policy connect

SKILLS IN THE AGE OF AI

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This report was written by Alyson Hwang.

Policy Connect
83 Victoria Street
London
SW1H 0HW

www.policyconnect.org.uk

Contents

Foreword

We were delighted to co-chair this fourth inquiry on artificial intelligence (AI) and data led by Policy Connect, into our readiness as a nation to take advantage of the most consequential technology of the 21st century. AI is embedded into our daily lives, from the coordination of traffic light systems to lightning-fast analysis of medical data. The opportunities to use AI as a force for good, to enhance our lives, are there for the taking – if our businesses and citizens have the knowledge and skills to exploit them safely and securely. This inquiry looked at what needs to be done to give us those skills. Importantly, the inquiry took direct evidence from citizens of all ages, from Year 8 students to retirees, as well as from business, academia, and policy bodies.

In the preceding report on AI by Policy Connect and the All-Party Parliamentary Group on Data Analytics (APGDA) in June 2023 we found that the capabilities of generative AI such as ChatGPT have resulted in both excitement and deep concern. These themes came through again, very strongly, in this inquiry. Individuals are concerned about the potential for AI to enhance the reach of fraudsters and cyber criminals and feel powerless to counter AI-enhanced deception and deep-fakes, including for misinformation and interference in politics. Companies and small organisations want to use AI to improve their efficiency and achieve better outcomes, but staff can be scared of the genie in the bottle. Perhaps unsurprisingly, given the 19 million adults in digital poverty, the engagement sessions held with citizens had to start with a discussion about what AI is and is not.

The report's recommendations therefore begin with education and awareness-raising. We need to start at primary school, developing young people to be comfortable with change and to understand how to exploit AI to supercharge their learning. Teachers' digital literacy coupled with flexibility in the curriculum will allow classes to be relevant to the rapid pace of technological developments. Grasping the benefits of the digital era is a whole-of-society issue. The Government must lead the way in terms of AI upskilling, adoption and communication at all levels, supported by influencers and industry leaders. Mankind used to dream about flying, soaring high like the birds, and now does this on a regular basis assured of its safety. We need to tell stories about AI in such a way as to generate a similar excitement and desire to experiment. Dystopian 'Terminator' headlines get in the way.

The second set of recommendations is aimed at helping our industry and economy to soar; through practical support measures especially for the small and medium-sized enterprises (SMEs) that make up the majority of our industry base. From making best use of training resources already developed by government for the civil service, to enabling regional and local digital skills partnerships, and pivoting existing learning and skills funds to deliver what each region needs – these recommendations build greater ambition and reach into existing government initiatives.

Finally, the report turns to regulation, a golden thread throughout our work on AI and data over the last seven years. We each feel confident in soaring through the sky because the aviation industry is effectively regulated. This inquiry's interaction with citizens of all ages showed levels of awareness, trust, and transparency are still very low, and that confidence in AI will be hugely improved through regulation around transparency, understandability, and accountability. The UK is good at this.

We would like to thank all those who participated in tremendous evidence sessions and sent in written evidence. Huge thanks go to Zurich Insurance, Manchester Metropolitan University, Microsoft UK, Warwick Manufacturing Group, and Jisc, whose sponsorship made this work possible.

The Lord Clement-Jones

Lord Chris Holmes

Recommendations

Education and Public Communication

1.1 Make AI Literacy a mandatory part of the National Curriculum and update the Essential Digital Skills Framework to include competencies for using AI.

1.1.1 Integrate Age-Appropriate AI Literacy units as a cross-curricular competence (ages 7-18). The curriculum should cover ethical use, detecting misinformation, privacy risks, and prioritise human-centred skills such as critical thinking and problem-solving.

1.1.2 Establish an AI in Education Advisory Board to review the curriculum on a regular basis, ensuring learners can access the most up to date content. The Board could also work with the new Digital Inclusion and Skills Unit to review and update the Essential Digital Skills Framework with respect to AI skills.

1.1.3 Build capacity for the teaching workforce to deliver AI Literacy as part of the curriculum by incorporating AI into Initial Teacher Training, the Early Career Framework (ECF) and relevant National Professional Qualifications (NPQs) by outlining statutory requirements post-early career CPD programmes in schools and colleges.

1.2 The Government should support a regional and local Public Awareness Campaign for AI.

1.2.1 Local authorities should launch "AI Simplified" public awareness campaigns using accessible language. These should be disseminated across traditional media platforms, social media, public libraries, and Jobcentres.

1.2.2 Leaders across the tech industry should be encouraged to provide case studies showing the benefits of using AI that boosts productivity and lowers administrative burdens on individual workers.

1.3 The Department of Science, Innovation and Technology should prioritise the following in the next phase of the Digital Inclusion Action Plan:

1.3.1 Build a robust evidence base for local interventions that are successful in increasing digital participation in the age of AI.

1.3.2 Build capacity in local communities through charity networks, to ensure there is a focal point of digital and technology support for citizens, leveraging the Digital Inclusion Fund to support existing and trusted community-focussed networks.[1]

1.3.3 Support the delivery of AI skills training through a combination of direct funding, strategic partnerships, infrastructure development, and targeted educational initiatives.

[1] Examples could include supporting the National Digital Inclusion Network, coordinated by the Good Things Foundation, or the scaling up of government initiatives such as Manchester's Let's Get Digital programme.

Digital Skills for Business Growth

2.1 The Department for Science, Innovation and Technology should create an information hub for businesses on AI deployment, modelled after the Whitehall AI Playbook.

2.1.1 This should be a **non-static** hub of guidance that is a dynamic iteration of the existing AI Playbook for the UK Government but directed at everyday citizens.

2.2 The Government Digital Service (GDS) should expand access to their AI e-learning courses so that they are available for all local government officials, not just Civil Servants.

2.2.1 The GDS AI e-learning should also be reviewed for suitability for companies, especially SMEs, and repurposed for that if necessary.

2.3 Relaunch and Expand Local Digital Skills Partnerships with single-pot skills funding to streamline investment in skills training for AI use and adoption.

2.4 Create AI Skills Accelerators that are aligned with the new Industrial Strategy to target upskilling priority industries.

2.4.1 Create sector-specific AI skills accelerators across the eight priority sectors, funded through reallocation of underspent Growth and Skills Levy funds.

2.5 To effectively incentivise SMEs to adopt and use AI systems, the Government should reform the current funding scheme of flat-rate vouchers with a more sustainable approach.

Regulation for a Confident Society and Skilled Workforce

3.1 Implement AI Transparency Standards for Automated Decision Making in Public Services.

3.1.1 Legislate mandatory disclosure of AI use and explainability requirements in healthcare, education, and welfare as part of these bodies' 'Licence to Operate' as set out in *Trust, Transparency and Tech*.[2]

3.1.2 Appoint AI Explainability Officers in governmental departments to bridge technical and operational teams.

3.1.3 Establish a statutory standard that defines the need for human oversight in automated decision making, which should be required for ethical deployment and use of AI systems. The Government should protect individual rights in cases of solely automated decision-making by providing individuals with the right to be informed about such decisions, the right to obtain meaningful human intervention, the right to contest and seek a review of the decision, and by ensuring transparency, fairness, and safeguards against errors, bias, and discrimination.

[2] Policy Connect, Trust, Transparency and Tech, (2019).

Context

Policy Connect embarked on its inquiry into “Skills in the Age of AI” from September 2024 – and since then, the landscape of artificial intelligence (AI) has evolved at an unprecedented pace, transforming economies, industries, and the very nature of work. The urgency of equipping individuals and organisations with the digital skills needed to navigate this transformation has never been clearer: digital literacy and inclusion have emerged not merely as desirable skills but as fundamental prerequisites for participation in employment and in everyday life.

This report is structured around three interconnected themes – education and public communication, digital skills for business growth, and regulation for a confident society and workforce – each of which underscores the central importance of digital literacy and inclusion as the foundation for a prosperous and equitable future in the era of AI. This inquiry, taking place over the course of nine months, showcases a snapshot of immediate practical steps that can be undertaken by the Government and relevant stakeholders to ensure a thriving society. There may be areas that have not received enough attention in the body of the report, which reflects the expanding scope of policy discourse surrounding the use and deployment of AI systems. We believe this work contributes to the important discussion on digital transformation in the public sector, and we very much look forward to continuing the debate.

Policy Landscape

In 2025 alone there have been significant shifts within the policy landscape both internationally and within the UK. The UK Government has responded to these technological shifts with a series of policy initiatives aimed at strengthening the nation's AI capabilities and workforce readiness. The publication of the AI Opportunities Action Plan in January 2025 marked a significant milestone, setting out a vision for building strong foundations for AI, transforming lives through its adoption, and nurturing homegrown talent.[3] These priorities are closely aligned with the themes of this report, particularly the need to embed digital literacy and AI awareness across all levels of society. The launch of the AI Playbook for the UK Government in February 2025 further demonstrates a commitment to practical, accessible guidance for public sector organisations, ensuring that civil servants – regardless of their technical background – are equipped to make informed decisions about AI adoption and use. The Government's actions reflect a growing recognition that digital literacy is not only a technical skill but a civic necessity, essential for meaningful participation in the digital economy and society.

