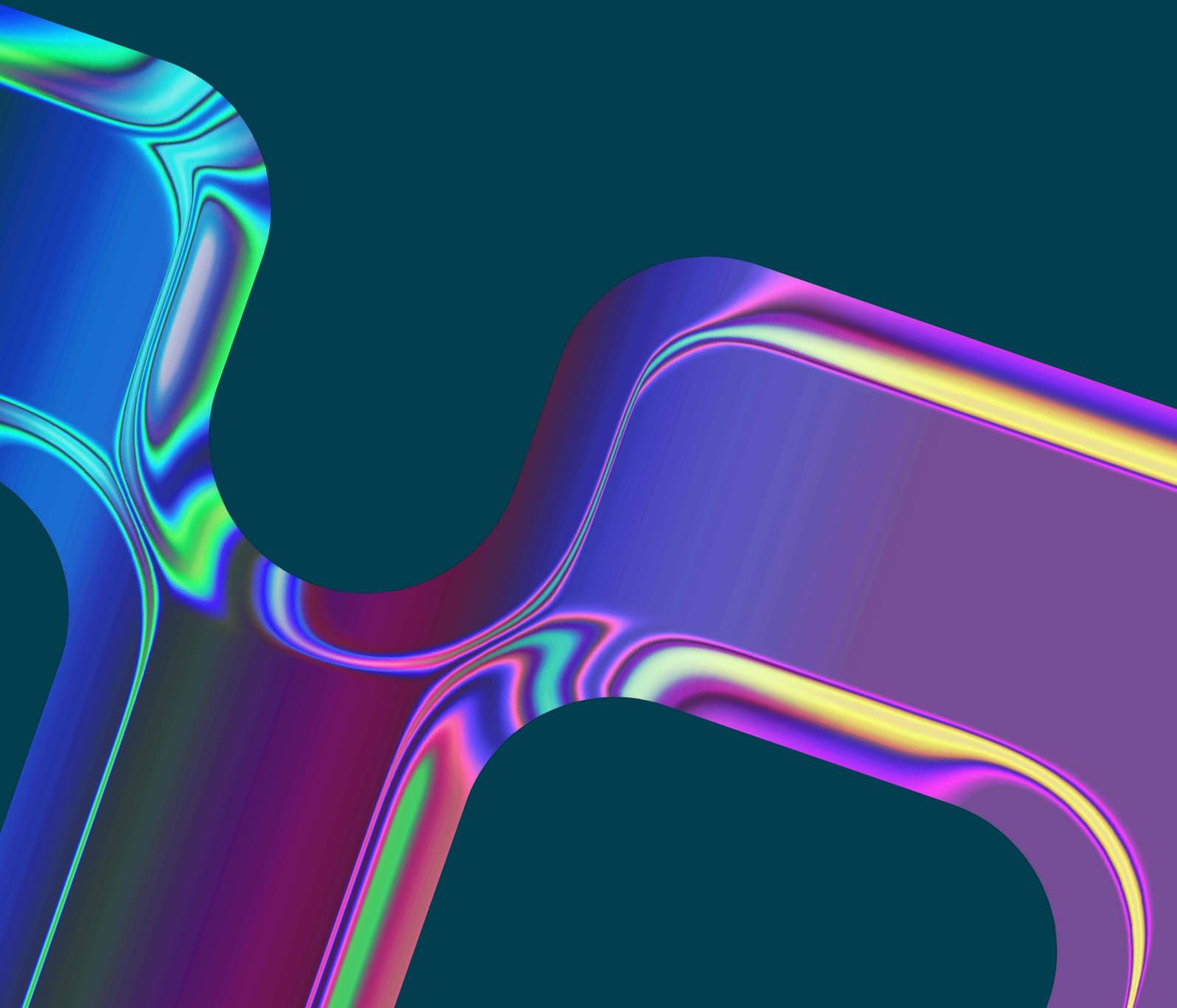


# Bridging the AI divide

Innovate UK BridgeAI:  
a year in review

2023 – 2024

A report produced by Digital Catapult for Innovate UK. Innovate UK BridgeAI drives the adoption of responsible AI in the UK by bridging the gap between innovation and implementation. This report shares industry insights and the interventions BridgeAI have developed to bridge the gap in the market.



# Contents

<b>Foreword</b>		04
<hr/>		
<b>Introduction and programme rationale</b>	<b>1. Introduction and overview</b>	06
	<b>2. The context and rationale for BridgeAI</b>	12
	• AI market trends	13
	• The AI policy landscape	17
	• UK AI innovation programmes and initiatives	21
	• Challenges in adopting AI	23
	• AI supply and demand imbalance in the UK	39
<hr/>		
<b>Industry perspectives</b>	<b>1. Agriculture and food processing</b>	43
	<b>2. Construction</b>	48
	<b>3. Creative</b>	53
	<b>4. Transport, warehousing, and logistics</b>	57
<hr/>		
<b>BridgeAI interventions</b>	<b>1. Funding</b>	63
	• Summary of funding rounds	64
	• Funded project spotlight	66
	<b>2. Upskilling</b>	71
	<b>3. Operationalising</b>	74
	<b>4. Standards</b>	83
	<b>5. Engaging the AI ecosystem</b>	86
<hr/>		
<b>Next steps</b>	<b>1. BridgeAI year two overview</b>	91
	<b>2. Get involved</b>	95

## Foreword

Innovate UK BridgeAI (BridgeAI) is a national initiative that helps UK organisations and companies to adopt AI.

AI is a game-changer for modern industry, with the potential to revolutionise operations, improve productivity, and drive innovation.

The BridgeAI programme aims to help cement the UK's position as a global leader in AI, supporting the adoption and use of safe AI models, and as a trailblazer in leveraging AI to address complex challenges and drive economic growth.

BridgeAI is a catalyst for dialogue and action, inspiring policymakers, businesses and individuals to harness the potential of AI and drive innovation in critical sectors of the economy. Together, we are helping UK industry to seize the opportunities that AI presents, as we work towards a future of sustainable growth, enhanced productivity, and unparalleled innovation.



**This breakthrough programme is led by Innovate UK in partnership with the STFC Hartree Centre, The Alan Turing Institute, the Digital Catapult, and the British Standards Institution (BSI). With £100 million of investment, BridgeAI is targeting selected key industries which are important to our economy and have the potential for greater adoption of AI to boost productivity:**

- In **agriculture**, opportunities to support precision farming: optimising resource allocation, reducing pesticide and fertiliser usage while increasing crop yields. It can also help to alleviate the burden of administrative work for farmers.
- In the **construction industry**, AI assistants can streamline project management, ensure protocols are in place and compliance is achieved, and even help to design new building materials.
- In the **creative industries**, AI unlocks new avenues for artistic expression by accelerating the creative process across film, art, music and entertainment. AI is transforming motion capture, graphic design and image rendering, while new tools are democratising art – allowing many more people to participate in the creative industry.
- In **transport**, AI powers applications for autonomous vehicles, and supports innovation in the mobility ecosystem, such as ride sharing and personal mobility solutions. It be used to help optimise logistics, freight routes and public transport. AI can be used for monitoring and managing traffic in congested areas and can help to enhance safety by predicting dangerous conditions before they occur.

This report, prepared by the Digital Catapult, reviews BridgeAI's first year and highlights the exciting projects and companies that have emerged so far. It provides a fresh perspective on the potential impact of AI in key UK sectors, and presents insights into the opportunities, challenges and best practices for integrating AI into these sectors.

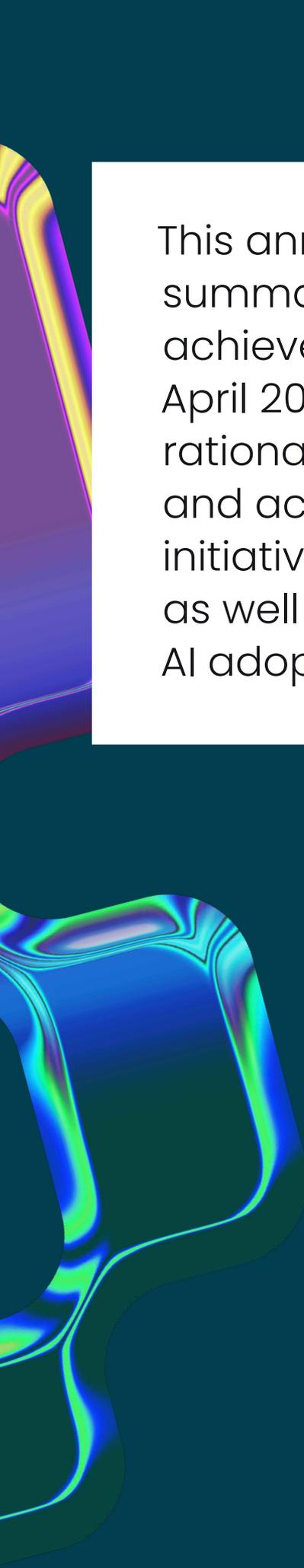
We will share this report across our innovation ecosystem, from businesses and researchers to investors and government bodies. We are keen to receive feedback at [bridgeai@iuk.ktn-uk.org](mailto:bridgeai@iuk.ktn-uk.org) so that we can work on our shared goal to transform tomorrow together.

**Indro Mukerjee**  
CEO, Innovate UK

An abstract graphic at the top of the page, featuring vibrant, iridescent colors (purple, blue, green, yellow) that resemble liquid or smoke flowing and merging. The colors are set against a dark teal background.

# 01

Introduction and  
programme  
rationale



This annual report provides a summary of the BridgeAI programme's achievements since its launch in April 2023. It sets out the programme's rationale, its early successes and achievements, and upcoming initiatives for its second year, as well as industry perspectives on AI adoption.

## Introduction

The Innovate UK BridgeAI (BridgeAI) programme drives growth and competition in the UK economy through the adoption of artificial intelligence (AI) and machine learning (ML). It uses the investment of £100 million from the UK Research and Innovation (UKRI) **Technologies Mission Fund (TMF)** and Innovate UK's core budget to foster an AI innovation network, bringing together businesses from priority sectors, AI experts and developers.

The challenges in adopting AI have been well-documented, especially those relating to skills, data, ethics, trust, responsible use, organisational and cultural change, compute power, compliance and the law. These challenges are felt more keenly in some areas of the economy, and there is a notable divide between AI-adopters and non-adopters in all industries and organisations – even though AI holds enormous potential to enhance productivity and competitiveness for almost every organisation.

BridgeAI has been designed to encourage wider AI adoption across four specific industries with low AI adoption rates, while providing AI adoption resources for the wider AI ecosystem. Its activity and remit support the UK Government's National AI Strategy for transition to an AI-enabled economy through widespread AI adoption across multiple sectors.

## Numbers at a glance

BridgeAI has already begun to drive AI adoption in the target sectors, while providing AI adoption resources for the wider AI ecosystem.

### Total number of organisations funded

560+

### Total value of funding issued

£60+ million

### Total organisations engaged

2,500+

# Programme overview

## The consortium

BridgeAI is being delivered by a consortium comprising: The Alan Turing Institute, British Standards Institution, Digital Catapult, Innovate UK, and the Hartree Centre.

### BridgeAI delivers funding and support by:

- Connecting businesses in priority sectors with AI experts: building an innovation community to help businesses adopt AI through collaboration with developers
- Developing new trusted AI services and technologies: supporting the co-creation of cutting-edge AI technologies by the supply and demand sides of the AI ecosystem
- Elevating high-growth potential sectors: building new capabilities in businesses through training and upskilling in AI providing access to scientific expertise
- Addressing standards gaps: providing clarity and guidance, identifying standards gaps, and fast-tracking the development of appropriate standards

## Target industries

BridgeAI has identified four key sectors with high growth potential, but currently low AI adoption rates. By offering funding and support, the programme aims to enhance productivity and efficiency, and help businesses stay ahead of the curve in an increasingly competitive marketplace.

These sectors are:



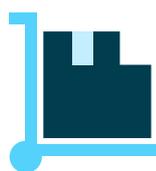
**Agriculture and  
food processing**



**Creative  
Industries**



**Construction**



**Transport,  
warehousing  
and logistics**

## Foundational support services

BridgeAI provides businesses in the four target industries with foundational support services, including:

- Direct funding for AI projects
- Helping companies to operationalise AI
- Access to compute power
- Ensuring responsible innovation
- Upskilling

Through work with these industries in the first year, the programme has identified sector-specific issues that it is addressing through new initiatives in year two. The foundational programme is tailored to meet their needs even more closely.

**Further details can be found in the next steps section**

## Definitions of AI and related terms

There are many different interpretations of ‘artificial intelligence’, and no single agreed definition of the term. The UK Government has released a number of definitions and interpretations in recent years. For example, the [National AI Strategy](#) (September 2021) describes AI as ‘machines that perform tasks normally performed by human intelligence, especially when the machines learn from data how to do those tasks’. The recent government white paper, [AI Regulation: A Pro-Innovation Approach](#), recognises the problems that different definitions cause, and instead defines characteristics of AI that require regulation.

### BridgeAI uses the UKRI<sup>1</sup> definition of AI

“...a suite of technologies and tools that aim to reproduce or surpass abilities (in computational systems) that would require ‘intelligence’ if humans were to perform them. This could include the ability to learn and adapt, to sense, understand and interact; to reason and plan; to act autonomously; and even to create.”

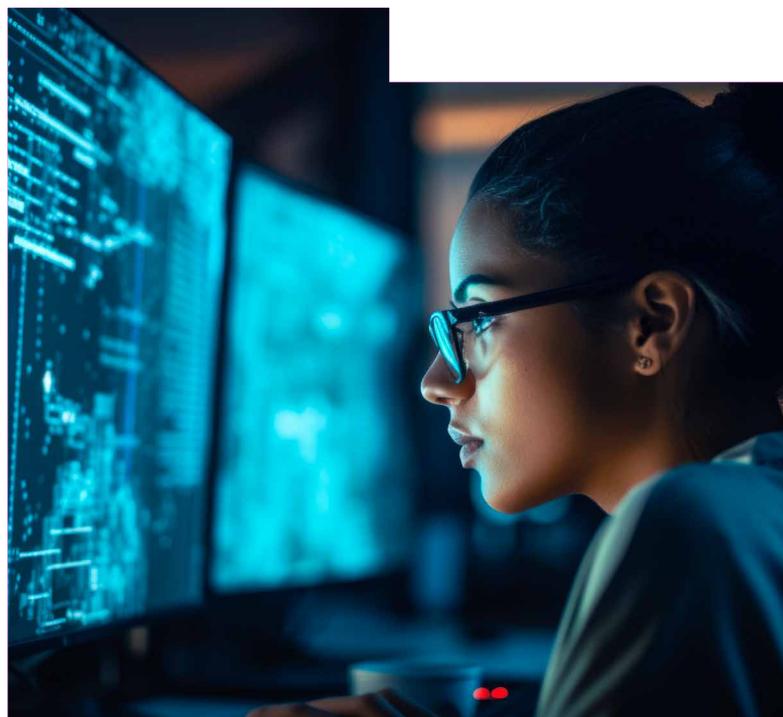
**In this report the following terms are also used:**

### AI adoption

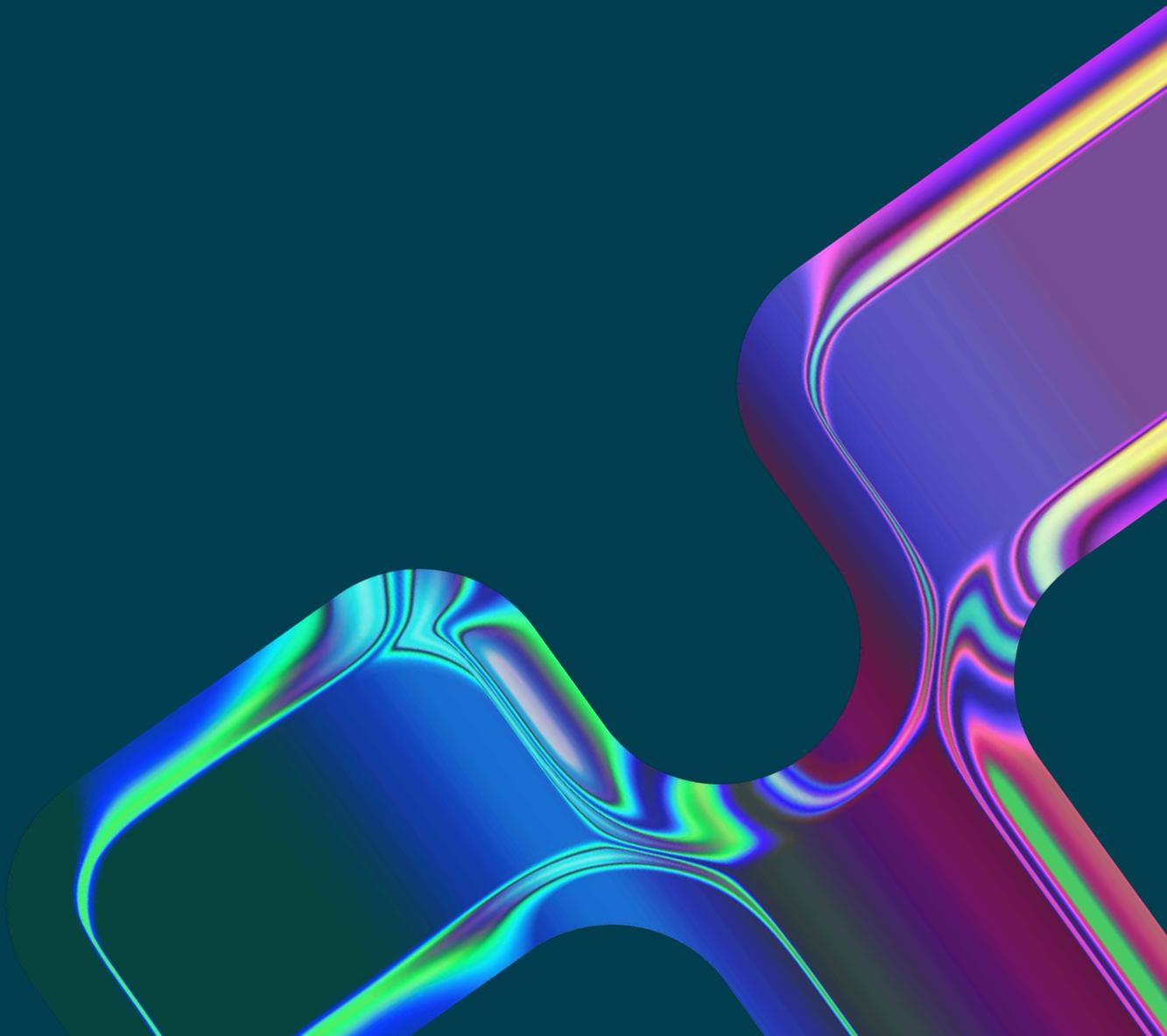
The process by which a company or organisation uses or integrates an AI technology into its products, services or operations.

### AI ecosystem

The complex network of actors and processes that enable the use and supply of AI throughout the AI lifecycle (including supply chains, markets and governance mechanisms).<sup>2</sup>



# The context and rationale for BridgeAI



# AI market trends

The global artificial intelligence market was valued at £424.5 billion in 2022 and is expected to grow to £2,407 billion by 2032, a compound annual growth of 19%.<sup>3</sup>

AI could create over £400 billion in economic value in the UK by 2030.<sup>4</sup>

The US International Trade Administration values the UK's AI market at over £16.9 billion, and expects it to grow to £803.7 billion by 2035.<sup>5</sup>

Global growth in AI investment has been consistent until 2022, which saw the first drop in a decade, down by £1 billion – from £68 billion to £67 billion.<sup>6</sup> This trend was also reflected in the UK's investment figures for 2022.<sup>7</sup>

This drop in investment has been attributed to general market conditions, under which investment has decreased globally. However, AI still outperformed other tech sectors (such as fintech, life sciences and digital security<sup>8</sup>), and experts believe the long-term trend will be for further global investment increases, reaching £160 billion in 2025.<sup>9</sup>

## Generative and enterprise AI

The year from 2023 to 2024 saw the advent of generative AI (GenAI or GAI) and foundation models, following the release of the text-based generative tool ChatGPT by OpenAI. ChatGPT reached 100 million monthly active users in just two months, much faster than popular social media sites such as TikTok (which took nine months to reach that number) and Instagram (which took two years).<sup>10</sup>

ChatGPT's rapid and widespread uptake has been accompanied by a rise in users of other generative AI models for video, visual and music content creation. In December 2023, Google released the latest Gemini model which Google claims can match and surpass the performance of OpenAI's GPT-4 across several key benchmarks.<sup>11</sup>

**Generative AI could add an estimated £2.1 to £3.52 trillion to the global economy annually, and increase the impact of all artificial intelligence by 15–40%.<sup>12</sup>**

The generative capabilities of these models and their ability to reach new levels of performance have also reignited public discussion about AI. Much of 2023 was dominated by narratives around existential risk, and legal and copyright issues related to the data and content being scraped to feed generative AI.