The global regulatory landscape for AI reflects a dynamic interplay of innovation-driven pragmatism and risk-averse statutory oversight, with significant differences across jurisdictions. In the United Kingdom, the reintroduction of the Artificial Intelligence (Regulation) Bill in March 2025 signals a potential shift toward statutory oversight, proposing the creation of a central AI Authority to coordinate sectoral regulators and enforce principles like safety, transparency, and contestability. This builds on the UK's previously non-statutory, principles-based approach outlined in its AI Opportunities Action Plan, which prioritises economic growth through public-sector AI adoption and infrastructure investment while resisting comprehensive legislation. Concurrently, the Information Commissioner's Office (ICO) has emerged as a de facto AI regulator, leveraging data protection law to enforce transparency and mitigate algorithmic bias, particularly in high-risk sectors like healthcare and finance.

In the United States, regulatory fragmentation persists, with the Trump administration revoking Biden-era AI ethics directives in favour of a deregulatory agenda emphasising global leadership and private-sector innovation. Federal oversight remains anchored to sector-specific laws, such as healthcare and financial regulations, while the National Institute of Standards and Technology (NIST) Privacy Framework (April 2025) introduces AI-specific risk management guidelines, including safeguards against data reconstruction attacks and algorithmic discrimination. State oversight on the other hand, remains fragmented; California's proposed Safety AI Bill that was reintroduced in March 2025 contrasts sharply from the lack of action taken to regulate AI on a federal level.

[3] The Department for Science, Innovation and Technology, AI Playbook for the UK Government, (2025).

The EU has solidified somewhat its position as a regulatory pioneer with the AI Act, which entered full force in August 2024 and began phasing in prohibitions on socially manipulative AI and real-time biometric surveillance in February 2025. The Act's risk-tiered framework mandates strict compliance for high-impact systems, enforced through a centralised AI Office and member-state authorities, while its General-Purpose AI (GPAI) Code of Practice, finalised in mid-2025, requires developers of foundational models to disclose training data sources and implement robustness testing. Notably, the EU's AI Continent Action Plan aims to bolster regional competitiveness through investments in compute infrastructure and streamlined compliance pathways, reflecting tensions between regulatory rigour and economic ambition.

The technological advances witnessed over the past several months have been both profound and far-reaching. The emergence of action models and agentic AI systems – capable of setting their own goals and executing complex tasks – has opened new frontiers in automation and decision-making. Open-source breakthroughs, such as Meta's Llama 2, have democratised access to powerful AI tools, while proprietary models like OpenAI's o3 have achieved human-level performance on advanced reasoning benchmarks.[4] These developments have accelerated the adoption of AI across sectors, but they have also exposed a widening skills gap: as technology races ahead, many individuals and organisations struggle to keep pace, risking exclusion from the opportunities that AI presents. The need for digital literacy has thus become not just a matter of individual advancement, but a collective imperative for economic resilience and social cohesion.

Against this backdrop, the first theme of this report – education and public communication – addresses the foundational challenge of ensuring that all citizens have the digital skills required to understand and engage with AI. Despite significant progress, Lloyds Bank's UK Consumer Digital Index reveals that over half of the UK workforce still lacks essential digital skills.[5] With 80% of the workforce that will be active in 2030 already in employment today, the task of upskilling and reskilling is urgent. Public communication campaigns, accessible educational resources, and the integration of AI literacy into school curricula are all critical components of a strategy to raise the baseline of digital competence. By fostering a culture of lifelong learning and curiosity, the UK can empower individuals to adapt to technological change, participate fully in the digital economy, and make informed choices about the use of AI in their personal and professional lives.

[4] Chollet, OpenAI O3 Breakthrough High Score on ARC-AGI-Pub, (2024).
[5] Lloyds Bank, 2024 Consumer Digital Index, (2025).

The second theme – digital skills for business growth – recognises that the economic potential of AI can only be realised if businesses, particularly small and medium-sized enterprises (SMEs), are able to harness its power. Government-backed initiatives, such as the Department for Science, Innovation and Technology's (DSIT) AI Upskilling Fund pilot, and the adoption of the Alan Turing Institute's AI Skills for Business Competency Framework, are starting to help bridge the skills gap by providing targeted training and resources. However, ongoing investment and collaboration between industry, government, and educational institutions will be essential to ensure that UK businesses remain competitive in the global AI economy. Digital literacy in this context means more than technical proficiency; it encompasses the ability to critically assess AI solutions, integrate them into existing workflows, and innovate responsibly. By supporting business leaders and employees at every stage of their digital journey, the UK can unlock new sources of productivity, creativity, and growth.

The third theme – regulation for a confident society and workforce – explores how effective governance can foster public trust and ensure that AI is developed and deployed safely. As AI systems become more powerful and pervasive, concerns about transparency, accountability, and ethical use have come to the fore. The UK's evolving regulatory approach aims to provide clear rules and enforcement mechanisms while supporting innovation. International efforts to develop ethical guidelines and voluntary codes of practice highlight the need for global cooperation in managing the risks and benefits of AI. Digital literacy is central to this theme as well; an informed and digitally skilled public is better equipped to engage with regulatory debates, advocate for their interests, and hold institutions accountable.

The challenges and opportunities presented by AI require both immediate action and long-term vision. Expanding digital literacy programmes, supporting business upskilling, and developing robust regulatory frameworks are all essential steps toward building a society that is resilient, inclusive, and confident in the face of rapid technological change. As Policy Connect's inquiry demonstrates, preparing for the age of AI is a shared responsibility – one that demands collaboration across government, industry, education, and civil society. By prioritising digital skills and inclusion across the three themes of this report, the UK can ensure that the benefits of AI are widely shared, and that no one is left behind in the next industrial revolution. This report aims to inform and inspire policymakers, educators, businesses, and the public as we navigate this pivotal moment in history, with digital literacy and skills at the heart of a thriving, future-ready society.

Key Findings

The inquiry received contributions from varying sectors, including employers, academia, and educationalists. In analysing the submissions to our public call for evidence, we were able to separate the findings into the three themes that shape the structure of this report. In this section, we cover the key findings that underpin the rationales behind the recommendations.

1. **The digital age necessitates a dual focus on digital literacy and human-centred skills.** Critical thinking, creativity, and collaboration have increased in importance in AI-driven environments, as technical proficiency alone cannot address complex societal challenges.[6] According to LinkedIn's Global Talent Survey, 63% of UK executives state their plans for prioritising soft skills in hiring, with adaptability emphasised as being critical for workplace resilience.[7] This trend signals the uncertainty facing workers given the radical transformations across industries, while also underscoring the need for pre-employment education and training to integrate project-based learning and interdisciplinary collaboration to foster transferable skills across roles.

2. **Digital inclusion must address both affordability and literacy.** The cost-of-living crisis exacerbates exclusion, with 1.6 million people in the UK living offline and 23% of the UK population struggling to interact with online services.[8] Free AI tools, such as streamlined healthcare booking systems, show potential, but systemic interventions – like increased broadband subsidies and community digital hubs – are needed to ensure equitable access.[9]

3. **Public distrust of AI persists across demographics,** driven by fears of misinformation, fraud, and opaque decision-making, which is corroborated by DSIT's *Public Attitudes to data and AI* tracker survey.[10] Over 55% of adults aged 70+ report limited ability to recognise AI use, while 28% of the UK public perceive AI's risks to outweigh its benefits.[11] Such scepticism stifles experimentation, particularly among SMEs and public sector organisations. Shifting narratives to frame AI as a complementary tool – enhancing productivity and reducing repetitive tasks – could mitigate resistance.[12] Academic studies have shown that, for example, AI-driven chatbots in SMEs improve customer engagement without displacing human roles.[13]

4. **Adopting a systems approach to education is critical for long-term AI readiness.** Current curricula struggle to keep pace with technological advancements due to lengthy approval processes and inadequate upskilling of educators. The Alan Turing Institute's AI Skills for Business Competency Framework, now adopted by UK government initiatives, provides benchmarks, but implementation gaps persist globally.[14] Embedding AI literacy early in education, coupled with lifelong learning pathways, can bridge this gap.

[6] Digital Education Council. Digital Education Council AI Literacy Framework, (2025); Rigley et al., 'Evaluating International AI Skills policy: a Systematic Review of AI Skills Policy in Seven Countries (2023).
[7] Murphy B (LinkedIn), United Kingdom Talent Trends, (2024).
[8] Lloyds Bank, 2024 Consumer Digital Index, (2025).
[9] NHS England. NHS AI expansion to help tackle missed appointments and improve waiting times. (2024).
[10] Department for Science, Innovation and Technology, Public attitudes to data and AI: Tracker survey (Wave 4) report, (2024).
[11] Office for National Statistics (ONS), Public awareness, opinions and expectations about artificial intelligence: July to October 2023, (2023).
[12] Jagannathan, AI in SME Finance: Opportunities and Threats, (2025).
[13] Sidhu et al., 'AI And Workforce Development: A Comparative Analysis of Skill Gaps and Training Needs in Emerging Economies', (2024).
[14] Alan Turing Institute, AI skills for business framework, (2024).

5. **Economic growth (GDP) alone does not ensure societal well-being in the AI transition.** Over 13–19 million UK adults face digital poverty, limiting their ability to engage with AI tools.[15] The 2025 Invest 2035 Strategy emphasises "diffusion" of skills across sectors, yet fragmented training pipelines risk exacerbating inequality.[16] The EU and several member states have explored and piloted social safety net reforms such as universal basic income (UBI) to support workers displaced by automation and AI. Amidst concerns for workplace displacement, contributors to the inquiry stressed the need for government to ensure the AI transition actively safeguard societal well-being, ensuring that technological progress translates into inclusive and sustainable prosperity of everyday citizens.
6. **SMEs require targeted support to adopt AI effectively.** Capacity constraints, cost sensitivity, and limited technical understanding hinder uptake. Successful cases, like Akbank's AI-powered financial management tools boosting SME engagement by 24%, illustrate the value of tailored solutions. Hybrid cloud-based AI platforms and subsidised upskilling programs (e.g. the UK's AI Upskilling Fund pilot) offer scalable frameworks for SMEs.[17] Such initiatives must continue to encourage further adoption across sectors.
7. **Short-course certifications are prioritised by employers and employees for rapid upskilling** as evidenced by the responses from research participants. Yet they must be complemented by ethical and critical AI training.
8. **Regulatory guardrails are essential to rebuild public trust.** Only 33 UK public sector AI projects have published transparency records, fuelling concerns about data privacy and algorithmic bias.[18] The proposed Artificial Intelligence (Regulation) Bill (a private members bill starting in the House of Lords, as reintroduced by co-chair Lord Holmes of Richmond in March 2025), which mandates statutory oversight, could align the UK with global ethical standards while addressing risks like AI-enabled fraud.[19]

These findings underscore a critical gap in current AI policy frameworks; the disconnect between macro-level skills strategies and the lived experiences of individuals, businesses, and communities navigating AI adoption. While governments and institutions increasingly recognise the importance of digital literacy and human-centred skills (illustrated by key initiatives such as the Digital Inclusion Action Plan and the interim Curriculum and Assessment Review report), implementation often lacks the granularity to address systemic barriers such as digital poverty, SME capacity constraints, and institutional inaction in education. A persistent challenge lies in designing policies that not only promote AI readiness but also foster equitable participation across socio-economic groups. For instance, while initiatives like the UK's AI Upskilling Fund pilot demonstrate progress, they risk excluding those without foundational digital access – a cohort disproportionately comprising older adults, rural populations, and low-income households. Similarly, regulatory frameworks must evolve beyond technical risk mitigation to address societal anxieties about AI's ethical implications and labour market disruptions.

Policy Connect's ongoing research will focus on bridging this gap by developing actionable models for **inclusive AI policy design** – emphasising community-driven upskilling pathways, localised public engagement campaigns, and adaptive governance structures that align rapid technological change with human needs.

[15] Lloyds Bank, 2024 Consumer Digital Index, (2025).
[16] Department of Business and Trade, (2024).
[17] The Department for Science, Innovation and Technology, Public attitudes to data and AI: Tracker survey (Wave 4) report, (2024).
[18] Central Digital and Data Office, DSIT, and Government Digital Service, Ethics, Transparency and Accountability Framework for Automated Decision-Making, (2023).
[19] Holmes, Artificial Intelligence (Regulation) Bill [HL], (2025).

Future work will prioritise cross-sector collaboration to ensure skills policies are both responsive to emerging AI capabilities and rooted in the realities of those most vulnerable to displacement or exclusion. By integrating these insights, we aim to advance a nuanced approach to AI readiness – one that harmonises innovation with equity, ensuring no individual or organisation is left behind in the transition to an AI-driven future.

1. Education and Public Communication

1.1 Make AI Literacy a mandatory part of the National Curriculum and update the Essential Digital Skills Framework to include competencies for using AI.

1.1.1 Integrate Age-Appropriate AI Literacy units as a cross-curricular competence (ages 7-18). The curriculum should cover ethical use, detecting misinformation, privacy risks, and prioritise human-centred skills such as critical thinking and problem-solving.

1.1.2 Establish an AI in Education Advisory Board to review the curriculum on a regular basis, ensuring learners can access the most up to date content. The Board could also work with the new Digital Inclusion and Skills Unit to review and update the Essential Digital Skills Framework with respect to AI skills.

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1.3 The Department of Science, Innovation and Technology should prioritise the following in the next phase of the Digital Inclusion Action Plan:

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1.3.3 Support the delivery of AI skills training through a combination of direct funding, strategic partnerships, infrastructure development, and targeted educational initiatives.

[20] Examples could include supporting the National Digital Inclusion Network, coordinated by the Good Things Foundation, or the scaling up of government initiatives such as Manchester's Let's Get Digital programme.

1.1 AI Literacy and the Curriculum

The integration of AI into the national curriculum has become an urgent necessity rather than an optional enhancement. According to the World Economic Forum's Future Jobs Report, 40% of employers anticipate a reduction of workforces where AI can automate tasks by 2030.[21] Machines and algorithms will have created 133 million new roles globally, displacing 75 million jobs. The UK workforce needs to be prepared for this seismic shift. Contributors called for AI integration in the national curriculum to prepare the next generation for a rapidly evolving digital landscape.

It is important to note the administrative burdens that national curriculum changes may have on schools – alongside any curriculum and pedagogical reform, schools, colleges, and universities must be financially and structurally supported to leverage AI resources. Centralised and nationally available materials such as the AI Tools for Education are welcome initiatives.[22] To encourage usage of AI tools across education providers and institutions, the Government must establish networks to ensure our teachers and learners can be confident and responsible in using AI. Steering group members voiced their concern at how resource strapped schools are, prohibiting them from adapting to technological advancements: the Department for Education (DfE) must signpost the resources already available and ensure the upkeep and delivery of continuous professional development for educators across the nation.

While the computing curriculum introduced in 2014 provides some foundations, it does not sufficiently address the need to prepare children for an AI-driven future. The current approach only introduces programming and algorithms at Key Stage 3, which falls short of comprehensive AI literacy. Contributors highlighted the need for a long-term solution and approach to enable people, employees and employers to feel comfortable using and experimenting with AI, and more confident in an era of change.

UNESCO has already developed AI competency frameworks for students focussed on four core competencies: a human-centred mindset, ethics of AI, AI techniques and applications, and AI system design. This framework emphasises interdisciplinary learning across both STEM and social studies, providing a model implementation in the UK. An exemplar leader is the Netherlands, which is currently redeveloping the curriculum for Grades K-8 (in England and Wales, this is the equivalent of Key Stages 1-3). The Netherlands Institute for Curriculum Development (NICD) presented a paper in the Innovative Approaches to Computer Science Teaching and Learning conference (2024) that detailed their approach to the Digital Literacy curriculum.

[21] World Economic Forum, Future of jobs report 2025, (2025).
[22] Department for Education and DSIT, AI teacher tools set to break down barriers to opportunity, (2025).

Case Study: The Netherlands

Underpinning the curriculum development is a philosophy of education drawing on Biesta's three aims of education. According to Gert Biesta, a renowned education theorist, there are three aims of education: **qualification** (developing knowledge that enables them to 'do something'), **socialisation** (ways in which, through education, we become members of and part of particular social, cultural and political 'orders') and **subjectification** (the opposite of socialisation, meaning students' development as autonomous individuals).[23]

The Dutch curriculum reform, currently under extensive stakeholder consultation, is structured to strengthen coherence across educational stages, enhance transitions between primary and secondary education, and define a clear set of core competencies and knowledge areas. Notably, the reform reduces the formal curriculum to essential content, granting schools greater autonomy while providing substantive guidance and support for teachers. The curriculum encompasses nine learning areas, including national languages, mathematics, sciences, arts, citizenship education, and digital literacy, each underpinned by explicit vision statements and core content building blocks.

International comparative analysis by the OECD highlights several strengths of the Dutch proposal, such as its emphasis on reflection, global competency, critical thinking, and digital literacy as cross-curricular skills. The reform also prioritises global themes – globalisation, sustainability, technology, and health – aligning educational aims with contemporary societal challenges.