The extent to which these powerful models will be integrated into human workflows is not yet clear with research in 2023 suggesting that up to 79% of businesses have experimented with GAI, and 22% have started to use it regularly in their work, with initial use cases mostly appearing in sales and marketing.<sup>13</sup>

Another area where generative AI has enjoyed widespread use is software engineering and coding,<sup>14</sup> with programmes such as GitHub Copilot leading the way. According to GitHub, Copilot has been used by over 1 million software developers, with an estimated £1.2 trillion impact on global GDP.<sup>15</sup> AI models have become so capable at coding that DeepMind's Alpha Code has performed comparably with humans in coding competitions.<sup>16</sup>

During 2023 there was a rise in businesses integrating generative AI and other models into existing products, or into new enterprise AI products. IBM's watsonx leverages ML and generative techniques to provide businesses with an end-to-end AI product that can be used for internal knowledge management, automated data and insights on administrative or proprietary data, and content generation.<sup>17</sup> Big tech companies are also integrating their various AI models into existing portfolios of products, such as Microsoft's Copilot,<sup>18</sup> which acts as an automated assistant, and Google Maps' Immersive View.<sup>19</sup>

# AI inputs: compute power and data

## The growing need for compute

The success of AI systems is partly due to the increasing capability of AI hardware to handle larger models.<sup>20</sup> The hardware market has been characterised by large tech companies developing high-performance computing clusters to process ever-growing quantities of data.

The supply of high-performance compute – specifically graphics processing units (GPUs) and other chips needed to run AI models – is dominated by a few companies. The demand for compute has seen record revenue growth for companies such as NVIDIA, which is widely regarded as the main provider of state-of-the-art GPUs.<sup>21</sup> Although building high-performance compute is costly and largely concentrated in the private sector, some governments have also begun investing in compute clusters, such as the UK Government's investment of £1.5 billion.<sup>22</sup>

Researchers are now suggesting that the continual expansion of compute power is unsustainable, due to environmental issues, training costs, and perceived future plateaus in the effectiveness of hardware.<sup>23</sup> Sam Altman, OpenAI's CEO, recently said that the future of AI will depend on an energy breakthrough.<sup>24</sup> Some researchers have called for a renewed focus on algorithmic efficiency and hardware improvements,<sup>25</sup> and the UK's Advanced Research and Innovation Agency (ARIA) has defined a new opportunity space for the need to find new ways to scale AI compute and algorithmic efficiency.<sup>26</sup>

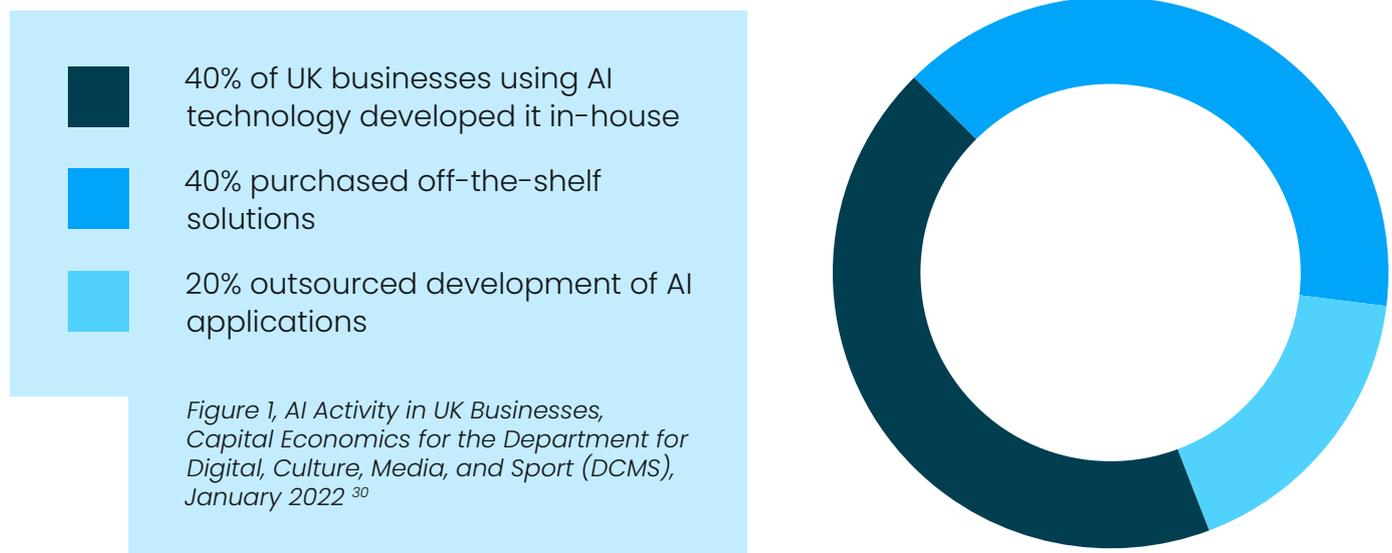
## The drive for data

The drive for compute is accompanied by the need for increasing volumes of data to feed AI models. Industry research has indicated that AI may run out of high-quality language data by 2026, and low-quality language data between 2030 to 2050, although these predictions do not consider improvements in algorithmic efficiency.<sup>27</sup>

There have been recent landmark deals struck between licence holders and large AI companies, (such as Open AI with Associated Press and Shutterstock),<sup>28</sup> and more similar deals may take place. However, large AI companies have also been subject to lawsuits targeting unlawful data scraping, and how these suits are settled is likely to impact on how the market for data develops, and how major AI companies spend their capital in future.<sup>29</sup>

## AI adoption by UK business

UK businesses can choose to use ready-made AI tools (such as generative AI or enterprise AI), build their own machine learning models, or outsource to an external vendor – or they can invest in a combination of all three.



50% of small to medium-sized companies are buying off-the-shelf solutions, with many citing initial cost as a barrier to developing their own AI applications.<sup>31</sup>

There are advantages and disadvantages to all approaches, that will vary depending on the type of business, how AI is going to be used, and what resources they already have available.

- **Building AI/ML capabilities** in-house may mean adapting operational business models to prioritise activities such as collecting quality data, building a team of talented data scientists, and investing in long term compute capacity. Although companies benefit from having a model built for their specific operating environment, they may incur higher overall costs.
- **Enterprise AI** is a potentially less complex option, and can be customised with business data. However, it may not be particularly useful for an organisation without readily accessible data. In addition, it may not be tailored to specific operating environments, and be restrictive in terms of experimentation, given that many models come ‘pre-built’.

**All approaches require employees using the integrated AI product or service to be trained or upskilled.**

# The AI policy landscape

The government's [UK Science and Technology Framework](#) (February 2024), identifies AI as one of five critical technologies in which the UK is seeking to build a strategic and globally competitive advantage. The goal is for the UK to become a science and technology superpower by 2030.

## The UK's AI strategy and commitments

### The vision and strategy

In 2017, the [Industrial Strategy](#) set out a vision to make the nation a global AI innovation hub. This was followed by the [AI Sector Deal](#) in 2018, investing nearly £1 billion into AI research, development, and adoption across industries. This investment laid the groundwork for the comprehensive [National AI Strategy](#), published in 2021 by the Office for Artificial Intelligence, and which outlines three pillars for the UK:

- **Investing in the long term needs of the AI ecosystem**
- **Ensuring AI benefits all sectors and regions**
- **Governing AI effectively**

### The AI Action Plan

The [AI Action Plan](#) includes initiatives such as investing over £2.3 billion in AI, creating the NHS AI Lab, and establishing the Turing AI World-leading Researcher Fellowships.

### The RTA roadmap

The Responsible Technology Adoption Unit (RTA) (formerly the Centre for Data Ethics and Innovation (CDEI)) has released a [roadmap](#) for the creation and support of a robust 'AI assurance ecosystem', that acts as a third party between AI developers and adopters, providing testing and verification of AI systems and building overall trustworthiness. This roadmap includes the introduction of new legislation, AI-related education and accreditation, and the creation of a professional service for the management and implementation of trustworthy AI systems to benefit the UK economy.

## The DSIT framework

The Department for Science, Innovation and Technology (DSIT) white paper [AI Regulation: A Pro-Innovation Approach](#), sets out the UK Government's proposed regulatory framework, which introduces a new and flexible approach, emphasising sector-led governance and light-touch instruments. This is designed to ensure comprehensive regulatory coverage with flexibility, enabling the UK approach to be regularly updated according to new opportunities and risks arising from AI.

## AI Safety Summit and AI Safety Institute

The UK hosted the first [Global Summit](#) on AI Safety in November 2023, aiming to foster an international collaborative approach to AI safety research and to establish measures for enhancing the safety of these systems, including the establishment of the UK [AI Safety Institute](#).

## AI and Net Zero

The UK Government has invested in AI for other strategic goals, such as the Department for Energy Security and Net Zero's (DESNZ) [Net Zero Innovation Portfolio](#). This includes an investment of £1.5 million into the Artificial Intelligence for Decarbonisation programme, which has been set up to support and promote the adoption of AI decarbonisation solutions for industry.<sup>32</sup> From this investment, £500,000 is being targeted at creating an AI for Decarbonisation Virtual Centre of Excellence (ADViCE) being delivered by Digital Catapult, the Energy Systems Catapult and The Alan Turing Institute.<sup>33</sup>

## International AI policy approaches

Globally, the AI governance landscape has become more defined and yet more divergent, with several governments proposing differing regulatory policies for governing AI within their own jurisdictions.

### European Union

Unlike the UK, the European Commission has adopted a horizontal, risk-based framework for AI regulation, aiming to establish guidelines applicable to all sectors based on potential risks. The European Parliament approved the [Artificial Intelligence Act](#) in June 2023 (expected to be fully effective in 2026), setting a global precedent as the first legislative body to regulate AI usage.

- The Act's aim is to ensure that AI use in the EU is safe, transparent, traceable, non-discriminatory, and environmentally friendly.
- It categorises risks into four tiers: unacceptable, high, limited, and minimal. Specific regulations are tailored to each level's potential impact on fundamental rights.
- The Act also promotes innovation by requiring every EU member state to create at least one AI regulatory sandbox. Spain is pioneering these efforts and has set up the [first AI sandbox](#) to facilitate controlled AI experimentation.

For more information on EU AI policy, see BridgeAI's [Decoding AI Policy](#) paper.



## United States

The US has primarily pursued a non-legislative approach to AI policy, focusing on non-binding principles and leveraging existing laws.

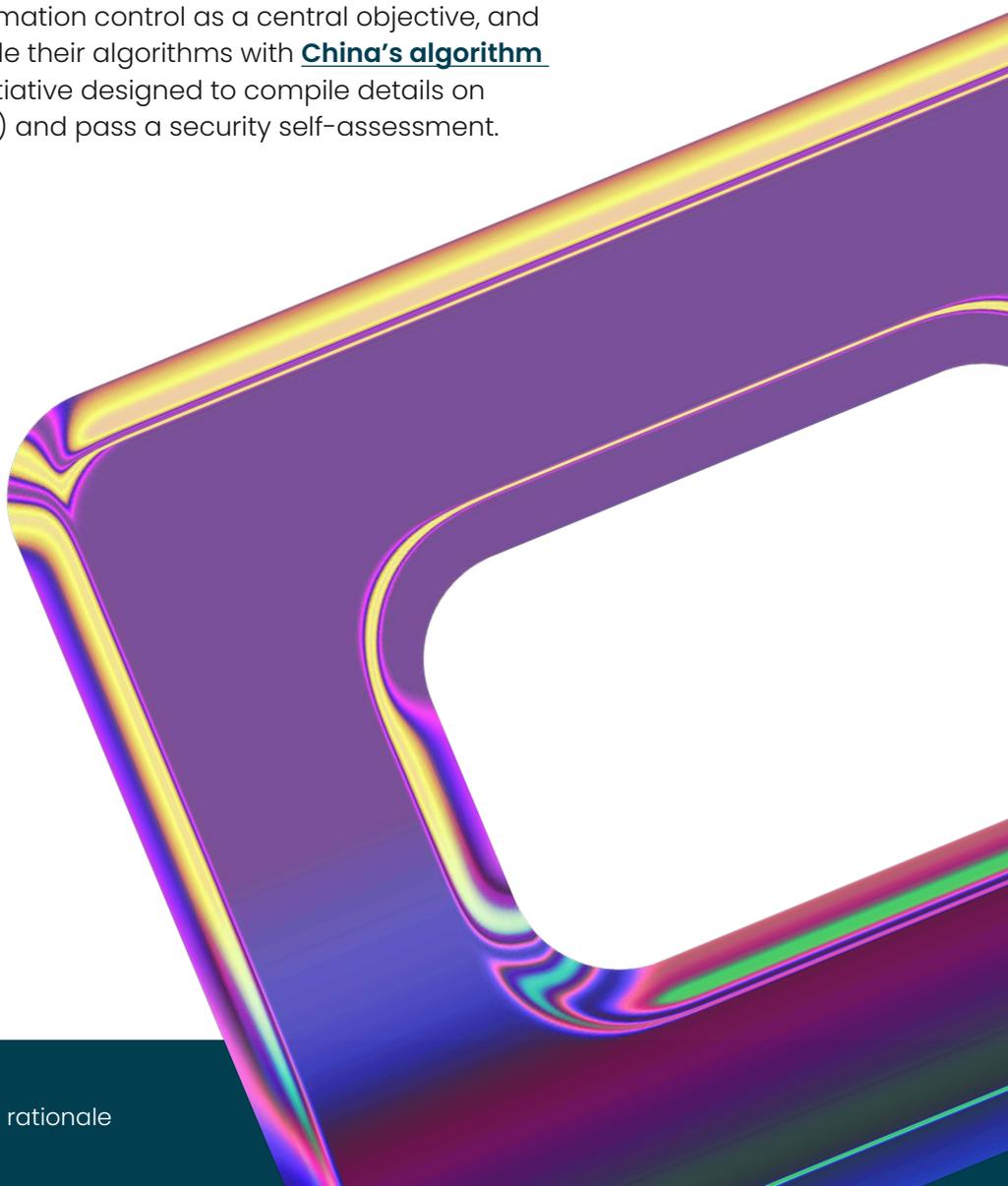
The enactment of the 2020 [National AI Initiative Act](#) is a foundation for promoting AI research and development in the US, while creating a collaborative environment with global partners. The Biden administration built upon this foundation by releasing the [Blueprint for an AI Bill of Rights \(BOR\)](#) in 2022.

In addition, in October 2023, [President Joe Biden signed an executive order](#) aimed at reducing AI risks to consumers, workers, minority groups, and national security.

## China

China's AI regulatory approach prioritises state security and social stability within technological development, reflecting differences in governance models and priorities.

China's three key regulations on algorithms and AI are the [recommendation algorithms, the rules for deep synthesis](#), and the [draft rules on generative AI](#). These draft rules underscore information control as a central objective, and collectively oblige developers to file their algorithms with [China's algorithm registry](#) (a recent government initiative designed to compile details on algorithm training methodologies) and pass a security self-assessment.



# UK AI innovation landscape

The BridgeAI programme represents one of many UKRI investments in AI as part of the government's overall national strategy.

## Artificial intelligence— five critical technologies

UKRI is vital to fulfilling the Government's vision to make the UK a global centre for Artificial intelligence innovation. It invests in research at the leading-edge of AI to build scientific advantage; drive technologies which are responsible, ethical, and accountable; understand and adapt AI's impact on society and collaborate with government, industry, and the public to boost AI adoption and economic transformation.



## Mission driven advances

### POINT 1:

Understanding and promoting adoption and diffusion of AI across sectors

**POINT 2:** Advancing AI by developing AI that works with any data

**POINT 3:** Developing AI that will open up new possibilities in science and research

**POINT 4:** Enabling responsible, trustworthy AI to power benefits for society

**POINT 5:** Solving pressing challenges in health and net zero with AI

### Adoption and Scale up

**Innovate UK's new £100 investment in the BridgeAI programme** aims to drive growth and competitiveness in the UK through the adoption of artificial intelligence (AI). Part-funded by the Technologies Mission Fund, it brings together businesses from priority sectors with AI experts and developers, to foster an AI innovation network in the UK.

### Foundations of AI

**EPSRC's Research Hubs (£60M)** will develop next gen AI technologies that have the capabilities to deal with the complexities of real data – dynamic, real time, federated, noisy, sparse, multimodal. Designed and delivered in partnerships between academia, industry and wider users, hubs will develop AI that meets the demands of real-world applications.

### AI for Science

**EPSRC's research hubs in AI for Science and Engineering (£20M)** will use AI to do science and engineering differently. These interdisciplinary hubs will develop and use AI that will enable new discoveries and the creation of new scientific knowledge and understanding and support the UK as a scientific superpower.

### Regulation

**Responsible AI UK (£35M) (RAIUK)** Part-funded by the TMF, RAIUK convenes researchers, industry, policy makers and civil society to deliver world-leading best practice for Safe AI systems. Interlinked is the Bridging the responsible AI divide programme (**BRAID**, £8.5M) combining social and humanities research to ensure AI benefits people, communities and society.

### Critical Technologies

Through the **Technologies Mission fund (TMF)** UKRI is investing £110m into AI. £26m is being invested in a suite of projects that will bring the power of AI to bear on global challenges in health and net zero. The remaining £84m is part of the investments into BridgeAI and RAIUK.

**POINT 6:** Setting UK leadership in AI through the Alan Turing Institute

**POINT 7:** Cementing World Leading talent in the UK

**POINT 8:** Building a pipeline of talent for the UK's AI future

**POINT 9:** Building flexible, scalable AI computing infrastructure

**POINT 10:** Building global collaborations as a trusted partner in research and innovation

### World Renowned Institutes

The Alan Turing Institute (c.£15M/yr) is the UK's National Institute for AI and Data Science. The Turing are evolving to deliver their refreshed strategy, Turing 2.0 which brings focus and leverages the unique strengths of a national institute. The Turing remain a globally recognised leadership vehicle connecting and convening across the research and innovation.

### World Leading Talent

UKRI's Turing AI Fellowships recruit retain and develop world-leading academic talent in AI. UKRI is currently investing over £54M in 8 World Leading Researcher Fellows and 19 Fellows and Accelerator Fellowships, supporting them to work flexibly with businesses, government and international partners. An additional investment of £12M for new World leading researcher fellows is planned to be committed in the latter part of 2024.

### AI Skills

UKRI's AI Centres for Doctoral Training (£117M+£100M previously) are training a new generation of PhD students to build and sustain the UK's digital future. Leveraging over £75M from other sources over the first 1000 students, and with a further £71M promised in the new centres, cohorts train to develop skills in the applications and implications of AI in areas of high priority for the UK across the breadth of UKRI's remit.

### Infrastructure

UKRI is working with DSIT to deliver a UK AI Research Resource (c.£800M) to enhance the UK's existing computing facilities, establishing the UK's largest supercomputing infrastructure to date through a series of public clusters which will provide flexible compute resource to AI researchers and startups in the UK.

### International Partnerships

Through the International Science Partnerships Fund (£10M) UKRI is investing in collaborative AI with the US through bilateral programmes. As trusted partners UKRI is combining its strengths to tackle globally significant issues such as AI governance and regulation through collaborative research programmes in responsible trustworthy AI.

## Building an AI ecosystem

# Challenges in adopting AI

Although AI has advanced significantly in its capabilities, adoption in recent years has been slow. A number of barriers still prevent widespread adoption across industry.