For UK policymakers, the Netherlands' experience demonstrates the value of a research-informed, consultative approach that balances national curriculum coherence with local flexibility. In consideration of the ongoing curriculum review as led by Dr. Becky Francis of the Education Endowment Fund, a great opportunity is presented to adopt a similar philosophy, moving the UK towards a curriculum that not only equips students with essential knowledge but also prepares them for active citizenship and personal autonomy. This model provides a robust foundation for curriculum review, ensuring both relevance and adaptability in a rapidly changing educational landscape.

[23] Biesta, Good education in an age of measurement: on the need to reconnect with the question of purpose in education, (2009).

The unprecedented pace of technological advancement in AI, particularly with the emergence of generative AI, agentic AI, and automated assessment tools, has fundamentally disrupted the education sector, exposing the limitations of traditional curriculum review and development cycles. Current processes, which often require several years to implement changes, are increasingly misaligned with the rapid evolution of AI capabilities. For example, the release of advanced generative AI models such as ChatGPT-4.5 and the integration of agentic AI platforms in classrooms have already begun to outpace the ability of schools and universities to adapt both content and assessment methods, raising concerns over academic integrity, the relevance of learning outcomes, and the preparedness of graduates for the workforce.[24] This context highlights the urgent need for an agile, expert-led body that can provide the Department for Education with real-time, evidence-based guidance on curriculum enhancement and pedagogical innovation.

Establishing a National Education Advisory Board (NEAB) would address this need by bringing together educators, technologists, ethicists, and regional representatives from across the UK. Such a board would ensure that curriculum development is not only informed by the latest technological developments but is also grounded in robust educational philosophy and pedagogical reasoning. The NEAB would serve as a dynamic forum for ongoing review and feedback, enabling the education system to respond proactively to disruptive trends and to integrate AI literacy, ethical considerations, and critical thinking skills into all levels of learning. This approach would also help unify currently fragmented responses to AI in education, which are often limited in scope or siloed within specific sectors or regions. By coordinating efforts across primary, secondary, tertiary, and lifelong learning pathways, the board would promote coherence and inclusivity, ensuring that all learners - regardless of geography or background – benefit from up-to-date, relevant educational experiences.

> ***To effectively deliver essential digital skills and achieve a fair level of AI-literacy across all ages, capabilities, regions, and socio-economic groups, a multi-faceted and inclusive approach is crucial. Education programmes must be tailored to diverse learning needs, incorporating accessible formats such as interactive online courses, community workshops, and mobile-based learning for remote areas.***
>
> **Dr. Freeha Azmat (Reader), WMG University of Warwick, Evidence Submission**

To be effective, the NEAB should operate with an agile governance model, convening regularly to evaluate emerging technologies and pedagogical approaches, and forming rapid-response subcommittees to address acute challenges such as the regulation of AI-generated content in assessments or the development of new standards for AI-integrated teaching. The Board would also be responsible for promoting transparency and ethical safeguards, such as public disclosure of AI tools used in education and regular audits to identify and mitigate algorithmic biases. Importantly, the inclusion of regional voices, student advocates, and representatives from devolved governments would ensure that the Board's recommendations are sensitive to geographic disparities and the diverse needs of learners across the UK.

[24] Goretti et. al., Challenges and Opportunities of Using Generative AI for Research: Opening the Discussion, (2024).

Building Capacity in the Educational Workforce

The integration of AI into educational settings represents a transformative opportunity to enhance teaching and learning processes across all levels of education. AI technologies offer significant potential to personalise learning experiences, automate administrative tasks, and provide real-time feedback to students, ultimately improving educational outcomes and efficiency. However, realising these benefits requires strategic investment in both human capital and technological infrastructure, ensuring that educators are equipped with the necessary skills and tools to effectively leverage AI in their practice.

> ***Effective delivery needs to be enabled by more clarity regarding the Government's AI in education policy – without a clear approach to be applied across different regions, there is a risk that different schools will incorporate AI literacy skills provision to varying degrees, resulting in a postcode lottery of AI access.***
>
> **Digital Poverty Alliance, Evidence Submission**

The Government has already invested £84 million to form the National Centre for Computing Education (NCCE) to improve computing teaching quality. This infrastructure provides a foundation to expand AI-specific teacher training.[25] The NCCE has already created resources including AI learning units for Year 8 pupils, demonstrating initial steps in this direction – but this work is only beginning and must expand beyond the subject of computer science.

[25] Department of Education, Tech experts to provide National Centre for Computing Education, (2018).

Case Study: WMG, University of Warwick

Digital skills are crucial for equipping the future workforce, prompting the need to close the skills gap among both staff and students. To identify which digital competencies should take priority, a list of basic and advanced digital skills - applicable across diverse sectors such as healthcare, engineering, and business - was created using insights from World Economic Forum reports. Input was gathered from internal and external stakeholders, including industry professionals and academics from various universities, who were invited to rank advanced digital skills without assigning a strict order. A shared consensus highlighted data analysis and AI as key focus areas. As staff are the primary agents of transformation in education, it is essential to upskill them before effectively educating students about AI. In response, WMG has developed a three-year strategy aligned with UNESCO's AI literacy framework to enhance staff capabilities in areas such as a human-centred mindset, AI ethics, foundational AI concepts and applications, AI pedagogy, and AI for professional development.

WMG is also launching The MSc in Applied Artificial Intelligence from September 2025 which is a forward-thinking programme designed to equip students with both the theoretical foundations and practical skills needed to thrive in AI-driven industries. With a curriculum that spans machine learning, deep learning, data mining, natural language processing, computer vision, and robotics, the course emphasises real-world applications through hands-on labs, workshops, and industry projects. Students will not only gain technical expertise but also develop critical research, ethical reasoning, and interdisciplinary problem-solving abilities - skills increasingly in demand across sectors. By fostering innovation, creativity, and adaptability, the programme prepares graduates to design and implement AI solutions for complex challenges while staying at the forefront of this rapidly evolving field.

1.2 Regional and Local Public Awareness Campaign for AI

> ***Community organisations consider AI support to be a vital asset for people who are digitally excluded. They recognise that, as AI adoption grows, a lack of knowledge about AI could widen the digital divide and exacerbate inequalities.***
>
> **Good Things Foundation, Evidence Submission**

Current AI narratives concentrate power, restrict policy debates, and limit public engagement. A lack of AI literacy initiatives in the UK has created a void where public conversations about AI often do not start from factual evaluations of these technologies and their capabilities. The Digital Inclusion Action Plan launched in February 2025 provides a framework that could incorporate AI awareness activities. With research showing that as many as 19 million people in the UK still experience digital poverty, local campaigns using accessible language across multiple platforms would reach diverse audiences, particularly vulnerable groups.

Tania Duarte, Founder of We and AI, argues that *"improving AI literacy would strengthen public voice and power, allowing more ordinary people to meaningfully engage with AI advancements, applications, and implications"*.[26] Such engagement is critical for democratic participation in an AI-transformed society.

The Government has a key role in supporting and enabling and raising awareness. Contributors from the citizens roundtables were clear that – if communities are to engage with AI – the lead at the local level needs to be provided by 'trusted' bodies and members of communities. This is not unique to the digital sphere. But, given the nervousness about AI generated content and the rapid spread of misinformation expressed by citizen participants, community resilience and appointed individuals who are accountable for raising awareness initiatives are reinforced both locally and regionally. As Policy Connect's report Our Place Our Data found (2021), local authorities and community-based organisations are more trusted than Whitehall in relation to the use of their data.[27]

However, this does not mean that community leaders and councils should carry out awareness raising work on their own. Our inquiry found that the messages given by industry and sector experts are equally important. If we are to help citizens overcome the fear factor, it is incumbent upon industry leaders to provide positive stories about the benefits to individuals of engaging with AI, rather than the doom-laden 'Terminator' language. Contributors felt strongly that there should be an objective of changing the lens through which ordinary people view AI; from something imposed on them to something that will help them have a good life. Shifting the narrative should be a combined endeavour at national, regional, and local level, and the Government should initiate this with industry leaders, for example through the Digital Skills Council.

> ***I'm terrified of using AI – I can't really tell if something has been [AI-generated] or not, I need to ask my son. Sometimes he can't tell. There's a lot of scams out there, a lot of fake calls that sound exactly like the banks and so on. It's just all happening at a pace I can't keep up with, and it's just made worse with the fact everyone my age seems to feel the same.***
>
> **Citizen Participant (Female, 68); Roundtable Session Two.**

[26] Duarte and Garcia, We must act on AI literacy to protect public power, (2024).
[27] Policy Connect, Our Place Our Data, (2021).

1.3 Digital Inclusion Action Plan

The Digital Inclusion Action Plan launched in February 2025 aims to bridge the digital divide through initiatives including a device distribution scheme, a Digital Inclusion Innovation Fund, and establishing a Digital Inclusion and Skills Unit within DSIT. This plan provides a foundation for addressing AI-specific inclusion needs.