## Data quality, access, maturity and governance

### Data quality

**Any AI/ML model is only as good as the data that feeds it (hence the computing term 'GIGO': garbage in, garbage out),**

The quality of data directly impacts the performance, accuracy, and reliability of AI models.<sup>34</sup> High-quality data enables models to make better predictions, produce more reliable outcomes, and mitigate bias, ultimately fostering trust and confidence among users.<sup>35</sup>

Variations or 'data pollution' affects the accuracy of machine learning predictions, and in frontier AI (general-purpose AI models that can perform a variety of tasks and match or exceed the capabilities of today's most advanced models) data quality has become an increasing concern, particularly in relation to the issue of 'model collapse'.<sup>36</sup> This is when newer AI models are trained on synthetic or AI-generated training data, leading to reduced overall capabilities.<sup>37</sup>

**77% of IT decision-makers do not completely trust the data in their organisation for accurate and timely business-critical decision-making.<sup>38</sup>**

Research also shows that 83% of IT decision-makers do not always have access to the data needed to inform timely decision-making, and that 91% believe work is needed to improve the quality of data within their organisation. Additional research suggests that in 2023, the average impact on revenue caused by poor quality data increased between 26% and 31%, year on year.<sup>39</sup>

## Data access

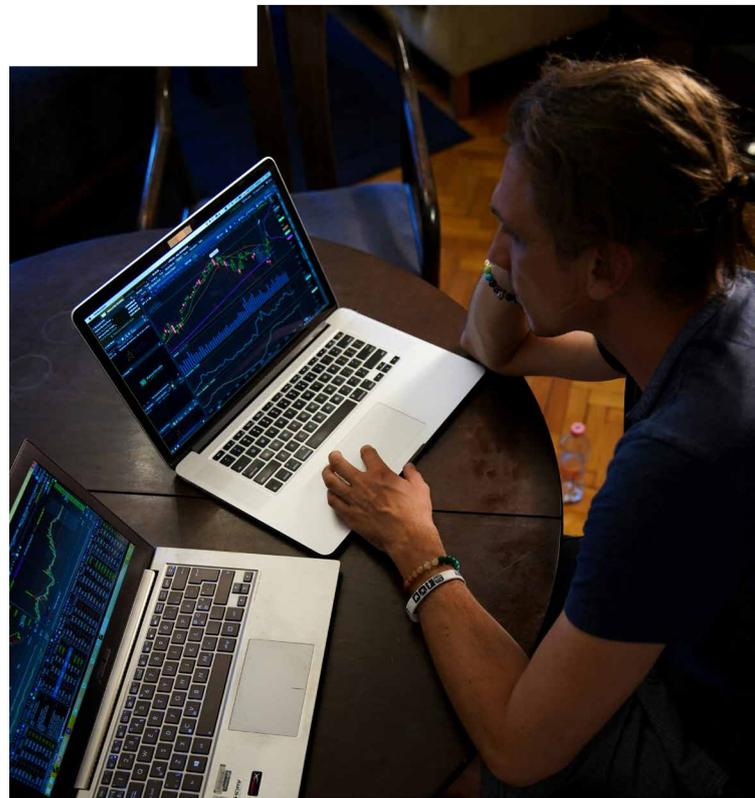
The ability of an organisation to manage, collect and govern data is an important consideration, and companies with strong data foundations tend to be more able to adopt and leverage AI.<sup>40</sup>

Enterprises may need to assess where relevant data is located, and design an effective collection method before they can use advanced data analytics and AI. Collecting, capturing and sourcing data for AI use can be prohibitively expensive for some companies. Sometimes data can be easily accessible, for example, from enterprise software tools; and sometimes obtaining data can be difficult if, for example, specialist measurement tools are required to capture it.<sup>41</sup>

**As many as 44% of businesses cite an inability to obtain the right data as a key barrier to their adoption of AI.<sup>42</sup>**

Data may also be obtained from external sources, with several organisations advocating greater sharing of public and private data.<sup>43</sup> For example, in the private sector, the Google Data Commons project consists of consolidated and standardised publicly available datasets from 194 countries.<sup>44</sup> However, there are some barriers to data sharing, such as interoperability, the privacy and sensitivity of data, and the potential difficulty in sharing data securely.<sup>45</sup>

New data intermediaries – organisations that facilitate increased sharing and accessibility of data – may help to overcome some of these difficulties. They may provide infrastructure and expertise to support interoperability and compliance with relevant regulations, and act as mediators in negotiating arrangements between organisations looking to share, access, or pool data.<sup>46</sup>



## Data maturity and governance

Adopting AI requires robust data foundations, including good data maturity and governance.

- **Data maturity:** an organisation's capability, effectiveness and readiness to use data
- **Data governance:** how an organisation ensures data is secure, private, accurate, available, and usable, and includes actions required, processes to be followed, and the technology in use throughout the data life-cycle

Yet many enterprises encounter data challenges, with almost one in five businesses citing data management issues as an AI adoption barrier.<sup>47</sup> These challenges often encompass fragmented data silos, lack of standard formats, inconsistent data quality, limited transparency about data assets, and organisational inertia around change management.<sup>48</sup>

To achieve a high level of data maturity, experts advise that data should be firmly embedded throughout the business and fully integrated into all decision-making and activities.<sup>49</sup>

“Data governance is critical to building trustworthy, robust and testable AI systems. International standards can help organisations put data governance in place and build trust in AI solutions with investors and internationally with customers and supply chains.

Certification in cyber security (ISO/IEC 27001), AI management (ISO/IEC 42001) and wider data governance (ISO 8000 series) enable startups and businesses to demonstrate their commitment to data governance.”

**Matilda Rhode,**

Sector Lead - AI and Cyber Security,  
British Standards Institution

# Ethics, trust, and responsible AI

## Controversies around AI

While AI holds enormous potential for the economy and society, growing concerns around the potential misuse of AI are well-founded. According to the AI, Algorithmic, and Automation Incidents and Controversies Repository (AIAAIC), AI misuse has grown exponentially in recent years, with the number of incidents 26 times greater in 2021 than in 2012.<sup>50</sup>

There are also well-documented issues of bias with AI, exacerbated by the advent of generative AI, where models consistently perpetuate stereotypes (such as gendered representations of prompts) based on their training data. An example would be the overwhelming return of images of men in response to the prompt 'CEO'.<sup>51</sup>

Where models source their data from has also been controversial, with 2023 seeing a string of copyright infringement lawsuits being served by media and entertainment corporations against AI companies.<sup>52</sup>

Many UK business leaders are now aware of the potential risks of AI, including misinformation, quality control and job losses.<sup>53</sup> Concern amongst consumers is also a barrier to adoption: according to a study by KPMG UK, 82% of 3,000 respondents have concerns or challenges that prevent them from using AI technologies.<sup>54</sup> These include data privacy issues, as well as a preference for interacting with humans.



## The rise in AI assurance and responsibility principles

In response to growing concern, the AI ecosystem has seen a rise in responsible AI techniques and assurance regimes. The number of accepted submissions to ACM FAccT (Conference on Fairness, Accountability, and Transparency) has increased tenfold since 2018.<sup>55</sup>

According to an [analysis of over 40 policy documents by Innovate UK and Trilateral Research](#), responsible AI techniques share similar principles, such as: transparency and explainability; safety, security and robustness; non-maleficence; privacy; fairness and justice; and accountability.<sup>56</sup>

AI assurance, which aims to build a robust regime for auditing and accreditation, is gaining momentum in the UK, evidenced by the publication of the RTA's AI assurance roadmap and portfolio of assurance techniques.<sup>57,58</sup> At the world's first AI Safety Summit, hosted by the UK, national representatives, companies, civil societies, and academic institutions discussed the importance of managing frontier AI systems and further consolidating emerging governance and testing standards.<sup>59</sup> Methods for explainable artificial intelligence (XAI) and bias mitigation are also becoming increasingly standard.<sup>60</sup>

Despite this proliferation of AI assurance models and the focus on responsible AI, there are gaps, and a lack of consistent methodology. Current frameworks tend to focus on explainability, so that data scientists can understand how their models arrived at specific results, rather than the socio-technical repercussions of model use (for example, building an AI system that allows the consumer to understand and contest how the model came to a decision).<sup>61</sup>

**Research shows that more innovation and funding is needed to address areas of responsible AI such as: responsible data creation and collection, consistency in fundamental AI assurance methodologies, measurement and benchmarking of sustainable AI, socio-technical training of AI researchers, and exemplars and case studies of responsible AI.<sup>62</sup>**

## Lack of responsible AI operationalisation

Many studies have found significant gaps in the operationalisation of AI principles and frameworks.

- A 2022 survey of 1,200 corporate executives found that many companies are incorporating AI ethics into existing business practices, yet fewer than 25% of these organisations operationalise these principles and practices.<sup>63</sup>
- A 2022 report by BCG and MIT found that although 52% of respondents have a responsible AI programme in place, over 79% of them say that its implementation is limited in scale or scope.<sup>64</sup>

Research points to several reasons for this, including a lack of responsible AI expertise; insufficient prioritisation by senior leaders; a lack of funding or resourcing; and a lack of awareness of responsible AI initiatives.

These studies indicate that while organisations may be aware of responsible AI, there is a significant intention-action gap.

“The adoption of AI technologies will continue to be hindered unless organisations understand how to build trust in their technologies and have the agency to do so.

As the field grows and expands, responsible AI is best approached in a way that is user-centred and interwoven with existing approaches in product, business, technical, and design fields so that responsible AI is built-in, not bolted onto organisational processes.”

**Jennifer Cheung,**

Technology Ethicist, Digital Catapult

# Organisational change and culture

While AI will inevitably influence every organisation, becoming an integral part of operations, a recent report highlighted that the speed and success of adoption of AI are intricately linked to its existing culture.<sup>65</sup>

Successful integration of AI with organisational culture necessitates a nuanced approach that will depend on the company's size, focus and remit. Effective communication is pivotal, requiring transparency, two-way dialogue, and clear articulation of the benefits and training initiatives associated with AI adoption.

## Barriers to change

Understanding cultural barriers to change is imperative for successful implementation of AI.

**Fear of job loss** is significant, as employees are concerned about potential displacement. Clear communication emphasising AI's role as a complement rather than a replacement is crucial to alleviating these fears.

**Cultural inertia**, where organisations are entrenched in existing norms and routines, often hinders the adoption of new technologies, making it essential to highlight the benefits of AI and align its use with organisational goals.

Overcoming barriers can lead to a sense of excitement about upcoming developments; 62% of industry leaders expect to see transformative change within a year as a result of generative AI.<sup>66</sup>

## Communication

Managing expectations and securing buy-in from key stakeholders across the organisation through effective and transparent communication is crucial to the integration of AI. AI adoption requires open and honest communication regarding the goals, benefits and potential challenges involved. Employees are more likely to embrace change when they understand the rationale behind it and when trust is established. Creating channels for two-way communication and encouraging feedback means that issues can be identified, discussed and resolved early on, before they escalate.



## Ethical concerns

Establishing clear ethical guidelines for the use of AI within an organisation should be a priority for senior leaders. Considerations include privacy, bias, and the responsible application of technology. Emphasis on ethical considerations builds trust with employees and key stakeholders, and addressing diversity in key development teams can mitigate unintentional bias in the development and implementation of AI systems. Demonstrating a commitment to responsible AI can contribute to a positive culture, and lead to increased investment and take-up by other organisations within the wider AI ecosystem.

“In the landscape of AI adoption, technology is the engine, but company culture and organisational change are the navigators. It is the synergy of a common vision and management’s willingness to pivot and iterate whenever needed that chart the course towards innovation and sustainable growth.”

**Dr Michael Woldegebriel,**  
AI Innovation Lead, Innovate UK Business Connect

## Skills and training

The National AI Strategy highlighted skills and training as a core enabler for the effective uptake of artificial intelligence, and for strengthening the UK's position as an AI and science superpower over the coming decade.<sup>67</sup>

Talent availability is an ongoing issue for the UK's AI workforce, as well as AI understanding, and equality, diversity and inclusion (EDI). Many within the AI ecosystem have found it difficult to find the talent they need.<sup>68</sup> And businesses have consistently flagged the lack of employee skills at AI practitioner and operator levels as a barrier to adopting AI.<sup>69</sup>

The need for more AI education has also stressed been by educators, with up to 81% stating that students must be trained on how to use generative AI tools for their future careers.<sup>70</sup>

**Ensuring that students, non-technical employees and decision-makers – as well as data scientists and AI technicians – understand the opportunities, limitations and ethics of using AI is key to its adoption.<sup>71</sup>**

## Supply and demand

In the UK, a 2021 study found that the supply of data scientists from universities was unlikely to exceed 10,000 per year, yet there were potentially at least 178,000 unfilled data and AI specialist roles. This indicates a clear supply and demand issue, with the UK experiencing a lack of AI practitioners and professionals.<sup>72</sup>

Given that 80% of 2030's predicted workforce is already employed, the existing workforce will require reskilling if the UK economy is to adequately fill data and AI jobs.<sup>73</sup>

## Upskilling the broader workforce

In addition to the requirement for technical AI employees to be trained, non-technical staff who engage with AI need education and upskilling relevant to their role.

Positive perceptions of AI's usefulness and safety are paramount if the wider workforce is to effectively integrate AI applications into their workflows.<sup>74</sup> Currently, Britain's workforce appears to have particular concerns around the impacts that AI will bring. While nearly half the respondents in an Ipsos study agreed that businesses should embrace AI in the workplace if it saves time, only 12% felt that AI will create far more new job opportunities than are lost.<sup>75</sup>

There is also evidence to suggest that the impact of AI will affect certain demographics more than others. The Office for National Statistics (ONS) estimates that over 70% of the 1.5 million roles at risk of automation are held by women.<sup>76</sup> Similarly, a study by the Institute for the Future of Work has highlighted the risk of regional disparities in AI adoption, based on differing levels of training.<sup>77</sup>

## Diversity and inclusion

Linked to the issue of demographics, the promotion of people from under-represented and disadvantaged backgrounds within the AI industry is important. Diverse teams that develop and use AI are likely to produce more responsible societal outcomes for the technology.<sup>78</sup>

**Evidence suggests that organisations with diverse AI teams are more likely to be AI high performers (that is, companies identified as mature in their AI adoption journey).<sup>79</sup>**

And yet:

- A government study into the AI workforce in the UK showed that only 24% of the surveyed AI workforce was female.<sup>80</sup>
- In the UK AI startup community, all-male founded companies secured £9.58 billion of equity investment over the past decade, compared to only £136 million for all-female founders.<sup>81</sup>
- Black founders secured only 1.83% of all equity investment in AI companies in 2022.<sup>82</sup>

## Existing interventions

The UK Government has committed

**£118 million**

to AI-focused training, creating twelve new UKRI Centres for Doctoral Training in the development and application of AI.<sup>83</sup>

Since 2019, DSIT has committed approximately

**£38 million**

to postgraduate AI conversion courses, with a focus on increasing the diversity of the AI workforce and reskilling students for the AI age.<sup>84, 85</sup>

At the Spring Budget 2024, the UK Government also announced a

**£7.4m**

upskilling fund pilot that will help SMEs develop AI skills. This will complement the SME Digital Adoption Taskforce.<sup>86</sup>

“To maximise the opportunities of artificial intelligence, it is essential that we nurture the development of a robust AI skills base.

We must develop a trained and empowered workforce who can identify the opportunities for AI while mitigating the potential negative societal impacts. We also need diverse teams with different life experiences governing the development and use of these technologies.”

**Dr Matthew Forshaw,**

Senior Advisor for Skills, The Alan Turing Institute

## Access to compute

Compute or 'advanced compute' refers to computer systems where processing power, memory, data storage and network are assembled at scale to tackle computational tasks beyond the capabilities of everyday computers.<sup>87</sup>

### The demand for compute

Compute is a core dependency in building large-scale AI, with systems increasingly demanding more power to run and train models.<sup>88</sup> Research has shown that larger models and parameters have generally led to greater results in terms of AI accuracy and capability.<sup>89</sup>

However, compute power is expensive, and the supply of state-of-the-art hardware is not meeting current demand. The complexity of building and designing suitable AI chips means that only a few companies (such as NVIDIA, TSMC, Google, Microsoft and Amazon) have access to and control the world's compute markets.<sup>90</sup>

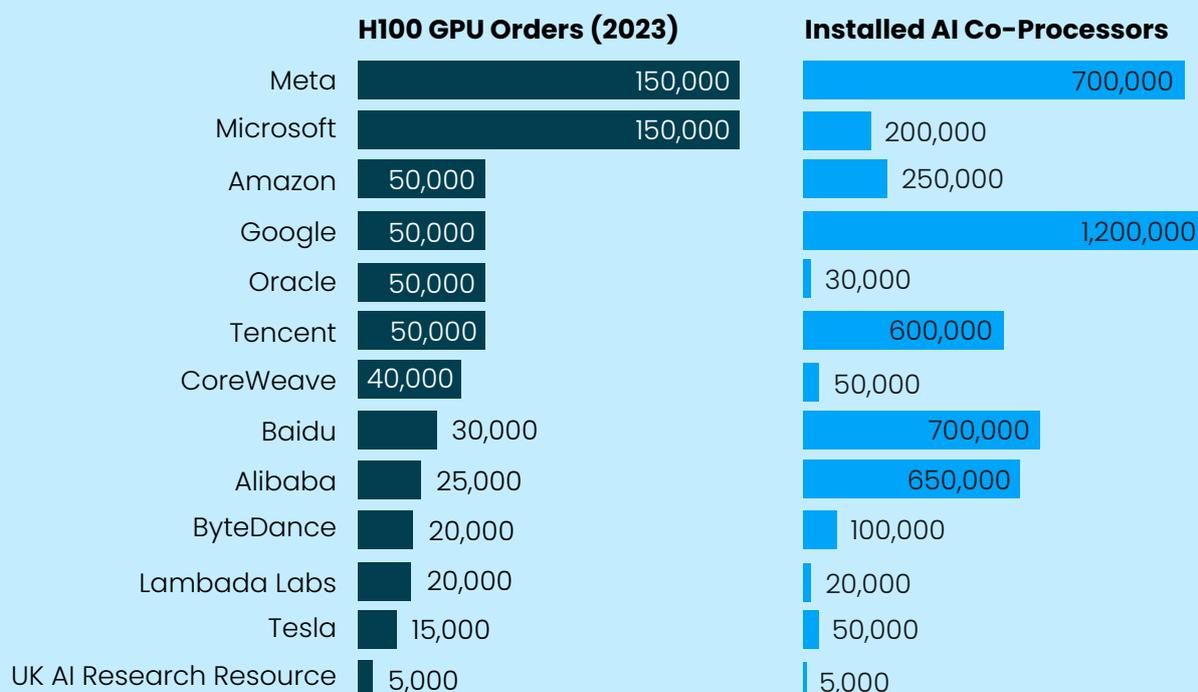
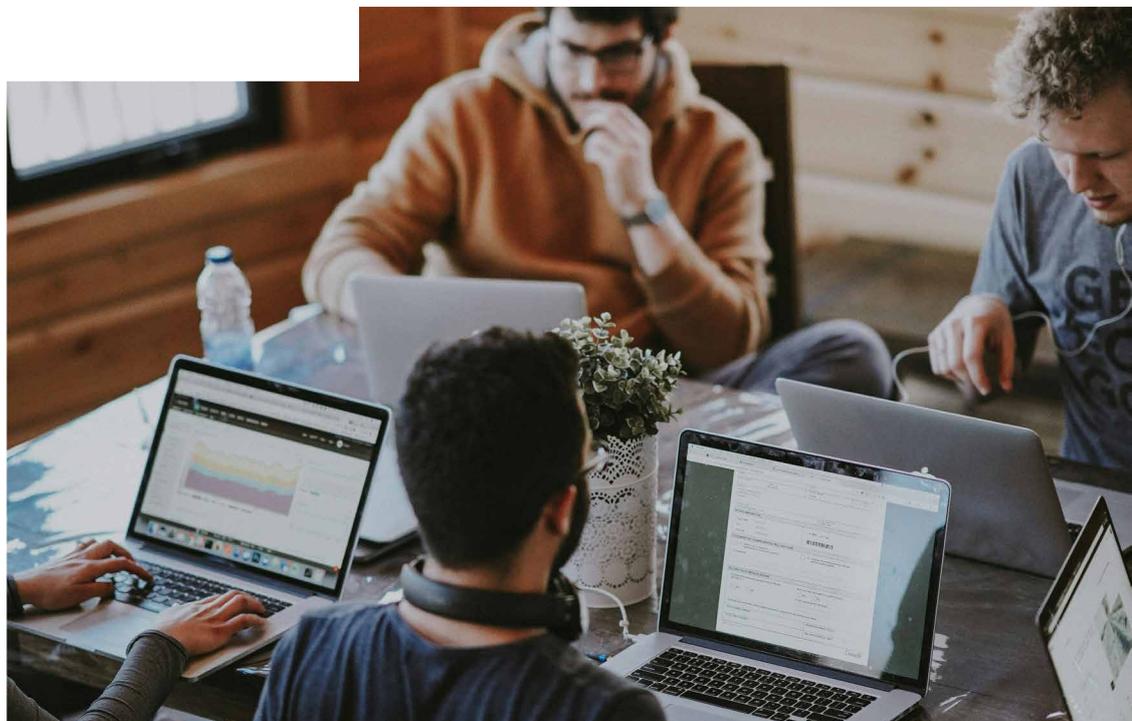