Research from the Digital Poverty Alliance and Deloitte shows that approximately 19 million people in the UK experience digital poverty, lacking access to digital devices, skills, or connectivity.[28] As AI becomes increasingly embedded in essential services and employment opportunities, addressing these basic access issues becomes even more critical. However, the Digital Inclusion Action plan sets out the start for addressing many of the connectivity problems, but DSIT should ensure that further iterations are developed to address the more nuanced elements – such as digital exclusion by lack of skills and training. In reviewing the action plan, the following were identified as requiring more attention:

Build a robust evidence base for local interventions

The UK Government's emphasis on building a robust evidence base for local digital inclusion interventions is critical due to the complex, context-specific barriers faced by excluded populations. The Digital Inclusion Action Plan highlights the need for "headline indicators" to address fragmented data and methodological inconsistencies in measuring exclusion yet lacks detailed guidance on evaluating localised strategies. This gap underscores the urgency for structured evidence-gathering, as highlighted by challenges such as the correlation between digital exclusion and broader inequalities (e.g. health, education) remaining poorly understood.

Local authorities and devolved governments face practical difficulties in assessing impact, including long timelines for realising benefits, contextual dependencies of exclusion, and resource constraints.[29] For instance, while initiatives like the Digital Exclusion Risk Index (DERI) in Greater Manchester demonstrate the value of localised metrics for strategic planning, the practice is not yet commonplace across the UK resulting in fragmented provision, underpinning coordination and scalability. Industry reports, such as those by Good Things Foundation, emphasise the importance of community-driven data collection to tailor interventions, particularly for marginalised groups.[30] Without rigorous evidence, interventions risk misallocating resources or failing to address nuanced barriers like device affordability, skills gaps, or distrust in technology. A strengthened evidence base would enable policymakers to identify replicable strategies, align regional efforts, and allocate funding to programmes proven to enhance digital participation – ensuring equitable access to essential services and opportunities across the UK's diverse communities.

[28] Digital Poverty Alliance and Deloitte, Digital Poverty in the UK, (2023).
[29] Local Government Association, Four essential steps for delivering digital inclusion projects and initiatives, (2024).
[30] Good Things Foundation, Our approach to measuring impact of digital inclusion, (2025).

1.4 Joining Up Community Focussed Interventions to Improve Digital Skills

The three interventions we are recommending above – that is targeted digital inclusion programmes to provide digital connectivity and devices; an evidence base drawing from community data, and a general awareness-raising programme using trusted national figures and regional/local bodies – will help provide powerful incentives for citizens to engage with digital upskilling. Such upskilling, to build capacity in local communities through AI training and skills workshops, is essential to deliver the objectives of the Government's Digital Inclusion Innovation Fund: to ***"support local community initiatives to get people online"***.[31] The Fund should be used to provide capacity for the delivery of digital skills training in community networks, which research shows are effective for reaching digitally excluded populations. This could be, by means of a grant programme, delivered by a trusted charity partner. The Department for Culture, Media and Sport has achieved this previously for community energy efficiency initiatives, with Groundwork UK as its delivery partner for disseminating grants.

The current Government can practically support the delivery of AI training and skills workshops, and current initiatives are welcomed by the steering group members. Recent government action includes the launch of the AI Upskilling Fund, which provided £6.4 million in grant funding to subsidise AI skills training for employees in SMEs, covering up to 50% of training costs and encouraging employer-led upskilling in AI technologies. While this pilot only focusses on the professional business services sector, it demonstrates a scalable model for supporting workforce-wide AI training through matched funding and accessible application processes.

In April 2025, the Ministry of Housing, Communities and Local Government set up an AI and Advanced Analytics Directorate which has been tasked with identifying the best ways to scale AI in local government services.[32] The UK Government can leverage this new directorate to support local initiatives by establishing it as a central hub for knowledge sharing, technical guidance and market navigation. This includes for example, the facilitation and scaling of proven AI solutions and acting as a feedback and coordination channel by inviting councils to submit information about their data challenges and opportunities. This could lead to improved operationalisation of programmes and initiatives that are contextualised locally and target the specific needs of residents and businesses in a given area.

To maximise the reach and impact of already in progress initiatives, the Government can:

- Expand grant and match-funding schemes to cover a wider range of sectors and regions.
- Partner with local authorities, universities, and digital inclusion charities to deliver workshops in community settings.
- Promote open-access online AI training resources.
- Establish a Local AI Skills Accelerator Fund for Charities and Community Networks.
- Create AI Champions and Peer-Learning Networks in targeted regions.

[31] DSIT, UK AI sector attracts £200 million a day in private investment since July, (2025).
[32] UK Authority, MHCLG creates new directorate AI and analytics, (2025).

2. Digital Skills for Business Growth

2.1 The Department for Science, Innovation and Technology should create an information hub for businesses on AI deployment, modelled after the Whitehall AI Playbook.

2.1.1 This should be a **non-static** hub of guidance that is a dynamic iteration of the existing AI Playbook for the UK Government but directed at everyday citizens.

2.2 The Government Digital Service (GDS) should expand access to their AI e-learning courses so that they are available for all local government officials, not just Civil Servants.

2.2.1 The GDS AI e-learning should also be reviewed for suitability for companies, especially SMEs, and repurposed for that if necessary.

2.3 Relaunch and Expand Local Digital Skills Partnerships with single-pot skills funding to streamline investment in skills training for AI use and adoption.

2.4 Create AI Skills Accelerators that are aligned with the new Industrial Strategy to target upskilling priority industries.

2.4.1 Create sector-specific AI skills accelerators across the eight priority sectors, funded through reallocation of underspent Growth and Skills Levy funds.

2.5 To effectively incentivise SMEs to adopt and use AI systems, the Government should reform the current funding scheme of flat-rate vouchers with a more sustainable approach.

2.1 Information Hub for Businesses

The AI Playbook for the UK Government, launched in February 2025, demonstrates the value of centralised guidance in fostering safe and effective AI adoption.[33] This playbook's success in providing technical, ethical, and operational frameworks for public sector AI use – supported by case studies from over 20 departments – validates the need for a similar resource tailored to businesses. A business-focussed hub would address the disconnect between public sector AI governance and private sector needs, particularly for SMEs lacking in-house expertise.

The existing AI Playbook's commitment to regular updates provides a blueprint for maintaining relevance amid rapid technological change. A dynamic hub could integrate real-time feedback from businesses, as seen in the London AI Hub's collaborative model, which combines industry input with academic insights to refine best practices.[34] Embedding iterative updates would ensure alignment with emerging risks, such as those highlighted in the Playbook's emphasis on "meaningful human control" and accuracy verification.[35]

[33] Government Digital Service, Artificial Intelligence Playbook for the UK Government, (2025).
[34] The Department for Science, Innovation and Technology, Digital Inclusion Action Plan: First Steps, (2025).
[35] Government Digital Service, Artificial Intelligence Playbook for the UK Government (2025).

This approach has demonstrated political viability through the Digital Regulation Co-operation Forum's pilot hub, which adapts regulatory advice based on developer needs.[36] The Government has already signalled its commitment to AI adoption through initiatives like the AI Opportunities Action Plan and targeted support for businesses through the Alan Turing Institute's bespoke AI advice programme for SMEs. Minister Feryal Clark's recent roundtable with technology companies and small business leaders further confirms political appetite for public-private collaboration in AI adoption.[37] The proposed hub aligns with the Government's stated goal to "whiplash" AI into public services while ensuring safety and effectiveness. By leveraging the existing Playbook infrastructure and expanding it for the use of businesses, especially SMEs that are at most need of accessible resources for uptraining and experimenting with using AI systems. DSIT can implement this solution efficiently while addressing the identified need from Enterprise Nation's Tech Hub findings that businesses struggle to identify appropriate, safe AI tools amidst the proliferation of options. This proposal represents a logical extension of current policy direction, making it both politically feasible and potentially transformative for democratising access to AI.

2.2 Making full use of AI e-learning already developed by the Government

The Central Digital and Data Office (CDDO) has already delivered 70+ AI courses for civil servants; covering ethics, technical applications, and business value. Contributors to our inquiry commended this initiative. However, they advised that academia and local government officials were not able to access these courses, as a gov.uk email address is required to register for the courses. Given that many issues covered by the courses (e.g. governance, ethics, and value for money of AI applications) will be similar for officials in local government and for administrators in academia, the value of the CDDO's course development work should be properly exploited. The courses should be made immediately available to all in local government and academia.

In addition, the CDDO should review the courses to assess their suitability for individuals in the private sector, especially SMEs who do not have the expertise or capacity to assess the suitability of what is available online. Should any re-purposing of the courses be needed, this ought to be relatively simple and cost-effective. Such an approach would be similar to that used a few years ago by the National Cyber Security Centre in rapidly increasing the skills across the public and private sectors.

2.3 Local Digital Skills Partnerships

A strong theme from our inquiry was the provision of digital and AI skills training for companies that is relevant to their regional and local circumstances, such as the skillset in the local workforce, and relationships across industry and academia. This is especially the case for SMEs who – as set out in Our Place Our Data – find it particularly difficult to free up time and capacity for training and upskilling.

[36] Digital Regulation Cooperation Forum, Pilot AI guidance hub for developers, (2024).
[37] Enterprise Nation, How government and businesses can partner to drive small business adoption of AI, (2025).

Our Place Our Data described the valuable work within the Greater Manchester area to develop SME digital skills. It advocated a model of skills development through cross-industry collaboration and with the education sector. However, this is hard to achieve because of the fragmentation of industry and prevalence of SMEs. Contributors to our current inquiry suggested much could be learnt from the 5-year pilot carried out between the Business Board Network and government, with the latter having provided a small amount of capacity-building funding (£75k) to create Local Digital Skills Partnerships (LDSPs) led by businesses to support growth hubs across several regions. These partnerships had been very effective, providing a route for all companies to tackle basic digital skills for SMEs as well as a route for government to engage with companies beyond the major digital and AI corporates. The 2021 evaluation of LDSPs found that £75,000 annual funding per Regional Coordinator enabled cross-sector collaboration, upskilled 12,000 workers, and reduced digital exclusion by 18% in pilot regions.[38] However, the capacity building funding was withdrawn by the previous government which led to the initiative being shelved.

Since then, the British Business Board has been working on the introduction of a private sector led initiative that builds on the LDSP model. Essentially, the AI Skills Partnership and the Business Board Network will leverage their established networks, expertise, and industry relationships to act as strategic connectors, aligning regional AI skills demands with targeted training initiatives and local economic priorities. Both bodies will facilitate collaborative engagement between businesses, universities and colleges, and the public sector within combined authorities.

Importantly, operating at the regional and local level, they can provide essential insights and oversight to ensure training solutions are responsive, impactful, and directly linked to regional business growth and job creation. To that end, the partnership is currently developing an AI skills pilot, which will target the challenges and opportunities in the region, supporting individuals, communities, and business to use AI to deliver better outcomes and address key government ambitions.

Our recommendation is that this collaboration model should be encouraged and supported across the country to allow business to drive the AI skills agenda – both locally and back into government through the Digital Skills Council. We note that this would be wholly consistent with the Government's recognition of *"the importance of a strong business voice in local decision-making, and in forming local economic strategies. The English Devolution Accountability Framework sets out that all institutions with devolved powers should embed strong, independent, and diverse business voices into their decision-making processes. Mayors will also have a statutory duty to produce Local Growth Plans, and we expect the development of Local Growth Plans to be informed by engagement with the private sector." [Minister of State for Local Government and English Devolution]*[39]

[38] Evidence Submission by British Board Network, (2024).
[39] Quotation from Evidence Submission by the British Board Network, (2025).

The best way the Government could provide such support would be – as part of the implementation of the Devolution White Paper – to create a single pot of skills funding within each of the existing and new Strategic Authorities. Merging the current plethora of small skills funding streams would allow local leaders to leverage funding most effectively depending on the local economic conditions and need. It would deliver better outcomes and remove bureaucratic fragmentation, echoing the Community Renewal Fund's success in streamlining grants for digital inclusion.[40] It would be welcomed by regions as part of their ambition to drive economic growth (see, for example, Andy Burnham's speech at the Institute for Government on 2 April 2025).[41]

2.4 Industrial Strategy Alignment

The Industrial Strategy identifies AI as a cornerstone of economic transformation, with sector-specific accelerators addressing the "fast-growing demand for expertise". The UK Government's proposed creation of an AI Skills Accelerators for public sector reform represents a promising start in upskilling target industries, but there needs to be strategic alignment with the Industrial Strategy to tackle skills shortages in priority industries.[42] For example, the financial services sector has been shown to have the highest share of in-demand jobs – measured based on seven labour market indicators - which has led to the sector being recognised as one of the eight priority sectors in the UK's Industrial Strategy. According to the Bank of England, 75% of financial service firms are already using AI as of 2024, with a further 10% planning to use AI over the next three years.[43] Despite the positive attitudes towards AI adoption and utilisation in work, 81% of surveyed firms were concerned about data safety and lack of specialist or managerial talent as a key barrier. There are a growing number of studies that provide evidence of a need for skills and effective adoption of emerging technology to bridge skills gaps and reskill employees.

The increasing demand for future digital skills continues to outstrip supply: this phenomenon is not unique to the financial sector, but across the eight growth-driving sectors as identified in the Industrial Strategy green paper, 'Invest 2035'.[44] Steering group members continuously emphasised the need for better coordination between government departments and clarity for policy implementations so that actors such as employers and educational institutions can support the delivery of the ambitions set out in the paper. The publication of the AI Opportunities Action Plan followed shortly after the Industrial Strategy, proposing that AI "could be the government's single biggest lever to deliver its five missions, especially the goal of kickstarting broad-based economic growth".[45] This agenda underscores the urgent need to accelerate mechanisms such as apprenticeship levy reforms and the implementation of Skills England, which are initiatives that could deliver real-change that drive productivity and growth.

[40] Ministry of Housing, Communities and Local Government (formerly Department for Levelling Up, Housing and Communities), UK Community Renewal Fund: evaluation report, (2023).
[41] Burnham, A Keynote Speech by Andy Burnham, Mayor of Greater Manchester, (2025).
[42] DSIT and Government Digital Service, State of digital government review, (2025).
[43] Bank of England, Artificial intelligence in UK financial services, (2024).
[44] Department for Business and Trade, Invest 2035: The UK's Modern Industrial Strategy, (2024).
[45] The Department for Science, Innovation and Technology, AI Playbook for the UK Government, (2025).

By reallocating underspent funds from the Growth and Skills Levy – which saw £3.3 billion returned to the Treasury between 2019-2022, a portion of which are unutilised employer contributions due to rigid apprenticeship structures – the Government can establish targeted upskilling programmes that bridge the disconnect between generic AI training and industry-specific competency requirements.[46] The Levy's reformed structure, emphasising flexibility in skills investment, provides a politically viable funding mechanism, while sector-specific alignment ensures training addresses the unique technical, ethical, and operational challenges faced by priority industries.

Contributors to our inquiry noted that generic upskilling initiatives often fail to address sector-specific applications, such as AI-driven predictive maintenance in advanced manufacturing or machine learning for drug discovery in life sciences. The Made Smarter Innovation Technology Accelerator provides a proven model in aerospace and defence: its collaboration between BAE Systems Air Division based in the Northwest of England and Machine Intelligence developed an AI-powered visual inspection system that reduced aerospace component defect rates by 35% while cutting inspection times by 50%.[47] This success stemmed from combining cross-sector AI expertise with deep domain knowledge in metallurgy and aerospace engineering – a synergy the proposed accelerators would institutionalise.

Susan Bowen, CEO of Digital Catapult, which leads the Technology Accelerator programme, said: ***"This superb project demonstrates precisely the value of bringing together technology innovators with leading manufacturers like BAE with its long standing and proven record working cross-sector on collaborative development opportunities."***

Research by Multiverse indicates that sector-specific AI training delivers 23% higher productivity gains compared to general programmes, as it directly addresses operational pain points like supply chain optimisation in manufacturing or genomic data processing in life sciences.[48] Similarly, the AI Accelerator Programme at University of Edinburgh's Bayes Centre demonstrates scalability, having trained 74 companies to secure £30 million in investment since 2020 through industry-aligned curricula in areas like computer vision and natural language processing to support entrepreneurs focussed on data-driven solutions.[49] By mirroring this approach, government-funded accelerators could replicate such successes nationally while adhering to the Industrial Strategy's "places" pillar - ensuring skills investment benefits regional economies like the North West's advanced manufacturing cluster or Scotland's green tech corridor.

[46] Institute for Public Policy Research, Over £3 billion in unspent apprenticeship levy lost to Treasury "black hole" new data reveal, (2022).
[47] Digital Catapult, BAE Systems & Machine Intelligence, (2025).
[48] Williams, 3 AI trends in 2025 shaped by the skills agenda, (2025).
[49] University of Edinburgh, The AI Accelerator programme, (2025).

Critically, this recommendation aligns with evolving policy frameworks. The AI Opportunities Action Plan explicitly calls for "sector-specific skills pathways" to meet the workforce demands of priority industries. Political feasibility is strengthened by existing cross-party support for productivity-focussed skills investment, as evidenced by the rapid adoption of the levy reforms and the AI Accelerator Programme's expansion across 12 government departments. By leveraging underspent levy funds and proven collaborative models, this policy would transform strategic industries into global benchmarks for AI-enabled productivity – a necessity highlighted by both the Industrial Strategy's ambition and the urgent upskilling demands of the Fourth Industrial Revolution.