Figure 2: Estimated number of NVIDIA H100 GPU orders in 2023 (Tony Blair Institute Research, 2023)

Public access to compute is limited, as governments have only recently begun to invest in compute.<sup>91</sup> This means that AI developers, startups, and researchers mostly have to use these companies' services, with Google suggesting that up to 70% of generative AI startups operate on Google-powered services. Other less conventional arrangements have also emerged, such as venture capital firms negotiating use of AI cloud services for their AI portfolio companies.<sup>92</sup>

Available public compute capacity in the UK has decreased in recent years, falling from third in the world in 2005 to tenth by 2022.<sup>93</sup> The government has recognised this shortfall and invested close to £1.5 billion in the UK's sovereign compute capabilities, as well as making cloud computing and data services eligible for certain tax rebates.<sup>94,95</sup> At the Spring Budget the UK government stated it will lay out how researchers and innovative companies can access these facilities later in 2024.<sup>96</sup>

Even for organisations dominating the market, access to compute is still an issue, with companies such as Microsoft citing compute power as a key risk to investors.<sup>97</sup> The demand for NVIDIA chips is so high that there are waiting lists of up to a year, and some businesses have begun using GPUs as collateral against loans for purchasing yet more compute.<sup>98,99</sup> It has been speculated that some large mergers and acquisitions in the AI ecosystem have been caused by the cost of compute and the need for companies to consolidate.<sup>100</sup>



## Cost of compute

The cost of operating high-performance computing clusters is astronomically high. Estimates put the running costs of ChatGPT at close to \$100,000 per day, or \$3 million per month.<sup>101</sup>

As high-performance computing clusters are concentrated in large private tech companies, and building these systems from scratch is

prohibitively expensive, AI startups have to spend a significant amount of money on access to compute through cloud services or APIs.<sup>102</sup> Some estimate that 80% of their capital is spent on compute costs.<sup>103</sup> Mustafa Suleyman, former co-founder of DeepMind and founder of Inflection AI, suggested that his company would spend 95% of its funds on compute.<sup>104</sup>

“Many small and medium sized businesses will struggle to fund significant investments into high performance or large-scale compute infrastructure in order to take full advantage of supercomputing and AI technologies.

It can also feel like a risk to invest in digital technologies before understanding which solution is appropriate – so this is where collaboration and funded access to existing HPC infrastructure can really make a difference and allow companies to explore compute capabilities and AI in an expert-guided, low-risk environment.”

**Simeon Clow,**

Business Development, STFC Hartree Centre

# Regulatory and legal challenges

## Repercussions of regulation on businesses

Without legal and regulatory certainty, many businesses are reluctant or unable to adopt AI technology effectively. It is natural that businesses may be hesitant to invest in technologies that may become obsolete through market trends, or be prohibited in future due to regulation or legal disputes.<sup>105</sup> The cost of compliance is also disproportionately heavier for smaller businesses and startups than larger enterprises, as evidenced by the impact of GDPR.<sup>106</sup>

## UK Government investment

The UK Government has invested £2 million in setting up the Digital Regulation Cooperation Forum (DRCF) AI and Digital Hub, to provide businesses with advisory services to help them achieve compliance with relevant regulations.<sup>107</sup>

The DRCF brings together four UK regulators to deliver a cohesive approach to digital regulation: the Competition and Markets Authority (CMA), the Financial Conduct Authority (FCA), the Information Commissioner's Office (ICO) and Ofcom. These regulators have also been tasked with formulating AI-specific guidance, with the CMA publishing its initial review in May 2023, and other regulators expected to follow suit.

The UK Government has also announced the launch of a scaleup forum with accompanying support services to help these growing companies to navigate regulation,<sup>108</sup> as well as the launch of the AI opportunity forum to drive greater adoption of AI in the private sector, with a focus on appropriate governance.<sup>109</sup>



## Regulatory trade-offs

One trade-off that regulatory regimes consider is the balance between safeguarding citizens and the public by encouraging transparent and responsible AI, and introducing overbearing regulation that may stifle innovation. This trade-off is particularly important, as AI systems with greater capabilities are often inherently opaque or unexplainable.<sup>110</sup> Founders of AI startups have reported their concerns that the broad categorisation of high-risk activities by sector (such as education) could potentially stifle iterative innovation that would eventually lead to a responsible AI solution.<sup>111</sup>

This trade-off has been actively recognised in the DSIT AI white paper, which promotes a proportionate and pro-innovation approach.<sup>112</sup>

“Regulation will be key in shaping the future of AI in the UK. By providing structured governance frameworks, regulation empowers businesses with the confidence to integrate AI technologies in ways that boost productivity and growth. It serves as a bridge between innovation and accountability, ensuring that the benefits of AI are harnessed both responsibly and effectively.”

**Dr Cosimina Dorobantu,**

Co-Director and Policy Fellow, Public Policy Programme, The Alan Turing Institute

# AI supply and demand imbalance in the UK

## UK strengths in AI

The UK has a strong and dynamic AI ecosystem and is the third largest AI market in the world, after the United States and China.<sup>113</sup>

**3,170 companies generated £10.6 billion in AI-related revenue in 2022<sup>114</sup>**

**Over 50,000 people employed in AI-related roles<sup>115</sup>**

**27 AI unicorns**, third globally behind only China (70) and the USA (315).<sup>117</sup>

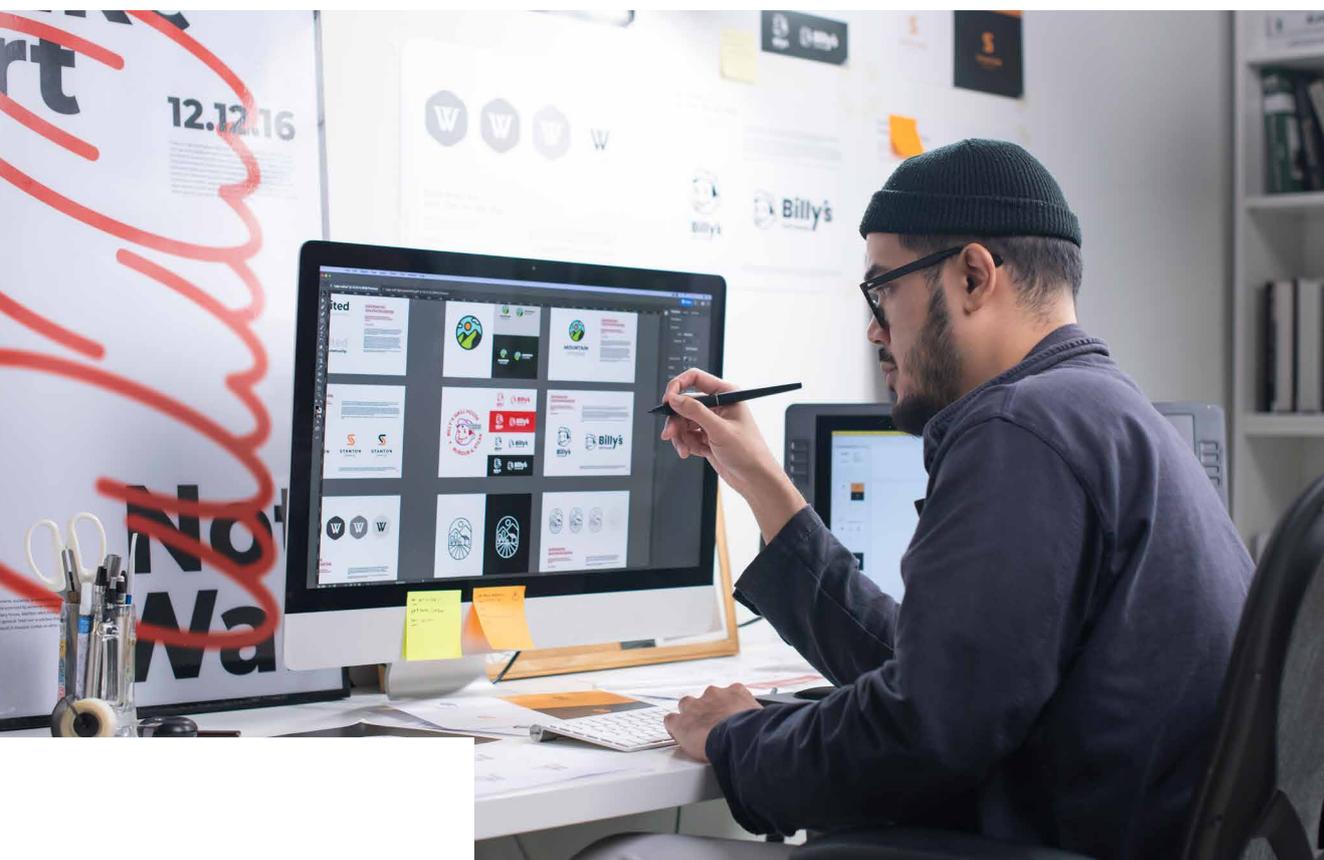
**£18.8 billion** in private investment since 2016<sup>116</sup>

The UK Government ranks third in the world for government AI-readiness (first in Western Europe) and is poised to use AI in public sector service delivery.<sup>118</sup>

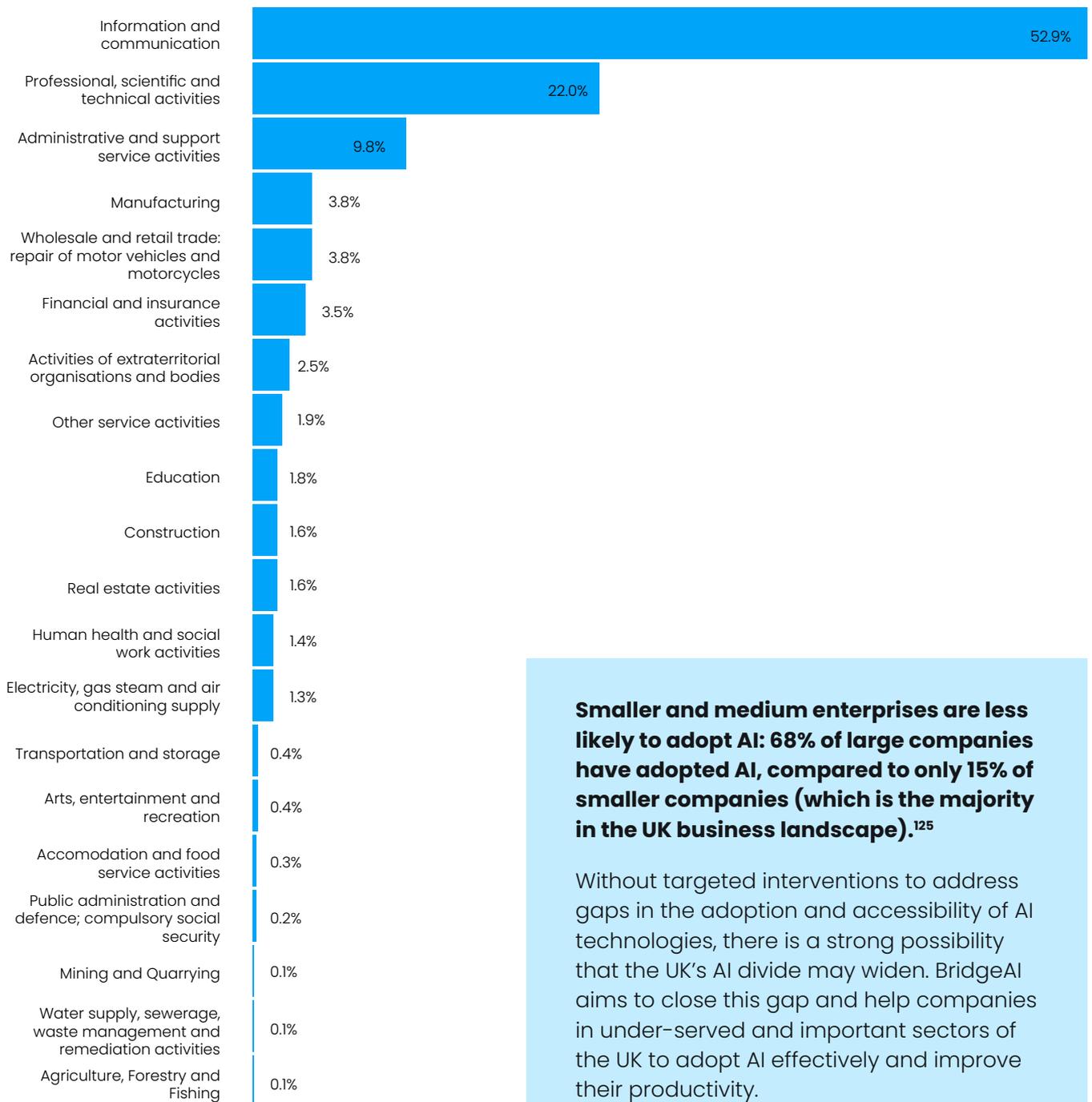
## The AI divide

Regardless of the UK's AI strengths, AI adoption is not yet widespread.

- A 2021 report showed that the UK's AI adoption was mostly focused on marketing and advertising activities, and on fintech.<sup>119</sup> AI companies operating in sectors such as transportation, construction and agriculture are less common.<sup>120</sup>
- A 2022 study found that 15% of UK businesses had adopted at least one AI technology, 2% were in the process of piloting AI, and only 10% were planning to adopt AI in future.<sup>121</sup>
- In 2023, the ONS reported that 16% of businesses across the UK were currently using at least one AI technology.<sup>122</sup> In the US, AI adoption is slightly higher, particularly in large employers, with an average of 18%.<sup>123</sup>
- More recent research has shown that approximately 53% of UK AI companies operate in the information and communication sector.



## Percentage of UK AI companies in each SIC sector



**Smaller and medium enterprises are less likely to adopt AI: 68% of large companies have adopted AI, compared to only 15% of smaller companies (which is the majority in the UK business landscape).<sup>125</sup>**

Without targeted interventions to address gaps in the adoption and accessibility of AI technologies, there is a strong possibility that the UK's AI divide may widen. BridgeAI aims to close this gap and help companies in under-served and important sectors of the UK to adopt AI effectively and improve their productivity.

Figure 3: Percentage of UK AI companies in each Standard Industrial Classification (DataCity 2023<sup>124</sup>)

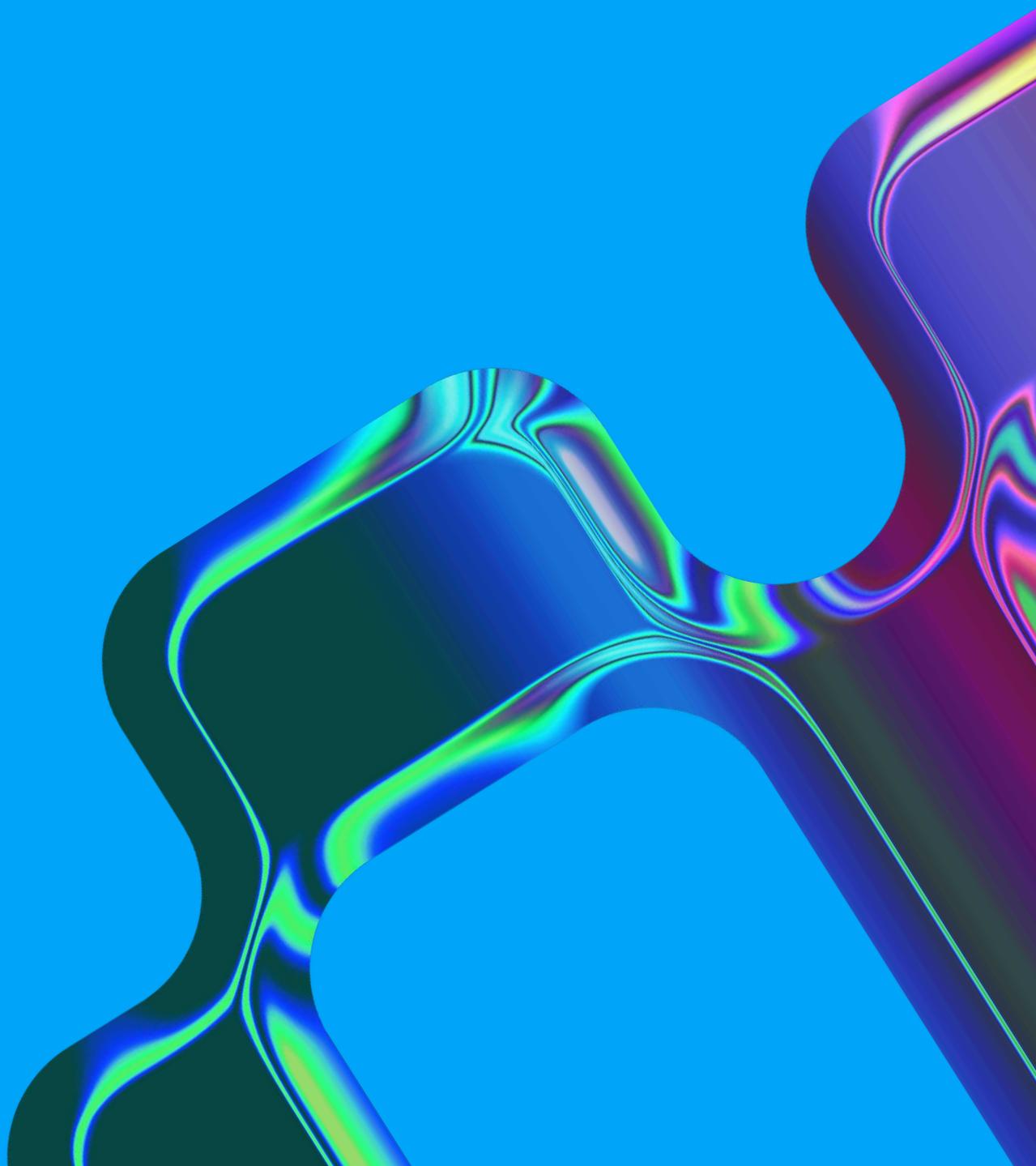


# 02

## Industry perspectives

The four sectors targeted by BridgeAI are both significant to the UK economy and future productivity growth. Primary research conducted by the programme surfaced shared and unique sector challenges in AI adoption.

# Agriculture and food processing



	<b>UK SIGNIFICANCE:</b>	<p>0.5% of GDP<sup>126</sup></p> <p>Produces 50% of the UK's food<sup>127</sup></p> <p>Manages and safeguards 71% of the UK's land<sup>128</sup></p>
	<b>PRODUCTIVITY:</b>	<p>£16 per hour productivity compared to £38 national average<sup>129</sup></p>
	<b>ADOPTION:</b>	<p>11% of farmers have invested in agritech (of which AI is a small portion)<sup>130</sup></p> <p>Adoption rate for data analytics 9%<sup>131</sup></p> <p>Adoption of field robotics 4%<sup>132</sup></p>

## Potential AI use cases in agriculture and food processing

In general, AI and data science could be used to help with on-farm decision-making, bringing in various sources of data to assist farmers in optimising their processes according to weather and soil conditions, and based on their type of farming.

Another potential application area is precision application, where AI technology and sophisticated sensors can help farmers to use the correct volumes of inputs – such as feed, pesticides and fertilisers – at micro-level. While the traditional blanket approach to distributing input is cost-effective for farmers, it has detrimental effects on the environment and soil health.<sup>133</sup>

Coupling AI with sensors can also aid in real-time monitoring and detecting issues on the farm and in the supply chain, as well as helping to anticipate and mitigate problems.