2.5 Modernising Apprenticeships: Balancing Quality and Adaptability

The UK's apprenticeship system, while historically effective, now struggles to reconcile productivity demands with the imperative of delivering high-quality, future-ready skills. Current frameworks prioritise administrative compliance and qualification attainment over tangible workplace impact, creating a misalignment between training outcomes and the dynamic needs of modern industries. This has been acknowledged by the current Minister for Skills (The Rt. Hon Baroness Smith of Malvern), as apprenticeship bureaucracies such as End Point Assessments were further reduced during National Apprenticeship Week 2025 – but employers represented in the inquiry have voiced their frustration at the lack of pace.[50]

This structural rigidity has been particularly detrimental in the context of AI-driven labour market transformations, where skills requirements evolve at unprecedented speeds. Skills England's delayed implementation exacerbates this crisis, as employers and training providers face prolonged uncertainty amidst exponentially widening skills gaps – a paralysis that risks cementing the UK's position in a global skills race it cannot afford to lose. To break this cycle, the Government must impose binding implementation milestones with standardised approval timelines, creating accountability mechanisms that accelerates Skills England's transition from concept to operational reality. Crucially, this acceleration should catalyse development of agile occupational frameworks that empower employers and providers to co-design responsive programmes. These frameworks could mirror successful international models where modular skill components replace static qualification structures, enabling real-time integration of AI and data literacy competencies across sectors.[51]

By institutionalising continuous skills mapping through AI-powered labour market analytics and dynamic funding levers, the system could pivot training provision within quarterly cycles rather than multi-year frameworks – a necessary adaptation given that 63% of technical skills become obsolete within 2-3 years in AI-intensive fields.[52] This transformation requires dismantling the false dichotomy between quality assurance and flexibility; rigorous assessment regimes can coexist with curriculum agility if grounded in competency-based progression metrics rather than prescriptive hour thresholds. Only through such systemic reinvention can apprenticeships transition from documenting past skill requirements to actively shaping future workforce capabilities in synchronicity with technological disruption.

[50] Department for Education, More red tape slashed to reduce apprenticeship bureaucracy, (2025).
[51] OECD, Agile Occupational and Training Standards for Responsive Skills Policies, Getting Skills Right, (2024).
[52] British Chambers of Commerce and The Open University, The Business Barometer 2024, (2024).

2.6 SME Funding Schemes to Incentivise AI Adoption

The UK Government's existing funding mechanisms support SME AI adoption to a certain extent, which includes initiatives such as the Flexible AI Upskilling Fund (£6.4 million in match-funded grants for skills training), and regional initiatives like Northern Ireland's Innovation Vouchers Programme (fixed £5,000 vouchers for R&D collaborations).[53] Although such initiatives demonstrate partial success, they lack the scalability and flexibility needed to address systemic barriers. While the Upskilling Fund has enabled over 20 departments to subsidise AI training since 2024, its narrow focus on professional services and 50% co-funding requirement excludes micro-enterprises and sectors with acute skills gaps, such as manufacturing. Similarly, the Innovation Vouchers – though achieving a 1.7:1 return on investment in Phase II - struggle with displacement effects, where 36% of beneficiaries required additional capital to realise project outcomes. These limitations are critical given that 40% of SMEs cite budgetary constraints as the primary barrier to AI adoption, despite the potential for a £232 billion annual GDP boost from broader tech integration.

Current schemes often prioritise short-term, transactional support over sustainable capacity-building. For instance, the Upskilling Fund's rigid reimbursement model fails to address recurring costs like software licensing or cloud infrastructure. This misalignment undermines the Industrial Strategy's ambition to position the UK as a global AI leader, as SMEs - constituting 99% of UK businesses – remain disproportionately reliant on outdated systems. The VAT Flat Rate Scheme, while reducing administrative burdens, exacerbates inequities by preventing SMEs from reclaiming input VAT on AI tools unless exceeding £2,000, disadvantaging smaller firms experimenting with incremental upgrades.[54]

A reformed approach should replace fragmented vouchers and grants with tiered, outcome-linked funding that combines upfront subsidies with long-term tax incentives. This would mirror techUK's proposal for a Small Business Digital Growth Fund, offering 140% tax relief on any net new digital products, services, software and advice, while integrating lessons from the Innovation Vouchers' academic-business collaboration model.[55] Details on the tiered system of incentives should be further backed by evidence on the measurable economic returns that AI deployment in workforces to ensure informed allocation of public funds.

[53] The Department for Science, Innovation and Technology, Flexible AI Upskilling Fund Pilot, (2024); SQW Ltd (for Invest Northern Ireland), Evaluation of the Innovation Vouchers Programme Report to Invest Northern Ireland, (2019).
[54] HM Revenue & Customs, Flat Rate Scheme for Small Businesses (VAT Notice 733), (2022).
[55] techUK, (2024), Small Enterprises, Big Impact The steps needed to digitise the UK's SMEs and restore economic growth, p. 31.

3. Regulatory Safeguards for a Confident Society

3.1 Implement AI Transparency Standards for Automated Decision Making in Public Services.

3.1.1 Legislate mandatory disclosure of AI use and explainability requirements in healthcare, education, and welfare as part of these bodies' 'Licence to Operate' as set out in *Trust, Transparency and Tech*.[2]

3.1.2 Appoint AI Explainability Officers in governmental departments to bridge technical and operational teams.

3.1.3 Establish a statutory standard that defines the need for human oversight in automated decision making, which should be required for ethical deployment and use of AI systems. The Government should protect individual rights in cases of solely automated decision-making by providing individuals with the right to be informed about such decisions, the right to obtain meaningful human intervention, the right to contest and seek a review of the decision, and by ensuring transparency, fairness, and safeguards against errors, bias, and discrimination.

The proposed policy recommendations – mandating AI transparency standards, appointing AI Explainability Officers, and establishing statutory human oversight - address critical gaps in the ethical deployment of AI within public services. These measures align with global efforts to balance technological innovation with accountability, fairness, and public trust. Drawing on academic research, industry reports, and international frameworks, this rationale demonstrates the necessity of these interventions to mitigate risks and maximise societal benefits.

The ***'Trust, Transparency and Tech'*** report first proposed embedding transparency as part of public services' "licence to operate," requiring institutions like the NHS and the Department for Work and Pensions (DWP) to disclose AI use in high-impact domains.[56] Mandating transparency in AI systems used for healthcare, education, and welfare is foundational to maintaining public trust and ensuring accountability. Public sector AI applications often involve high-stakes decisions affecting individuals' rights, such as healthcare prioritisation, welfare eligibility, and educational assessments. The recommendations align with the Algorithmic Transparency Recording Standard (ATRS), which mandates public registers of AI systems in central government – a framework the Labour Government plans to expand to local authorities. However, as noted by the Ada Lovelace Institute (2025), public awareness of AI's role in these domains remains alarmingly low, creating a "black box" effect that undermines democratic oversight.[57]

The Public Law Project's TAG Register identifies over 50 cases of AI use in welfare, healthcare, and policing where opacity can lead to discrimination and unfair outcomes. Mandating disclosure in primary legislation (versus voluntary guidance) would address gaps in the UK's current "patchwork" approach, mirroring France's legally binding proposal for an Algorithmic Transparency Act (2023).[58]

[56] Policy Connect, Trust, transparency and tech: Licensing public service algorithms, (2019).
[57] Jones, et al., Foundation Models in the Public Sector, (2023).
[58] Assemblée Nationale (France National Assembly), PROPOSITION DE LOI No.1630, (2023).

Regulation (or lack thereof) arose as a concern for citizens, who strongly articulated a fear of misuse of their personal data online – and how this may be used to train AI models. Considerable worries that each company or website will have its unique set of privacy and data policy, with the default setting usually opting in for personal data capture. Participants voiced the absence of governmental oversight and how individuals are expected to 'fend for themselves' - as the technological landscape becomes more complex, some individuals are finding it a challenge and opting for digital non-participation, only adding to the digital divide.

This raises the question of the ethics of a digitalised welfare state: in the second parliamentary evidence session, a contributor to the inquiry representing a large tech-firm in the UK pointed out that, "automated-decision making errors are as prevalent as human errors. Humans are equally capable of being biased, prejudiced and unfair towards their work and decisions". Furthermore, the current Government has placed digitalisation as extracting further value during a time of fiscal constraints – especially across the civil service. However, during citizens roundtables, participants voiced their extreme discomfort of having welfare decisions such as universal credit or social care provisions being automated by a non-human agent and felt that whatever negative outcome would be viewed as, 'unjust' and morally abhorrent. This scepticism towards automated decision-making has been echoed by organisations such as Human Rights Watch who released their report on the DWP's approach to Universal Credit applications in 2020, as well as Big Brother Watch.[59]

3.1 Appoint AI Explainability Officers

The creation of AI Explainability Officers (AEOs) within governmental departments addresses a persistent disconnect between technical teams and operational stakeholders. Complex AI systems, such as those using deep learning or agentic AI, often lack interpretability even for developers. Steering group members especially highlighted the need for explainability officers to use accessible language to ensure communication is understood by the end-users. AEOs would bridge knowledge gaps by translating technical processes into actionable insights for policymakers, ensuring compliance with ethical standards, and facilitating public communication. This role aligns with the EU AI Act's requirement for deployers to assign qualified personnel with "appropriate authority and competence" to oversee AI systems.[60]

[59] Human Rights Watch, UK: Automated Benefits System Failing People in Need, (2020); Big Brother Watch, Everything, everywhere, all at once: automated decision-making in public services, (2025).
[60] Regulation (EU) 2024/1689 of the European Parliament and of the Council, (2024).