In terms of automation, farms could benefit from AI-enabled heavy machinery and equipment such as self-driving tractors and drones. As agriculture is a heavily regulated industry with high levels of checks and balances, farmers could also benefit from automated form-filling and integration with government and international trade systems, in order to free up time and improve productivity.

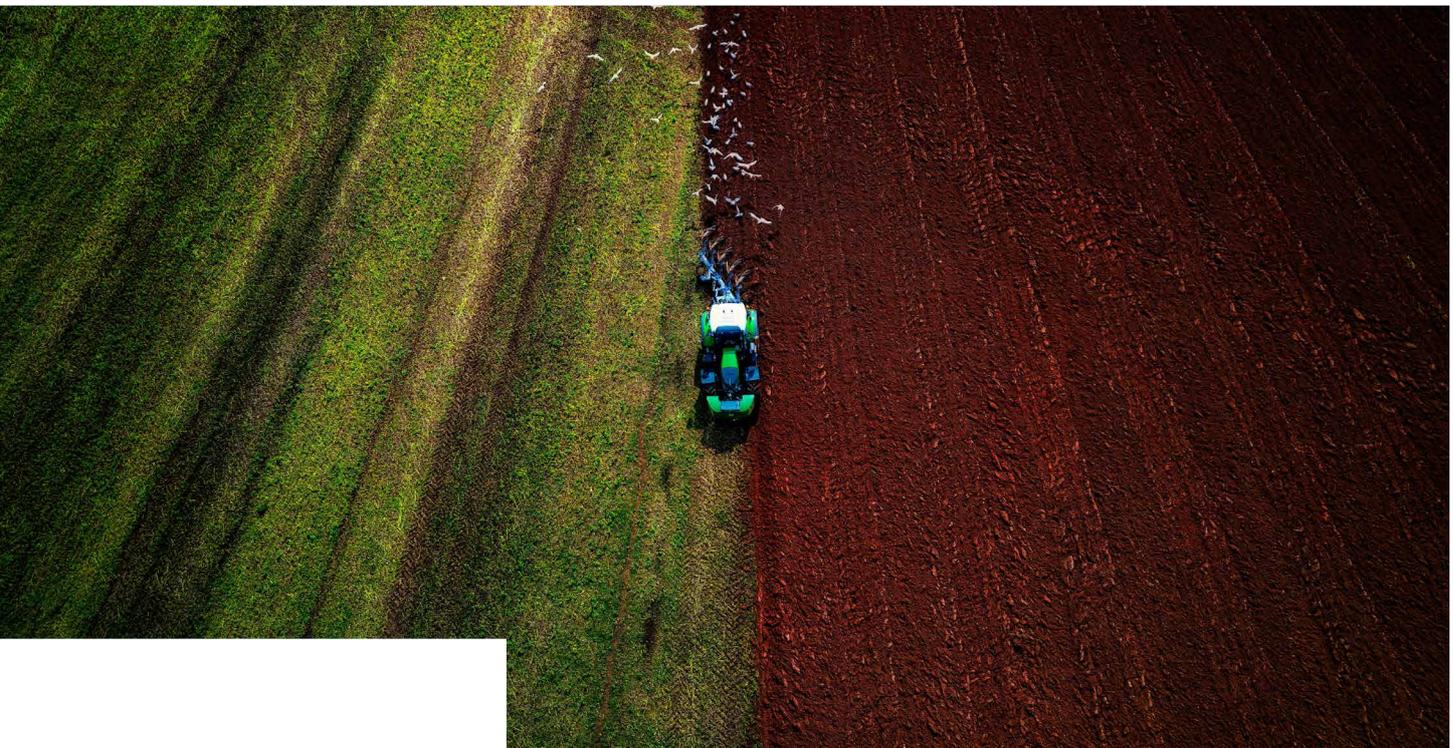
# AI adoption challenges in agriculture and food processing

Farmers have low profit margins, which makes investment in new technologies extremely difficult,<sup>134</sup> and what little profit there is often extremely volatile.<sup>135</sup>

In 2021, 56% of farmers reported CAPEX costs as a primary reason for an inability to invest in agritech.<sup>136</sup>

The issue of cost is exacerbated by the complex environments in which farm technology is used. For example, to benefit from data collection, a farm may need to invest in advanced sensors and observation tooling to assess pH levels in the soil.

Lack of awareness and lack of trust in AI are also issues in agriculture. Members of BridgeAI's expert working group cited that it was unlikely that farmers were aware of existing potential benefits and support, such as BridgeAI, and farmers may also be pressured by the agrifood supply chain to prioritise short-term decisions that meet immediate contractual needs, rather than having the flexibility to invest for the long term.



## AI for food and agriculture

This is going to be the year when the potential for AI in food and agriculture really resonates with the sector's key stakeholders, and that is because BridgeAI is bringing these very real possibilities to life.

The sector is ready for this technology in several ways. It is data rich in many parts of the supply chain, and where there are gaps in data there are innovations in place to collect it. The growth in agri-tech over the last five years has been impressive, much of it focused on sensors and data collection at farm level. AI focused on productivity, decarbonisation, cost controls, and the optimisation of day-to-day operations like managing waste through much more intelligent supply and demand models in fresh foods, is an exciting prospect.

**The real game-changer, though, is in the complex and actionable insights AI can generate.**

With the impacts of climate, nature, and world trade disruptions, foresight and the ability to spot emerging trends has become more important. What will be the impact on new animal and crop diseases as our planet warms? What will water availability and quality look like going forward?

There are no generic answers: what a beef producer needs to know in the Highlands is quite different from a dairy farmer in Devon or a salad grower in Spain. We need to get better at predicting unique conditions, and AI can help us do that.

**So what does the sector need for the potential of AI to be realised?**

Skills and expertise are the big enabler here, as is regulation from a global perspective, along with more practical challenges such as availability of raw materials for the manufacture of the hardware. These challenges are within our gift to resolve, and we need to resolve them, in order to focus on the massive transformation that our global food system needs to see if we are to build a more resilient, fair and sustainable food system and feed the world well in the future.

**Judith Batchelar OBE,**  
Director, Food Matters

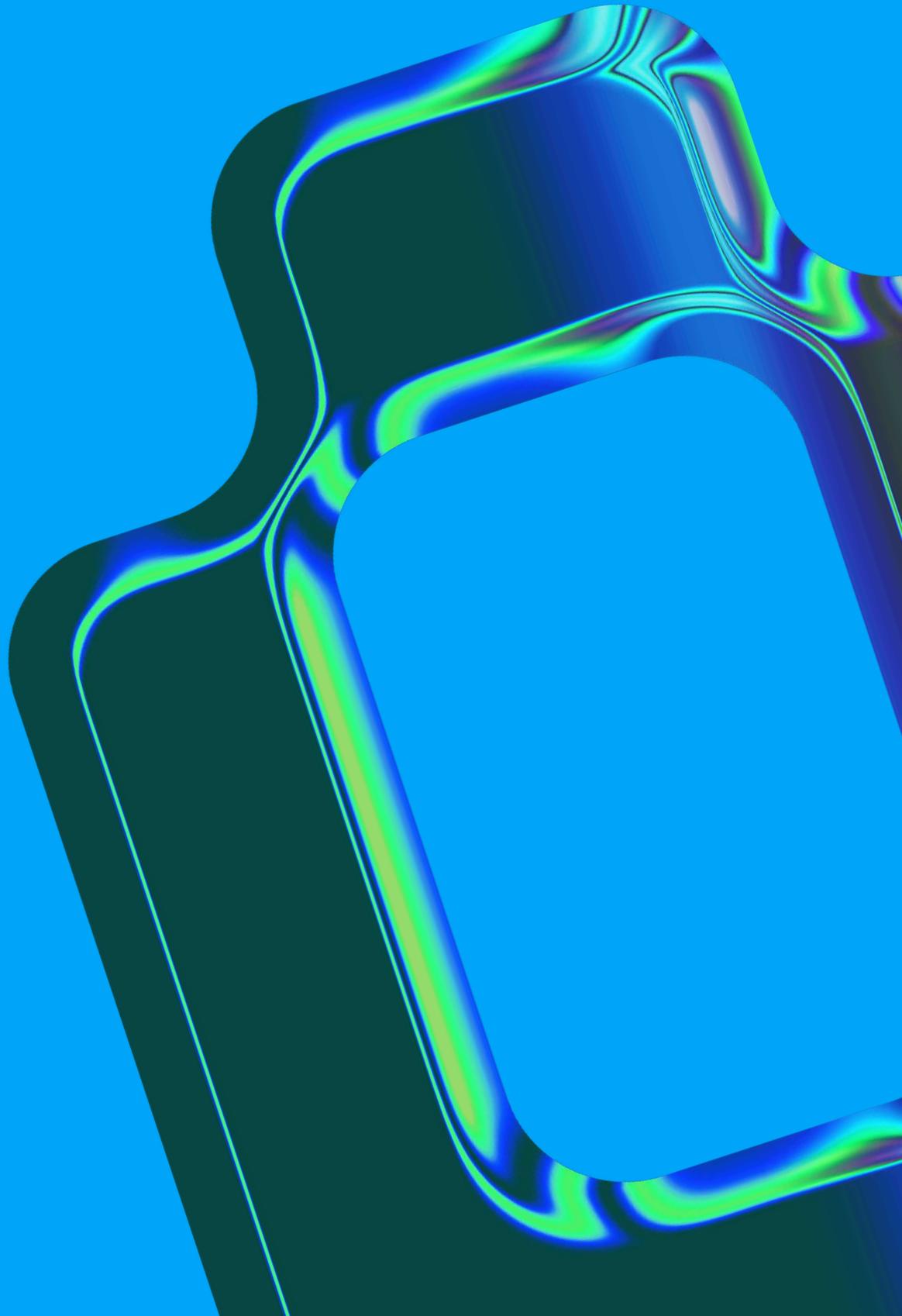
**Agrimetrics** was originally one of four **agritech centres**, funded by Innovate UK, and is now a stand-alone business. Since 2016, they have been enabling agri-food organisations to realise the value trapped in their data. Their **Data Marketplace** makes it possible for the agrifood sector to access data from relevant sources via APIs and apps such as **Field Explorer**, which combines ML and satellite images to provide data for all UK fields. Users can search for fields that meet specific requirements, such as being suitable for viticulture, and the data availability has led to a number of products being developed, including **wHen2g0** – a BASF app that tells farmers when conditions are suitable for the safe use of agro-chemicals.

In the past 12 months, Agrimetrics has repurposed the technology behind the Data Marketplace to host DEFRA's **Data Services Platform**, which catalogues and provides access to over 10,000 government environmental open-data sets and over 30 apps. The platform receives over one hundred million hits per month, a testament to the value of the data it hosts.

Agrimetrics also creates added value products using ML and AI. Algorithms have been trained to identify crops within the growing season and predict yields, with aggregated field-level predictions based on Earth Observation (EO). The team is developing a foundational EO model trained on a variety of tasks, including soil carbon estimation, deforestation detection, crop identification and yield prediction, and which can be quickly adapted to perform new tasks.

Agrimetrics has also used natural language processing (NLP) tools to capture the sentiment of farmers on the topic of governmental farm support, and their beta version of The Farm Data Account enables farmers to supply their data to trusted partners. This allows farmers to supply data to help calculate a crop's environmental footprint, or predict a pest or disease outbreak.

# Construction





**UK SIGNIFICANCE:**

2.7 million people<sup>137</sup>, 8% of the entire UK workforce<sup>138</sup>

8% of UK output<sup>139</sup>



**PRODUCTIVITY:**

1% growth in productivity over the past two decades<sup>140</sup>



**ADOPTION:**

13% of companies have adopted AI (less than the UK average of 15%)<sup>141</sup>

## Potential AI use cases in construction

AI is being used to enhance efficiency, safety and decision-making in the construction sector in innovative ways.

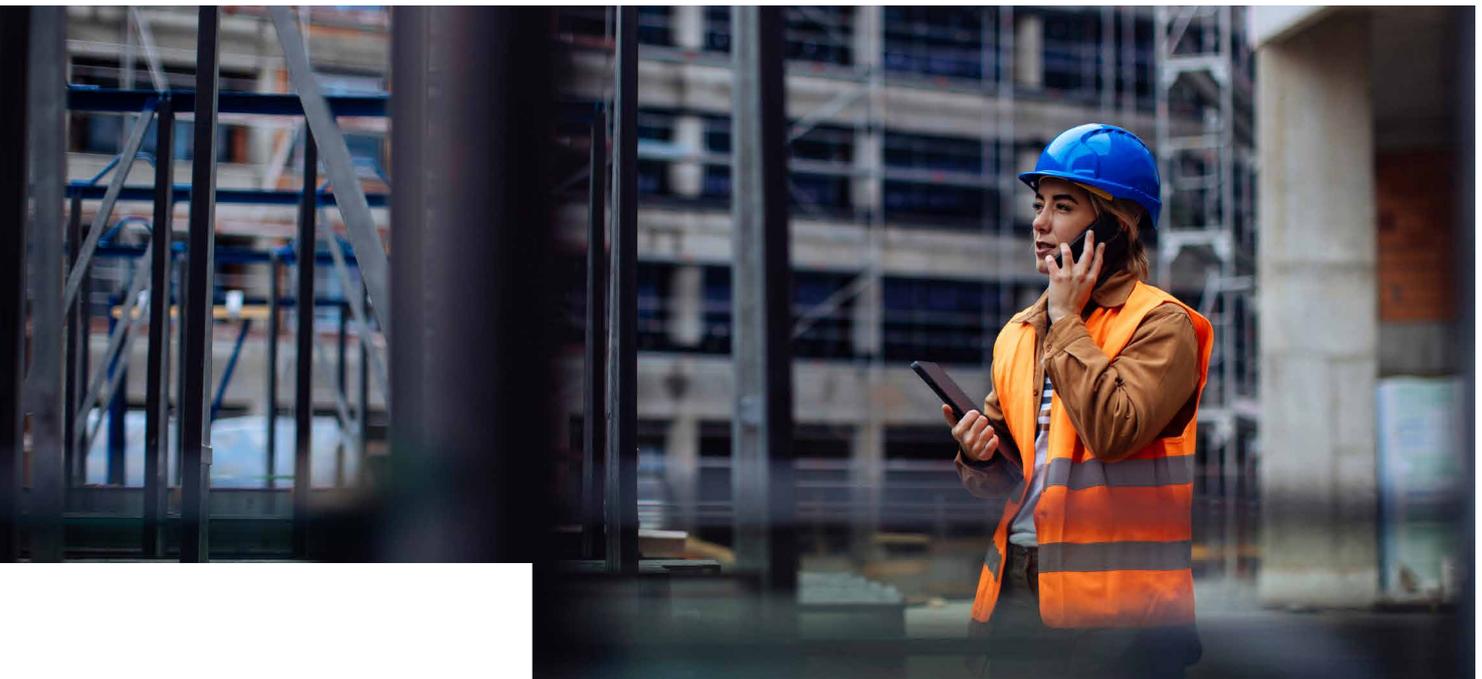
- Machine learning models are used for predictive machinery maintenance, forecasting equipment failures by analysing data from, for example, HVAC and electrical systems.<sup>142</sup>
- AI systems can support supply chain management by predicting demand for materials, optimising inventory levels, and facilitating just-in-time delivery, all of which can help to reduce waste and improve project margins.
- AI-powered cameras and sensors can be used on construction sites, ensuring compliance with safety regulations by analysing video feeds to detect safety gear usage and identifying potential hazards.<sup>143</sup>

## AI adoption challenges for construction

Adoption of AI in the construction industry presents multiple challenges. Research shows that the cyclical nature of the sector, the unpredictability of future work and a lack of collaboration across the sector, has slowed productivity growth,<sup>144</sup> which has led the UK Government to invest over £180 million through the Industrial Strategy Challenge Fund, aimed at fostering a more productive and highly skilled construction industry.<sup>145</sup> This investment strategy includes the implementation of AI to enhance the forecasting and scheduling of construction projects, to reduce and mitigate potential setbacks and delays.

Within the construction industry, there is notable hesitation in embracing new technologies. This is due to the high risks and costs associated with construction projects, coupled with a general distrust of AI systems that lack transparent decision-making processes. Outdoor environment conditions and the lack of standardised building design introduce additional complexities to deploying AI.<sup>146</sup>

Integrating AI with legacy systems poses another substantial challenge, alongside cultural resistance stemming from the traditionalism of the sector. Like agriculture, construction is heavily regulated, and this raises concerns about the compliance and legal issues related to AI use. Training and education gaps, scalability issues, and the need for reliable AI performance in diverse and unpredictable construction environments all complicate AI adoption.<sup>147</sup>





## AI in the construction industry

“The construction industry is on the verge of a data and digital transformation, with AI playing a crucial role in driving greater efficiency. However, the adoption of AI across the industry is not without its challenges.

AI has huge potential to boost productivity in delivery processes and throughout asset lifecycles, with an ever-increasing number of use cases based around generative AI, computer vision and AI-based modelling. However, this also means that existing business models that rely on selling person-hours will face disruption. Who will want to get paid by the hour if a task only takes a few seconds?

**The value of AI lies in its use. Therefore, the industry does not so much need to understand how AI works, but rather how AI can help it work better.**

Developing plain-language guidance on AI and how it can be applied will be helpful, but widespread and consistent adoption will require real effort. At an industry level, it will need a joined-up strategy to address common issues like safety and security, training and capability, risk and liability.

In the exciting emerging AI market, there will be lots of brilliant individual solutions, but there will ultimately be more value in integrated solutions, therefore we need to keep our eyes on that bigger prize. With AI, the value of digitalisation is in ‘making better decisions, faster’, which is all about connecting people and information, so its focus must be to empower people and improve their work experience. In other words, this data and digital transformation needs to be people-focussed and technology-enabled, not technology-led.

Data is the essential fuel of AI. And not just for AI, but also for digital twins, robotics and the metaverse. In fact, it is the fuel for all cyber-physical infrastructure – anything that helps to make the connection between the physical world and digital worlds.

**We seriously need to sort out our data across the industry: our data architecture, data quality, data flow, data security and data sharing, to name a few.**

Established approaches are difficult to shift in this famously fragmented, project-focussed industry. While the leading organisations are already powering ahead with AI adoption, and some smaller, more agile companies will be able to pick up new AI-based approaches quickly, there is a real challenge to help most of the industry adopt the emerging good practice.

To get the most value from AI, it will be necessary not only to encourage the innovation of new approaches, but also to facilitate their widespread and consistent adoption, and BridgeAI is making all of this possible.”

**Mark Enzer,**  
Strategic Advisor, Mott MacDonald

National Grid needed to connect a new power cable for a data centre, and wanted an innovative solution to streamline the delivery partner selection process. They partnered with Sensat to create an interactive 2D and 3D visualisation of the local substation and its real-world immediate surrounding area that would enable better collaboration and decision-making for all the project teams involved.

### **Facilitating a shared understanding of the available data**

National Grid wanted to make a large point cloud data set available to those involved in the decision process. Existing light detection and ranging (LiDAR) information sat unused in archives that could not be accessed, so instead, the contextual data around National Grid's boundaries, overhead lines and third-party boundaries was uploaded onto Sensat's reality layer by the teams involved. This combined their information into one holistic view, so that potential delivery partners could easily spot hazards and constraints.

Instead of replacing existing software, Sensat users were able to complement existing systems and collaborate in a shared environment without needing to switch between clunky tools. Using the visualisation platform, the team could realistically appraise proposed designs in context, and have an effective way of presenting them back to their clients. This helped National Grid to make the right decisions and provide clarity for everyone involved.

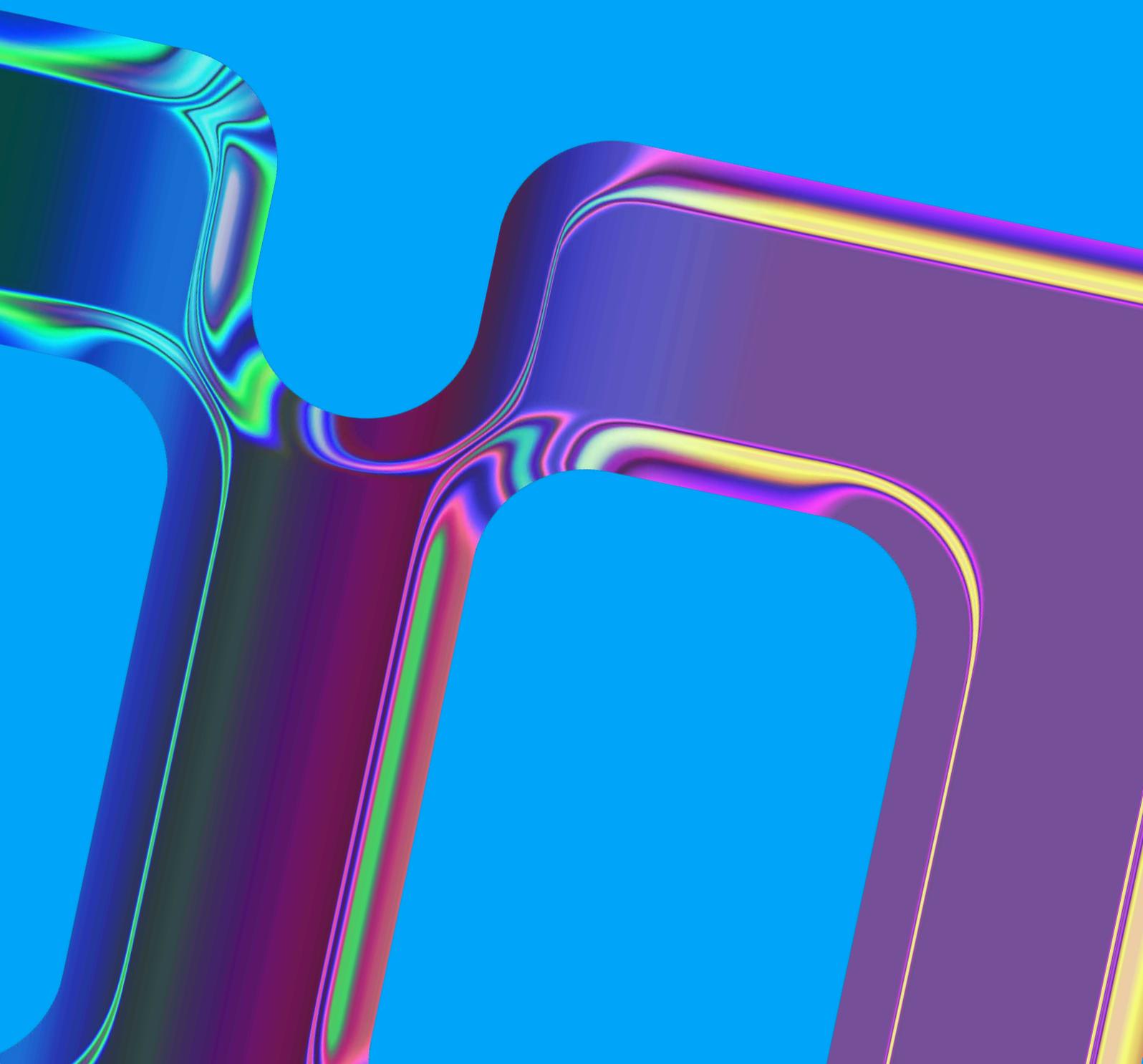
### **Desktop access and enhanced communication**

Some of the project stakeholders were up to five hours away, and obtaining access to some of the land was also a time-consuming challenge for National Grid – especially for land owned by a third party. Using Sensat, stakeholders could now take accurate measurements from their desktop. These measurements were used to verify overhead cables and assess risks, helping to streamline decision-making while minimising the need for additional topological surveys.

National Grid wanted the project teams to be able to share technical information with each other, and using the digital environment to give real-life context to proposed designs saved a considerable amount of time, minimising the back-and-forth between teams, while providing a richer understanding of the design options. The Sensat platform maintained version control, enabling everyone to work together from the most up-to-date information and design versions for confident decision-making.

The visualisation is now being used for third-party engagement and public consultation, and for evaluating options and selecting the designs to take forward into the next phase. Without the need for complex explanations, even non-technical users will have a clear picture of how the new energy infrastructure might affect them.

# Creative industries





**UK SIGNIFICANCE:**

1 in 14 UK jobs are in the creative industries, which employed 2.3 million in 2021.<sup>148</sup>

The industry creates £108 billion a year<sup>149</sup> or 5.6% of UK GDP.<sup>150</sup>

The UK Government aims to grow the sector by £50 billion by 2030.<sup>151</sup>



**PRODUCTIVITY:**

Growing at 6.9% 2021-22, compared to 1.2% for the wider economy.<sup>152</sup>



**ADOPTION:**

92% of arts, entertainment, and recreation businesses reported that 'AI use' was not applicable to them.<sup>153</sup>

## Potential AI use cases in creative industries

AI is reshaping the production, distribution, and consumption of creative content, and there are a wide range of applications for different sub-sectors. AI's ability to generate text, music and visual art, combined with a willingness by artists and creators to utilise AI tools that enhance their creativity and experimentation, indicates a real opportunity for AI adoption.

For example, in film and video production, AI assists in script analysis, editing, creating visual effects, streamlining production, and reducing costs. Popular streaming services such as Netflix employ the technology for personalised content recommendations, analysing viewing patterns to enhance user engagement.<sup>154</sup> While in gaming, AI has been used to support design, virtual assistants and player sentiment analysis.<sup>155</sup>

## AI adoption challenges for creative industries

The primary adoption concern for the creative sector is the relationship between generative AI and intellectual property (IP). The UK Government's response to the Culture, Media and Sport Select Committee's report highlights these concerns and the need for a balance between adopting AI and protecting creators' intellectual property.<sup>156</sup>

Industry professionals have raised the lack of incentive for them to invest in innovation. This is especially true for micro-businesses, which constitute 94% of the creative industries, which often lack the essential resources, infrastructure or capabilities for effective innovation.<sup>157</sup>

The BridgeAI Creative Industries Expert Working Group has highlighted a deficiency in technical skills among individuals in the creative sectors. These skill gaps hinder the ability to use new technologies, limiting capacity to innovate on problems or seize new opportunities.



## AI in the creative industries

**“The arrival of OpenAI’s GPT4 unleashed a stream of excitement, fear and confusion worldwide.**

ChatGPT and others like it (such as Stable Diffusion and Midjourney) represent a turning point for the creative industries. We have already been using AI to automate a variety of tasks, but these new tools with their simple and accessible interfaces that understand and respond with natural language, images, audio and video make it easier for almost anyone to produce creative works of remarkable sophistication.

Today, GenAI in particular has enormous potential for automating certain tasks and streamlining creative processes that most audiences are not aware of, from ideation to content production and distribution. It can be used to create music, audio, enhance special effects, write text – the list seems almost endless.

AI can also be used to derive insights from vast amounts of data, which can be used to create personalised content that will appeal to specific audiences.

In the future, it’s likely that AI will play a role in enabling entirely new audience experiences, from Because there are many possible use cases for AI across the media value chain, it can be difficult to identify a single ‘best’ application for this technology. One of the more significant barriers to AI adoption in the creative industries is the lack of understanding about which problems it can help solve and which to prioritise (when you have a hammer, everything looks like a nail).

**Access to requisite knowledge and skills, whether technical, legal or strategic, will help those in the creative industry to make sure they are getting the most out of their investments in AI.**

Alongside the benefits of AI are some very practical and existential risks for the creative industries. The risk to copyright and intellectual property, the potential impact on jobs in the creative industries (while AI certainly will not replace human creativity, some executives may be tempted to reduce headcount, thanks to potential efficiencies created), and the impact of AI-generated images on the information ecosystem. Deepfakes have been around for a while, but Generative AI makes it possible for almost anyone to create fake content quickly, cheaply and at an unprecedented scale.

Finally, there is understandable concern about what AI means for the future of human creativity. Audiences say they are generally comfortable with the use of AI to make small efficiency improvements in content creation (such as summarising a long report) but feel uncomfortable with content that has been fully AI-generated, like a song, for example. The challenge is to use this technology to enhance the work we already do or help create entirely new possibilities, while ensuring the vitality, longevity and humanity of the creative industries in the future.”

**Antonia Kerle,**  
Chief Technical Advisor, BBC R&D

## CASE STUDY Move AI and FIA: real-time movement in a virtual space



The Fashion Innovation Agency (FIA) and Move AI worked with Outernet London to create an immersive experience that allows users to move in real-time through virtual worlds. Streamed on the Outernet's 60-foot-high ultra HD screens, these technologies came together at an intersection of fashion, avatars, gaming and immersive experiences.

Digital fashion was modelled in real-time by a performer in a virtual cityscape that FIA had built using game engine technologies. Move AI runs AI inference in real time over incoming video streams to recognise human movement. The software combines the data points collected into a high-fidelity data stream, creating a markerless motion capture system that extracts natural human motion without the need of a motion capture suit. It retargets that data onto an avatar rig that can be taken into any game engine or virtual environment.

This project demonstrated Move AI's newest feature: real-time motion capture in any environment using smartphone cameras. The performer's movements were retargeted onto FIA's avatar, which was dressed in digital garments from the FIA virtual wardrobe.

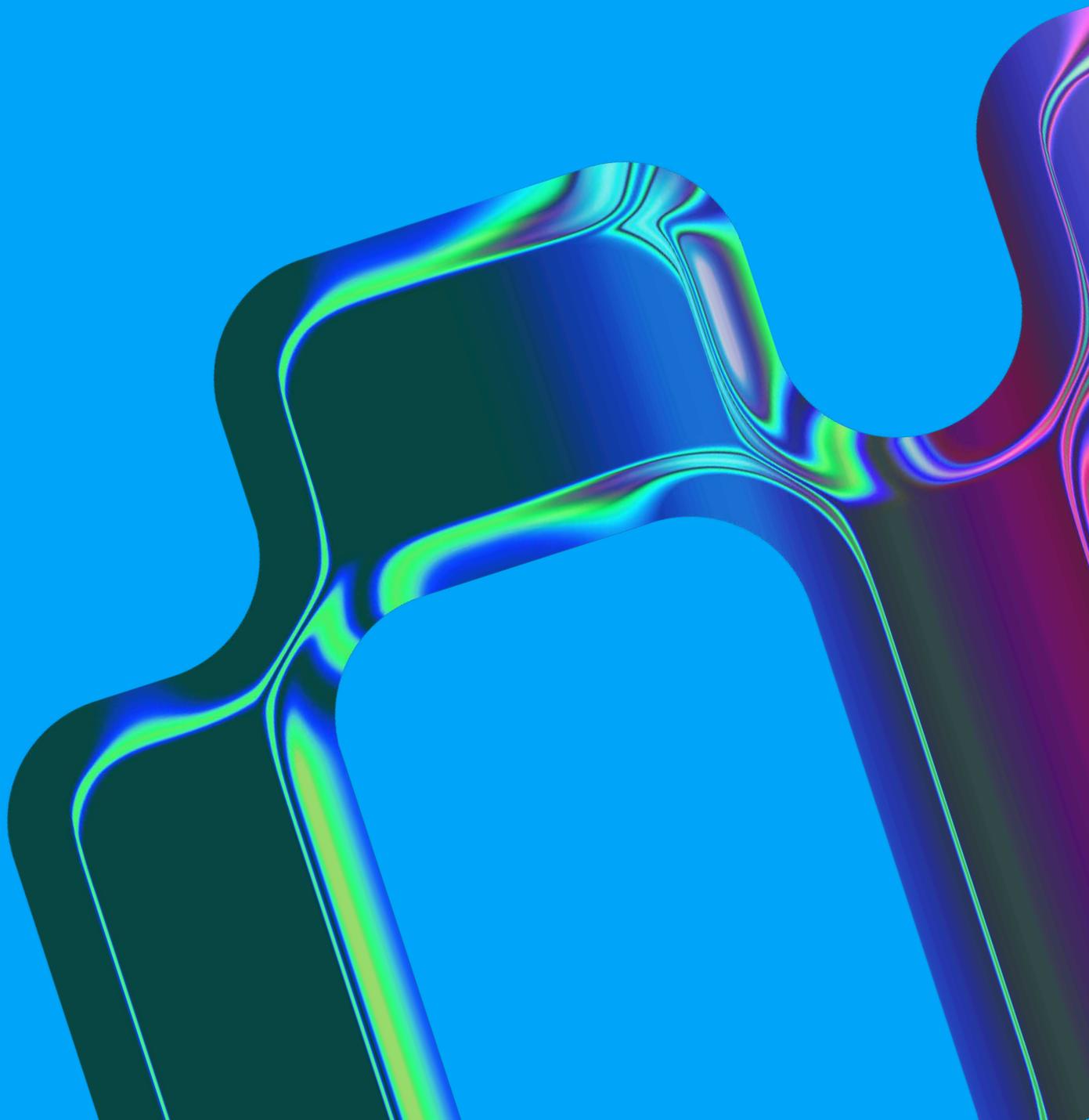
[See the video demonstration here.](#)

"No motion capture suit, just your movement, in real-time, directly into a virtual space. You're not controlling an avatar with a cursor - this is YOU, your movement, in real-time. So while we're still a way off the full 'Ready Player One' vision, things are heading that way."

**Matthew Drinkwater,**

Head of the Fashion Innovation Agency at London College of Fashion, UAL

# Transport, warehousing and logistics





**UK SIGNIFICANCE:**

3% of the UK economy<sup>158</sup>  
27% of the UK's greenhouse gas emissions<sup>159</sup>  
5.1 billion journeys on public transport<sup>160</sup>  
Facilitated 740 billion passenger-kilometres and moved 216 billion tonne-kilometres of domestic freight<sup>161</sup>



**PRODUCTIVITY:**

Output per hour has decreased by up to 25% since 2011<sup>162</sup>



**ADOPTION:**

89% of businesses said AI use was not applicable to them<sup>163</sup>

## Potential AI use cases in the transport industry

There are several applications for AI that could enhance efficiency, safety and user convenience in the transport industry. Autonomous vehicles are at the forefront of mobility transformation, and AI integration has shown promise in increasing road safety by reducing incidents caused by driver error, and easing traffic jams.

The application of AI extends to optimisation of traffic management systems, using real-time data analytics to recalibrate traffic signals and redirect vehicles away from congestion – reducing travel time and energy consumption.<sup>164</sup> For example, Transport for London has used AI to target congestion hotspots and adjust signals, contributing to improved traffic flow and increased efficiency. This has resulted in over £100 million in cost savings related to travel delays.<sup>165</sup>

For public transport, the application of AI in processing big data streams from ticketing systems and automated passenger counting devices empowers traffic controllers to predict when demand deviates from typical patterns, or when delays or infrastructure problems disrupt services.<sup>166</sup> AI-driven logistics and routing platforms will also be designed to prioritise environmentally-friendly options, leading to reductions in carbon emissions and supporting the advancement of eco-conscious transportation solutions.<sup>167</sup>

## AI adoption challenges for transport

**The UK Government has announced that over £40 billion will be put into the transport infrastructure over two financial years.<sup>168</sup>**

Even with this investment, the transport sector still faces significant challenges (such as escalating demand, worsening congestion, ageing infrastructure, and increasing costs) that threaten the sustainability and efficiency of services.

Safety is a primary challenge, especially in hybrid environments with human and machine-driven actions. Issues range from a lack of transparency in AI's decision-making processes to the vulnerability of critical infrastructure to cyber threats.<sup>169</sup> This is particularly crucial for autonomous vehicles, which need to navigate unpredictable environments and react to sudden changes with high precision and reliability. Achieving such real-time responsiveness requires verifiable algorithms and processing capabilities, and needs robust failsafe mechanisms to ensure decisions are executed flawlessly.<sup>170</sup>

The industry is also siloed, with each mode of transport (rail, road, air, or sea) having developed its own set of operational protocols and systems. This has led to a fragmented landscape where the lack of unified standards impedes AI integration across different systems. Discrepancies in data formats, communication protocols and operational procedures mean that AI protocols that are designed for one system may not function correctly, or at all, when applied to another.





## AI in transport, logistics, and warehousing

“The transport, logistics and warehousing sector in the UK has struggled to adopt AI. There are divergent opinions, fragmented ecosystems, policy, politics and regulation at play. But we also have the right fundamentals for transformative change with the use of AI and machine learning technologies.

Parts of the sector are still learning how to leverage value out of more basic digital ways of working – let alone using AI. But there are forms of AI that hold the most near-term promise for the sector. Firstly the use of machine learning models to support quantitative analytics, unlocking insights in complex system design and operation, from dynamic logistics re-routing optimisation to stock and crew balancing. Secondly, the (measured) use of LLMs to support human-understandable engagement with, and presentation of, mobility information to communicate complex scenarios to diverse audiences, whether a journey planner or a summary report.

By and large, the type of AI being deployed is not the core of the adoption challenge: instead, a multitude of barriers exist ranging from: dynamics around industry culture, skills in the workforce, ethics and security, perception of AI, procurement and funding models, data governance and standards. None of these issues are new, and documents ranging from the Transport Data Strategy all the way to more recent technical work done by Digital Catapult’s AI adoption toolkit have laid out sensible ideas to address and minimise these challenges.

**Better adoption of AI will begin when the industry can find the levers to address these barriers, and actually implement some of the core suggestions we have been talking about for so long.**

To drive the biggest impact, the key challenges blocking AI adoption in transport are: procurement and funding models, AI perception (from users to those who hold the budgets), and skills of those purchasing, designing and using AI-driven tools safely and effectively.

Early signs of success will become evident with the communication of more case studies and an uptick in cross-transport-sector communication. AI adoption in transport is coming, but it will take a big effort in public and private alignment to unlock the real value – the BridgeAI programme is a great start.”

**Anna Jordan,**  
Co-Founder and CEO, Alchera Technologies

**CASE STUDY VivaCity: improving safety and saving money in Oxfordshire**



Despite the adoption of Vision Zero strategies to eliminate traffic fatalities and severe injuries, someone is killed or seriously injured on UK roads every 16 minutes. Road safety interventions are typically based on incomplete and infrequent historic information, which means that interventions are reactive rather than preventative.

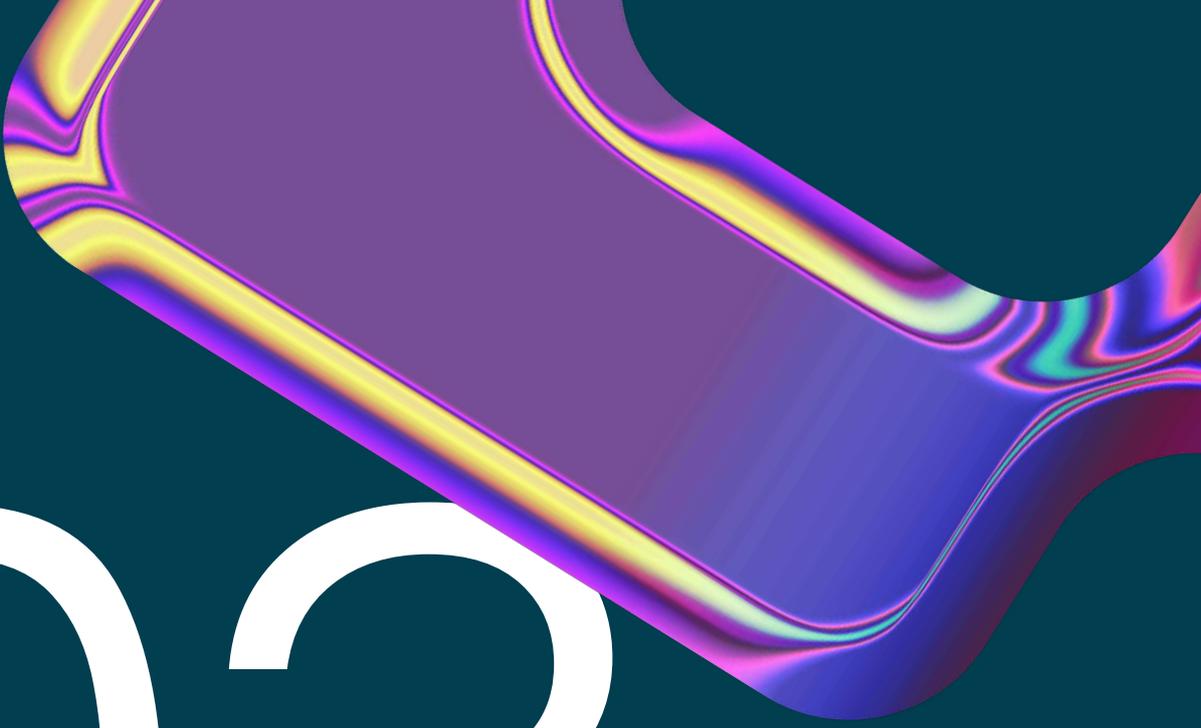
VivaCity has been working with Oxfordshire County Council to use AI computer vision sensors to detect near miss incidents on their roads (dangerous interactions between at least two road users that could have led to a collision). VivaCity quantifies near misses, analysing the trajectories of road users in time and space, and how they relate to each other – without the need for manual analysis.