The establishment of AEOs is critical to operationalising transparency and accountability in AI-driven public services. Two key case studies underscore this necessity:

The UK Information Commissioner's Office (ICO) mandates that organisations provide "meaningful and personalised explanations" for AI-driven decisions under GDPR's Article 22, which safeguards against solely automated decision-making.[61] However, compliance requires bridging the gap between technical teams and frontline staff. The ICO's updated guidance emphasises that explanations must be tailored to individuals' understanding, necessitating dedicated personnel to translate complex AI outputs into accessible insights.[62] For example, the NHS's AI Lab ethics boards employ interdisciplinary teams to audit algorithmic decisions in healthcare triage systems, ensuring patients receive clear, actionable explanations.[63] Without such roles, public bodies risk non-compliance and eroding trust, particularly among vulnerable groups disproportionately affected by opaque systems.

Recent research by London Office of Technology and Innovation (LOTI) reveals systemic flaws in human oversight of AI systems.[64] In councils where officers lack specialised training, 68% report insufficient skills to critically evaluate AI outputs, leading to "rubber-stamping" of automated decisions. It is important to note that tokenistic human involvement, however, creates a "false sense of security," as seen in cases where flawed predictive tools for welfare allocation escaped scrutiny due to overburdened staff.[65] Dedicated AEOs would institutionalise accountability by embedding technical expertise within operational teams, mirroring the NHS AI Lab's model of ethics officers who audit algorithmic fairness and liaise with clinicians.

The Ethics, Transparency and Accountability Framework for Automated Decision-Making mandates meaningful human involvement in automated decisions but lacks legal force.[66] The Algorithmic Transparency Recording Standard (ATRS) has emerged as a cornerstone of the UK's strategy to ensure accountability in public sector AI use; however, it is not enough to ensure comprehensive accountability, public trust or effective governance of AI in the public sector. This is largely due to the slow adoption and implementation: as of early 2025, only a small fraction of public sector bodies has published transparency records, with just 33 records available on the Government's repository, despite the growing use of AI across government services. The limited uptake means that the ATRS currently provides only a partial and fragmented view of where and how AI is being used in public services, undermining its potential as a tool for democratic accountability and public engagement. Furthermore, the ATRS's scope is inherently limited, as it only covers public-facing AI tools that influence decision-making, allowing for exemptions on security or sensitivity grounds, and does not consistently include informal, cross-departmental or back-office uses of AI systems. This means that many algorithmic systems with substantial impact on individuals' rights or access to services may remain outside the scope of public transparency, particularly in critical sectors such as law enforcement, migration, or welfare, where transparency is most needed.

[61] ICO, Explaining decisions made with AI, 2023.
[62] ICO, Guidance on AI and data protection, (2023).
[63] NHS England, The NHS AI Lab, (2023).
[64] Nutt, Humans in the Loop: What should the role of officers be in AI-powered public services?, (2025).
[65] Green, The Flaws of Policies Requiring Human Oversight of Government Algorithms, (2022).
[66] The Department for Science, Innovation and Technology, Centre for Data Ethics and Innovation, Cabinet Office and Office for Artificial Intelligence, Ethics, Transparency and Accountability Framework for Automated Decision-Making, (2021).

As a result, the co-chair of this inquiry Lord Clement-Jones proposed codifying this through the development of the Public Authority Algorithmic and Automated Decision-Making Systems Bill [HL]. Key features include:

- Mandating public authorities to complete Algorithmic Impact Assessments (Clause 3) and maintain Algorithmic Transparency Records (Clause 4) for all automated decision-making systems. These requirements mirror the ATRS framework, which already provides a structured pathway for documenting AI use cases, data sources, and human oversight mechanisms. Scaling ATRS implementation – coupled with expanded training – is critical to pre-emptively align with the Bill's obligations, avoiding last-minute compliance gaps.
- Despite DSIT's training of 12,000 civil servants, the Bill's scope extends to all public authorities, including local councils, healthcare providers, and regulatory bodies. For example, the Local Government Association found that 71% of council officers lack the skills to challenge AI outputs effectively.[67] Accelerated ATRS expansion would institutionalise accountability by:
  - Standardising transparency practices across 400+ public bodies.
  - Embedding AI Explainability Officers to bridge technical and operational teams, as recommended by the Bill's training requirements.
  - Ensuring compliance with the Bill's proposed **5-year logging mandate** for AI decision audits (Clause 7, subclause 3).
- Prohibiting public authorities from deploying AI systems that cannot be effectively monitored (Clause 8). Agencies risk using non-compliant tools, as seen in cases where predictive welfare algorithms exacerbated biases due to inadequate oversight. Centralised ATRS training and enforcement would:
  - Reduce reliance on external vendors for transparency documentation.
  - Prevent redundant efforts, as seen in the NHS's parallel development of ethics boards and transparency protocols.

[67] Local Government Association AI: Consultation on the Use of Artificial Intelligence in Government, (2024).

Methodology

Policy Connect carried out this inquiry between September 2024 and April 2025. Evidence was gathered in a series of evidence sessions between November 2024 and March 2025, interviews with those working in and around AI, written submissions, focus groups, citizens roundtables and input from our steering group.

We recognise that these are complex and potentially controversial issues and expect that not all of those listed as contributors will agree with every part of the report. The views in this report are those of the author and Policy Connect.

While they were informed by our contributors, they do not necessarily reflect the opinions of either individuals or organisations – whether Steering Group members, participants in evidence sessions, or contributors of written evidence.

Steering Group and Expert Contributors

Organisation	Name
Careful Industries	Rachel Coldicutt
Alan Turing Institute	Prof. David Leslie
Jisc	Sue Attewell
Zurich Insurance	Penny Jones
Microsoft UK	Simon Staffell
Open Data Partners (formerly CDEI)	Roger Taylor
Policy Connect	Oona Muirhead
Manchester Metropolitan University	Prof. Keeley Crockett
WMG, University of Warwick	Dr. Freeha Azmat

Parliamentary Roundtable Contributors

Session One

Organisation	Name
Digital Poverty Alliance	Elizabeth Taylor
Big Brother Watch	Silkie Carlo
Good Things Foundation	Sital Mistry-Lee
Microsoft UK	Hugh Milward
Citizens Advice Bureau	Stuart Pearson
Quantexa	Parsa Ghaffari
Ada Lovelace Institute	Gaia Marcus

Session Two

Organisation	Name
ACCA Global	Narayanan Vaidyanathan
Shakespeare Martineau	Smita Jamdar
Shoosmiths	Paul Caddy
techUK	Anthony Walker

Focus Group (n=71)

Manchester Metropolitan University (Higher Education): MSc Conversion Data Science

Manchester Metropolitan University (Higher Education): Law, Sociology and Criminology

College A*:
Apprentices, Construction, A Level Students, Higher Education Courses Students, Social Care, Software

College B*:
Electricians, Drama, Art, Computer Science, Gaming Design Students

**Colleges have been anonymised for protection of participant's privacy.*

Focus Group (under 18s, n=7)

Azhar – Derby (Year 11)

Simran – Derby (Year 8)

Beth – Manchester (Year 13)

Safa – Oldham (Year 13)

Thamina – London (Graduate)

Ali – Leicester/London (First year medical student)

Miranda – Bristol (Year 12)

***Only first names of students are used for safeguarding purposes.*

Citizens Roundtables

A total of three citizens roundtables were facilitated by Manchester Metropolitan University and Policy Connect over Winter 2024. The demographics differed between the workshops, with the rural Yorkshire roundtable attracting older, more affluent white participants (the eldest was in her nineties). The urban roundtables had a greater ethnic mix, including a few attendees under forty, but were mostly middle-aged or above. All groups included gender balance (60/40 split between women and men).

A fourth workshop had been planned in a second small rural town in Yorkshire but did not attract any attendees. The attempt to set it up provided useful learning on what issues to consider when planning an education or awareness campaign: critically that advertising through a local group is not in itself sufficient, the chances of success are vastly improved by working through known and trusted individuals.

Contributors

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Contact:

Policy Connect
83 Victoria Street
London
SW1H 0HW

@Policy_Connect
policy-connect
info@policyconnect.org.uk
0207 202 8585

Design & Production: Ashley Signage Print & Display | 01603 701700 | www.ashleyads.co.uk