**Between 12 December 2022 and 12 February 2023, VivaCity recorded 1,132 near miss events between cyclists and motorised vehicles.**

Event counts are supported by anonymised video clips, qualitative data that provides contextual information for more in-depth assessment. By combining metrics such as speed, proximity and angle, each near miss between cyclists and vehicles has a single moment that is considered the most dangerous. These can be displayed as a heatmap to show where near misses are most likely to occur.

Using this data, Oxfordshire County Council has been able to better understand the scale of near misses and risk for cyclists on their roads. Detailed information about hotspots and common near miss situations can be used to inform potential interventions, such as speed limits or changes to road layout. As well as contributing to the council's Vision Zero, the elimination of deaths and serious injuries from road traffic collisions in Oxfordshire, saving time and money that would otherwise be spent on collecting data and analysing incidents, and optimising decision making on where to direct investment in traffic safety measures.

This product is the first to measure near misses at scale, and future iterations will include more road user types (pedestrians, for example).



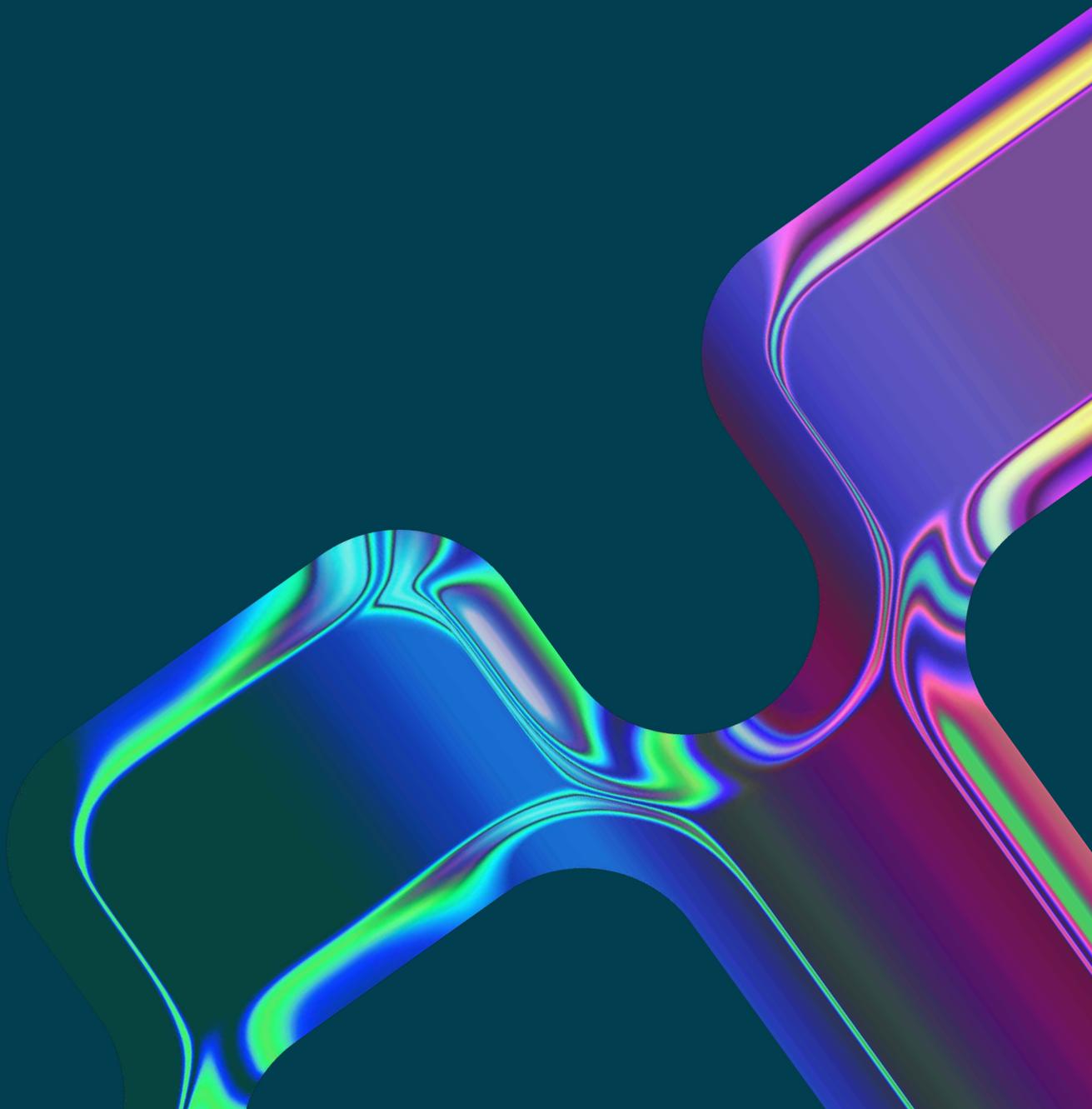
# 03

## BridgeAI interventions

BridgeAI has developed a portfolio of comprehensive support to help organisations in the six key challenge areas: data quality, maturity and governance, ethical considerations, trust and responsible AI, organisational change and culture, skills and training, access to compute, regulatory and legal challenges.

By targeting interventions at the four key target sectors, BridgeAI is helping to boost productivity of these industries, and also provide resources for the wider AI ecosystem.

# BridgeAI interventions: funding



Industry stakeholders have indicated that the costs and demonstration of return on investment for AI projects are a significant barrier to adoption. BridgeAI has offered several rounds of funding to address this challenge.

## Summary of funding rounds

**Four funding rounds have taken place to date, with £59m of grant funding with £21.7m contributed in private investment for 261 projects. In addition, Investor Partnership funding totals £6.6m with matched funding of £3.2m from project partners, with an expected further private investment of £18.9m.**

As these projects develop and progress over the three years of the programme, BridgeAI will aim to publish case studies that demonstrate responsible, safe, and secure AI adoption pathways in the target sectors.



**LAUNCHED**

**DEC '22**

**Accelerating trustworthy AI, Phase 1 feasibility study: 43 projects**

To accelerate the adoption of trusted and responsible AI and ML technologies by reducing bottlenecks during development and deployment

Projects started in May 2023 for three months

Up to £2 million funding available, maximum of £50,000 per grant

**LAUNCHED**

**MAR '23**

**Feasibility studies for AI solutions: 96 projects**

To support innovative projects, prompted by a challenge to business in an area of operations that can drive improvements in productivity

Projects started in October 2023 for 4 to 6 months

Up to £5 million funding available, maximum of £50,000 per grant

**LAUNCHED**

**AUG '23**

**Accelerating trustworthy AI, Phase 2 collaborative R&D: 21 projects**

To accelerate the adoption of trusted and responsible AI and ML technologies by reducing bottlenecks during development and deployment

Projects started in February and March 2024 for up to a year

Up to £19 million funding available, with grants awarded ranging from £630,000 to £1.2 million

**LAUNCHED**

**SEPT '23**

**Collaborative AI solutions to improve productivity: 101 projects**

To support the development and adoption of AI and ML solutions in the priority sectors of transport, construction, agrifood and the creative industries

Projects starting in April 2024, running until November 2024 (single strand) and March 2025 (collaborative strand)

Up to £32 million funding available

74 single strand projects, with grants ranging from £35,000 to £100,000

Funding for single strand projects totalled £6 million

27 collaborative strand projects, with grants ranging from £700,000 to £1.2 million

Funding for collaborative grant projects totalled £26 million

**LAUNCHED**

**MAR '24**

**Feasibility studies for artificial intelligence solutions: Series 2**

To develop AI- and ML- driven solutions that address a business challenge or opportunity in internal business operations, with an impact on business productivity

Projects due to start in October 2024, for completion by 31 March 2025

Up to £5 million funding available

Projects grants will range from £25,000 to £50,000

## Investor Partnerships' Future Economy programme

**This initiative has regular competitions running from 2022 to 2025. The BridgeAI stream has a total available fund of £7 million, with 14 projects funded to date.**

Investor Partnerships brings together Innovate UK's use of grant funding, and investor partners' aligned funding and expertise. Its aim is to stimulate research and development in micro, small and medium-sized enterprises, while accelerating equity investment into those companies so that they can grow more rapidly through innovation.

The BridgeAI stream is funding projects underpinned by AI that either boost business productivity in the four target industries, or accelerate the adoption of trusted and responsible AI.

## Funded project spotlight

The following case studies illustrate examples of innovation being funded by BridgeAI.



**Galebreaker's** weather protection, ventilation and access solutions help to create ideal housing conditions for healthy, productive livestock. **Smartbell** is a leader in animal health monitoring technologies and decision support systems.

Heat stress in dairy cows can affect fertility, cause lameness, and impact on udder health and milk yields, as well as being a risk to life. This could cost a farmer with an average sized herd over £20,000 a year. Galebreaker currently monitors and controls ventilation devices using overall building conditions, based on theoretical thresholds. In reality, all cows have slightly different optimal conditions, so the impact of environmental conditions on productivity and health can vary between individuals.

**This project explored the use of AI to monitor individual cow behaviours to ascertain if and how building ventilation could be optimised. This could improve individual cow welfare, while enabling more efficient and effective ventilation devices.**

The project team developed ML models to interpret data from cow ear-tags; translate it into time-stamped data that shows when each individual is active, lying down, ruminating and feeding; and then ascertain how these behaviours are affected by the temperature and humidity of the animal's environment. Being able to analyse real-time behaviour in this way yielded two key findings.

- Looking at individual cow behaviour, milk productivity, fertility and health has shown the impact of a heat stress event in detail, and how it directly affects an animal's output. This shows the value of a new approach to cow-centred management practices, for example, moving vulnerable cows to different areas of a barn to reduce the impact of heat stress.
- An index could be developed to control trigger activation or deactivation of ventilation devices, based on individual animal behaviour and environmental conditions. Such an environmental control index could potentially lead to more cost-effective management of the local conditions for each cow.

"By applying our core cow behaviour models, we are identifying the markers of early, yet troubling, signs of heat stress. Making early warning of heat stress immediately actionable by changing the environment is revolutionary."

**Veena Adityan,**

Co-founder of Smartbell

"This addresses a global need to ensure food production is sustainable into the future, through the focus on animal welfare. It is great that two UK manufacturers can collaborate together through the support of BridgeAI to continue to drive innovation on global issues within the agriculture sector".

**Jeremy Scudamore,**

Managing Director of Galebreaker

**CASE STUDY Pixel Research and Revolution Software: Using AI to remaster classic games**



**Pixel Research** is an AI startup tackling a critical challenge for the gaming industry: the demand for efficient and cost-effective solutions for remastering classic video games. Revolution Software is a developer and publisher of narrative-driven adventure computer games, best known for the award-winning Broken Sword series, which has sold over 10 million copies.

**Pixel Research partnered with Revolution Software to investigate the feasibility of implementing an AI solution for remastering game assets, and integrating it into existing game studio workflows to reduce the work hours involved.**

The trend for remastering classic game titles has gained momentum in recent years, with many game studios and publishers republishing for modern platforms. This can be an excellent way to generate substantial additional revenue, appealing to older fans and new audiences who may not have played the original. Remastering typically involves enhancing the graphics and audio of the original, while improving the user experience to make it more appealing and accessible to modern audiences. However, this involves a significant time commitment and can be prohibitively expensive.

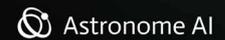
The collaboration looked at how AI could be developed, trained and used to upscale the original low-resolution images. In recent years, there has been a significant advancement in image upscaling technology using AI, which can learn to identify patterns in low-resolution images and generate high-resolution versions of the same image with significantly improved quality. But there had been no projects looking at how to upscale very low resolution hand-drawn assets for game remastering.

Using Revolution Software's current remastering project (Broken Sword Shadow of the Templars: Reforged), as a case study, the project aim was to integrate AI directly into the game development workflow, adopting an artist-in-the-loop approach, and developing a general commercial tool as a demonstrator.

**The resulting AI model has been successful in producing better results in upscaling these low-res assets than any other commercial tool currently available. Revolution Software estimates that they can reduce the overall cost of their game remastering by around 69%.**

This outcome will directly improve business productivity in the creative industries, by providing game development studios with a cost-effective approach to enhancing original game assets.

**CASE STUDY** **Astronome AI and Caltech Lifts: making IT easy for SMEs in construction**



**Astronome AI uses AI** technology to automatically manage IT for small and medium-sized businesses. **Caltech Lifts** is a lift installation company working in the construction industry.

Caltech was outsourcing IT function to a managed service provider, relying on them for all IT support. However, the Caltech team were concerned about service levels, expertise and costs involved, and wondering if there was a better option. Like many businesses of their size, they had little time to devote to the implementation of a new digital technology. However, being forward-thinking, they recognised the benefits of using AI in the long term, and knew that implementing Astro AI would ensure their IT met industry best practice standards. Working with Astronome AI could also enable them to implement an IT solution to match their specific needs and budget.

Using mobile device management (MDM) Astronome AI's platform, Astro AI can monitor thousands of data points from every device their client company uses. It then applies unique algorithms to identify issues ahead of time, and optimises IT across the whole client organisation, ensuring safety, security and compliance with relevant industry standards.

Caltech implemented Astronome AI's IT software, and now has zero-touch onboarding and offboarding for employees; device management to keep client data safe; automatic implementation of industry-standard security and compliance benchmarks – all without having any technical knowledge.

**Caltech has saved up to 80% on IT spend, as well as hundreds of admin hours.**

With Astronome's IT management software in place, Caltech will be able to achieve Cyber Essentials Certification (the UK Government's certification for good IT practices). This has had a noticeable impact on their ability to win new business and operate more efficiently.

**Gridicity** optimises electric vehicle (EV) charging operations, reducing costs for EV fleets and charge point operators. **TechnoQuest** specialises in developing AI-driven solutions, with experience in energy, healthcare and other industries.

EV fleets, charge point operators and ultimately consumers stand to save 40% or more on their energy expenditure with a more efficient approach. As EV adoption grows, existing solutions are inadequate because they lack the necessary flexibility and intelligence to adapt to varying energy demand. Existing grid infrastructure is also struggling to adapt to this increase in EV charging infrastructure, and connections need to be used as efficiently as possible.

**TechnoQuest and Gridicity partnered to address inefficiencies in energy use and the management of EV charging networks. Their project aim was to reduce costs, improve sustainability, and meet the growing demand for sustainable EV infrastructure.**

The BridgeAI grant allowed them to make significant progress in developing a dynamic load management system that leverages AI to optimise energy consumption and EV charging. The system dynamically adjusts to energy demands in real-time, ensuring efficient use of resources while minimising costs.

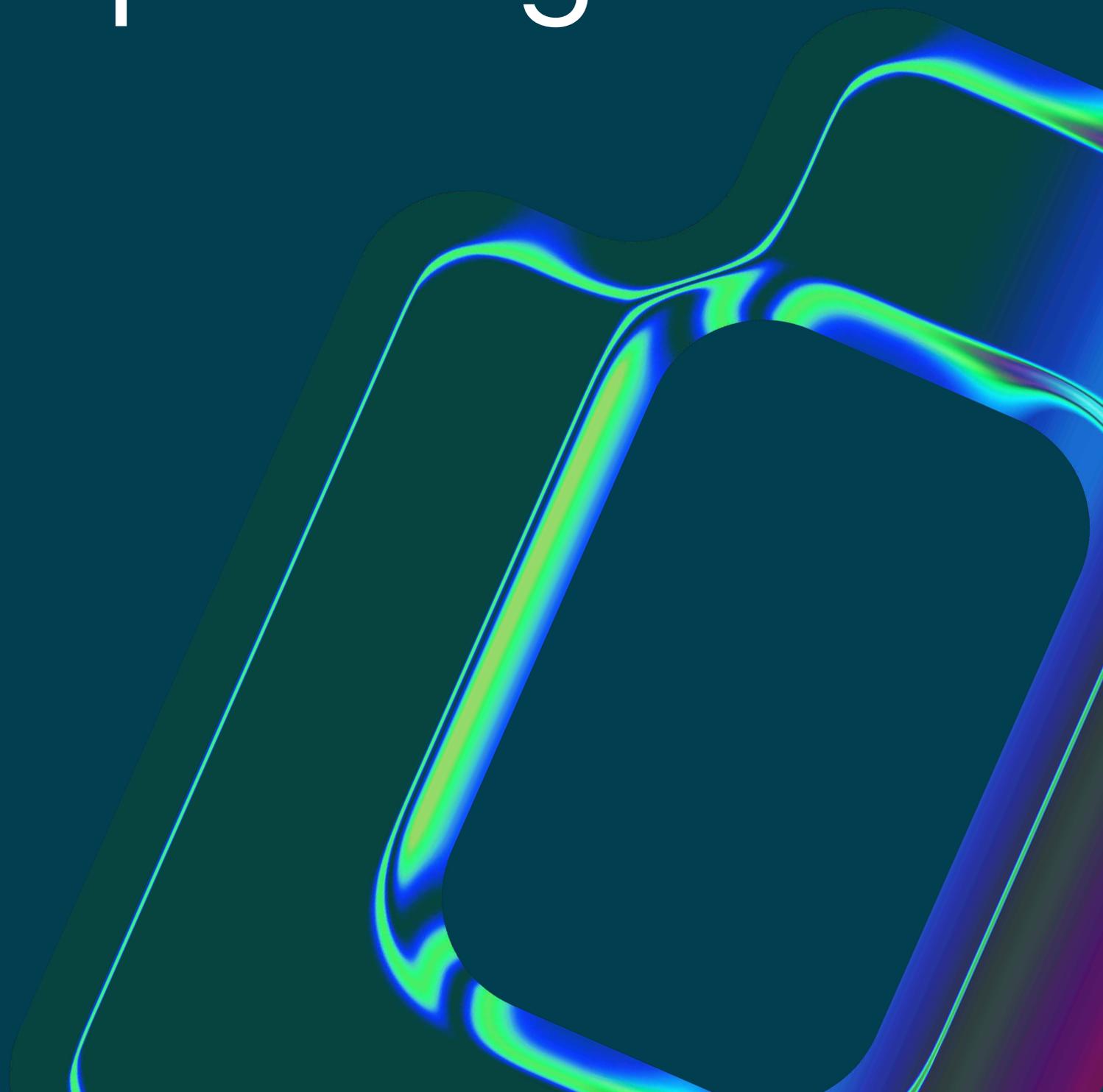
By integrating AI, the SAFEC solution can predict energy usage patterns, manage EV charging loads intelligently, and make real-time decisions to balance supply and demand. This directly addresses the challenge by providing a flexible, adaptive approach that traditional systems lacked, overcoming the inefficiencies and limitations previously faced.

“The SAFEC solution developed through this project has delivered tangible benefits for EV charge point operators’ energy management and energy bills. The AI-driven system optimises charging in a way that reduces our energy costs by over 40% while supporting charging expansion.

We are pleased to see notable improvements in balancing supply and demand, enabled by SAFEC’s real-time data analytics.”

**Dr Alicia Blatiak,**  
Founder and CEO, Gridicity

# BridgeAI interventions: upskilling





The lack of AI skills and talent has been cited as a key barrier to AI adoption. BridgeAI has therefore focused several of its offerings on ensuring that AI adopters and developers have the necessary skills, training, and knowledge to effectively implement AI in industry.

This means upskilling AI developers themselves in areas such as ethics and responsible AI, as well as helping businesses to upskill the employees who will engage with the technologies, and who require understanding at both junior and senior level.

Skills-based programme activities include the **AI Skills for Business Competency Framework**, which is designed to give organisations clear guidance on effectively upskilling workforces to adopt AI effectively and responsibly.

“Making sure workers up and down the country have the skills they need for their jobs with and in AI is a key part of our strategy in making the UK an AI powerhouse and ensuring the skills of our workforce keep pace with this rapidly developing technology.

This guidance will be vital in helping us realise that ambition, continuing an important conversation with businesses across the UK to make sure the steps they can take are practical, functional, and successful.”

**Viscount Camrose,**

Former Minister for AI and Intellectual Property<sup>171</sup>

Alongside this important framework, various BridgeAI partners are offering training courses and access to various educational resources. These are tailored for AI professionals, practitioners and leaders.

The Alan Turing Institute courses include:

[Operationalising Ethics in AI](#)

[Introduction to Transparent Machine Learning](#)

[Assessing and Mitigating Bias and Discrimination in AI](#)

[How Data Lies](#)

STFC Hartree Centre courses include:

[Discover Digital Transformation Training](#)

[Self-paced introductory, beginner and practitioner training](#)

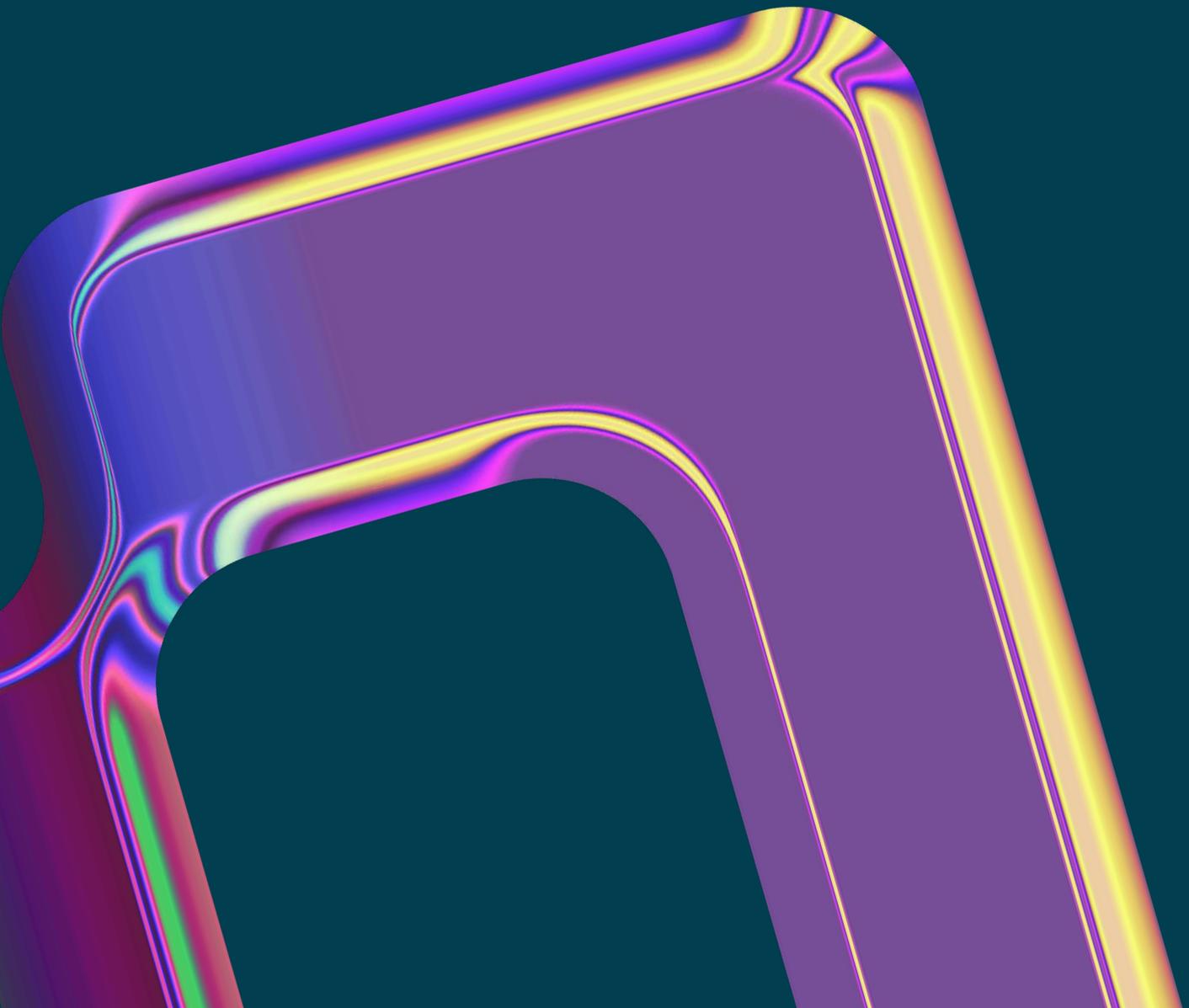
“People are staying in the workforce longer than ever before, and more people choose multiple transitions, across occupations and sectors, as part of their careers. It is essential that we provide information and guidance for businesses and individuals to be equipped with the skills needed to succeed.

The adoption of AI in the UK is critical to our economic prosperity and ensuring businesses can invest in their workforce with confidence will underpin success. BridgeAI's training offerings, combined with the Competency Framework, are a critical component of this journey, being able to work with businesses and education and skills organisations with clarity will ensure we can maximise opportunities in the UK.”

**Debbie Johnson,**

Head of Innovation Talent & Skills, Innovate UK

# BridgeAI interventions: operationalising



Beyond funding projects, BridgeAI has a number of initiatives to support grant winners and the wider AI ecosystem in the target sectors. By helping to operationalise AI in the real world, these activities and interventions address challenges such as data quality and maturity, ethical considerations, organisational change, and access to compute.

## Digital Catapult

The Digital Catapult **FutureScope High Growth AI Accelerator for BridgeAI** provides AI startups and scaleups with access to technical and business expertise and an experimentation space to help them develop responsible, ethical and desirable AI and ML deeptech solutions. This accelerator includes ethical AI support, engagement with the BridgeAI community, and technical support that included high performance compute access.



## CASE STUDY Veunex: AI-enabled health and safety



**Veunex** aims to revolutionise safety using AI and big data. Its mission is to transform occupational and process safety, integrating all risk sources and response mechanisms with AI and Generative AI.

Veunex aids health and safety functions by automating observations, enhancing risk analysis, and facilitating compliance control. Working in sectors like construction and oil and gas, Veunex's AI solution monitors, analyses and responds to potential risks in real time, while equipping organisations to identify and mitigate risks long before they materialise. This prevents disasters and creates a safer and more resilient operational environment, allowing health and safety teams to focus on strategic decision-making.

"Our experience with the BridgeAI programme has been a game-changer for our startup. The mentorship provided by the programme not only led us to a crystal-clear product definition, but also assisted us in formulating an always-working value proposition. The guidance was not just theoretical; it was practical, actionable advice that brought focus and precision to our strategy.

### **The wealth of resources made available through the programme was instrumental in propelling us forward.**

With these tools at our disposal, we successfully delivered our minimum viable product (MVP) while upholding a commitment to responsible AI practices. The incredible mentors associated with the programme played a key role in navigating the complexities of our industry.

We highly recommend the BridgeAI programme to startups seeking a transformative experience. Engaging with their outstanding mentors and utilising the provided resources is a strategic move for any company looking to thrive in the dynamic landscape of technology."

**MJ Karbasian,**  
Founder and CEO, Veunex

Digital Catapult also offers a range of frameworks and toolkits to help businesses on their AI journey, assessing their AI readiness and providing guidance on responsible adoption.

### **AI Adoption toolkit**

Including digital and data maturity assessments, and a data readiness assessment.

[Find out more](#)

### **Ethics framework**

A highly practical tool for individuals and organisations developing AI-enabled products and services, and that want to build value-aligned technologies with positive effects while avoiding negative consequences.

[Find out more](#)

### **Data strategy and governance framework**

Helps organisations make informed decisions around their data and how to keep their data secure.

[Find out more](#)

### **Digital transformation strategy framework**

A ten-step framework that helps participants on their journey to digital transformation.

[Find out more](#)

### **Industry & SME Collaboration Framework (in development)**

Synthesises insights gathered from a series of workshops delivered by Digital Catapult in 2023, as part of the BridgeAI programme, to offer guidance for collaboration between small enterprises and large organisations.

**CASE STUDY** NeuralEcho Labs: supporting next-gen neuro-technology



NeuralEcho Labs is a deeptech startup building a 'neuro' headset that reads minds, adding sci-fi-level value to the overall gaming and VR experience. Their goal is to make joysticks and keyboards obsolete by reading the brain's electrical activity and turning it into commands. This has implications for accessibility and inclusion, as well as the gaming experience.

The neuro headset can also analyse emotional data from users, which may have industrial applications in training scenarios, helping training providers and games developers to create more engaging training courses or entertainment. A real-time emotional data feed can also create a more interactive scenario. For example, if the headset detects a lack of empathy from a trainee doctor or nurse, the virtual patient may become more anxious or nervous. In this way, the emotional data from the user could be used to dictate how the scenario will unfold, creating a truly immersive experience.

While aiming to fulfil an ambitious vision, NeuralEcho Labs lacked clarity and realism in creating and following business and product development plans, and this might have ultimately led to an end of operation. However, through the accelerator and targeted consultations, NeuralEcho was able to identify risks regarding their product and user data safety, assess compliance with regulations, create a more ethical and human-centred product, and adopt a more agile business approach. This allowed the team to create a better business strategy moving forward and to articulate their vision in front of investors and partners.

Following the accelerator, NeuralEcho Labs has enrolled in the Google Cloud for Startups programme.

"The BridgeAI accelerator is one of the great opportunities in the life of a startup, and we were lucky to take full advantage of it. I think it stands out not because of the cloud credits or other offerings that early-stage startups desperately need – and it offers plenty of those.

**It stands out thanks to its people and their approach to entrepreneurship:** solid technical and business backgrounds combined with much love and empathy for the future users of a product. That is what truly matters, and these learnings last forever."

**Alex Rogozea,**  
Founder CEO, NeuralEcho Labs

## Innovate UK

**AI Labs (previously Ignite Labs x BridgeAI)** is a 4-week programme featuring online panel sessions with industry experts, immersive workshops and an in-person showcase. It offers invaluable insights and best practices delivered through virtual sessions and in-person showcases, providing organisations with the tools and knowledge necessary to navigate the complexities of AI integration effectively.

“Throughout the event, I encountered real-world case studies and demonstrations that showcased how AI is transforming my sector. Witnessing the tangible impact of AI technologies in action was truly inspiring and gave me a deeper understanding of its potential.

Moreover, interacting with industry experts and fellow attendees allowed me to gain valuable insights and perspectives on the current trends and future directions of AI. The discussions and networking opportunities provided a platform for exchanging ideas and experiences, fostering a vibrant learning environment.

Overall, the programme left me with a profound appreciation for the power of AI and its ability to shape the world around us. I am excited to continue exploring this fascinating field and apply the knowledge gained from the event in my own endeavours.”

**Hun Sinem, Genderscope Ltd,**  
Ignite Labs x BridgeAI Alumni 2023

## STFC Hartree Centre

Alongside training and upskilling, the Hartree Centre offers vouchers for access to business support and expertise in AI adoption, applied data science and digital twinning.

**High performance compute vouchers** allow companies to harness readily accessible, world-class computing power, enabling them to increase the size of their models and run large quantities of data more efficiently. Providing access to high performance computing without increasing overheads, these vouchers can help companies to gain a competitive advantage and to accelerate their operations in the delivery of high-quality technical solutions.

**Innovation vouchers** equivalent to either £5,000 or £15,000, give recipients the opportunity for bespoke engagement with the Hartree Centre's technical experts in data science and AI. The vouchers can be used for a range of short, AI-related projects, such as an initial proof of concept, AI road mapping, the identification of suitable data sets, and feasibility studies.

“We have seen, and continue to see, great demand and interest in our innovation vouchers. For many applicants, this might be their first step into discovering how AI and digital technologies might help their business.

With our team of experts, we are creating a safe and welcoming space to discuss and explore the applications in their business, service or product. We hope to continue working with businesses on bringing their ideas into reality.”

**Kate Currie,**

Business Development at STFC Hartree Centre

# The Alan Turing Institute

The Alan Turing Institute has recruited a number of **Independent Scientific Advisors (ISA)** who provide advice, guidance and mentoring to organisations that are seeking to adopt AI solutions, or are looking to develop their own capability and capacity in AI. Organisations selected for ISA support will be largely those whose specific challenges cannot be easily addressed by other parts of the BridgeAI programme.

The Turing also offers access for BridgeAI participants to a number of guides for AI development:

- **Turing Commons**: A guide for designing, developing, and using data-driven technologies responsibly. Explore free and open-source guidebooks through The Alan Turing Institute with distinct skills tracks for researchers or those interested in responsible research and innovation, Public engagement, or AI Ethics and governance.
- **The Turing Way Handbook**: A series of openly developed online guides that share over 300 chapters on best practices and skills for reproducible, ethical, collaborative, and inclusive data science and artificial intelligence.

The **Turing Way Practitioners Hub** is an extension of The Turing Way, engaging directly with experts from partner organisations in their efforts to promote data science best practices. The Hub provides a forum for cross-sector engagement, knowledge exchange and strategic collaboration across academia, research, engineering systems, government and healthcare-leading data science initiatives. Through the involvement of domain experts from different sectors, the Turing Way Practitioners Hub enables systematic approaches for building a shared understanding of open science, reproducibility, accessibility and research ethics to enhance quality, rigour and integrity in data science and AI.

“The Turing has an excellent track record of providing independent scientific advice in data science and AI to the UK public sector. I am therefore delighted to see the Institute convene an outstanding set of ISAs to provide advice to BridgeAI companies and help them on their AI adoption journey.”

**Mark Girolami,**  
Chief Scientist at the Alan  
Turing Institute



**DigiHaul**, a UK-based startup, is reducing waste and improving efficiency in the transport sector. Their innovative digital freight-matching platform tackles the financial and environmental costs of empty running, which are currently estimated at 20% of all journeys.

By integrating AI into the daily operation of road haulage networks, DigiHaul aims to optimise route planning, reduce empty running and pave the way for an environmentally-conscious and technologically advanced transportation ecosystem. "Transportation tends to be carried out in silos: companies are good at optimising their own networks and looking after their own customers, but they do not think laterally about how they could collaborate with other networks... DigiHaul allows operators to plug into a bigger network, helping to create fuller loads and taking carbon off our roads.

We want to challenge the idea that things have to be done the way they've always been done."

**Martin Willmor,**

CEO and Founder, DigiHaul

There are several areas in which DigiHaul hopes to leverage developments in machine learning, AI and data analytics, including:

- Using generative AI to answer queries or requests on the DigiHaul platform, such as "Who is the highest performing carrier over the past three months?"
- Automatically checking unusual aspects of a booking (such as if the shipment appears to be very low weight)
- Advanced analytics on carriers' past performance, allowing shipping customers to pick the best match based on more than just cost
- Algorithms to enable loaded return journeys, known in the industry as 'backhaul'
- Codifying decades' worth of employee knowledge and experience in the transportation sector to help algorithmic models make better recommendations

DigiHaul wants to open up internal data and models for use by the whole sector, helping to drive greater efficiencies while taking into account data security and privacy concerns. Their view is that optimisation can only happen at scale, and when the industry works collaboratively.

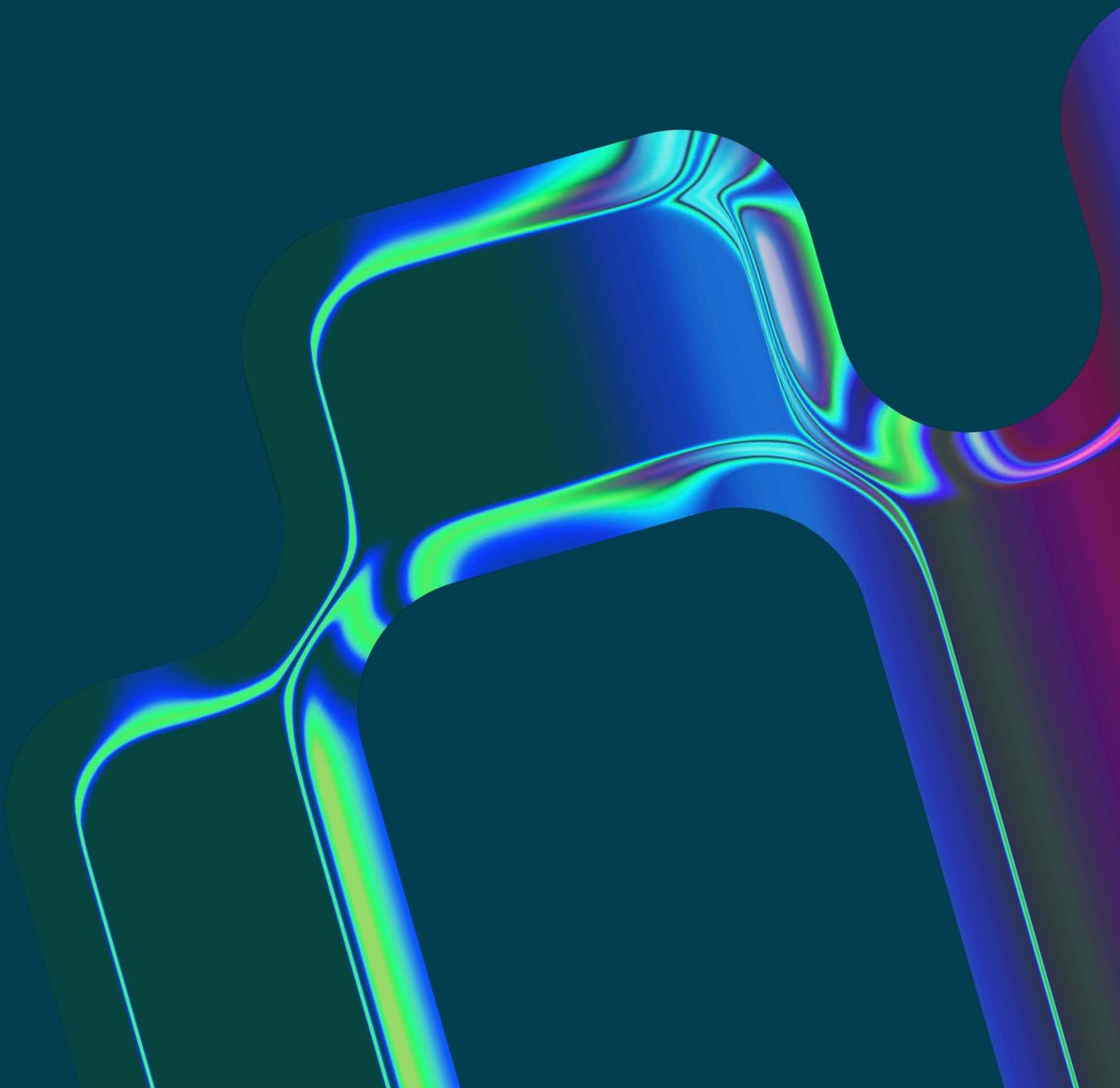
"Some of our ambitions, such as giving customers real-time information on their shipments, only work in practice if drivers and carriers are using our app and providing the right data for the platform. So we are working to improve adoption.

Another task we are addressing is to make sure employees have the skills to use future developments like generative AI, and that we communicate the benefits that these technologies can have in people's day-to-day jobs to encourage their use."

**Fernanda Vasconcellos,**

Data Analytics Manager, DigiHaul

# BridgeAI interventions: standards





The British Standards Institution is providing guidance on relevant standards as part of the BridgeAI programme. This intervention will help businesses comply with industry standards and best practices, including relevant regulation.

## **BSI online community and standards advice**

BSI has created an [online community](#) where AI adopters and developers in BridgeAI's four key sectors can source relevant standards (not only for AI, but also around data, organisational change, transformation management etc.) depending on their specific needs. Businesses and organisations will be able to find relevant standards based on their level of AI maturity, industry sector, and AI use case, allowing them to fully understand different best practices at different stages of their AI adoption journey.

## **UK AI Standards Hub and governance workstream**

The Alan Turing Institute and BSI also provide standards expertise through access to the existing [UK AI Standards Hub](#), in collaboration with the National Physical Laboratory.

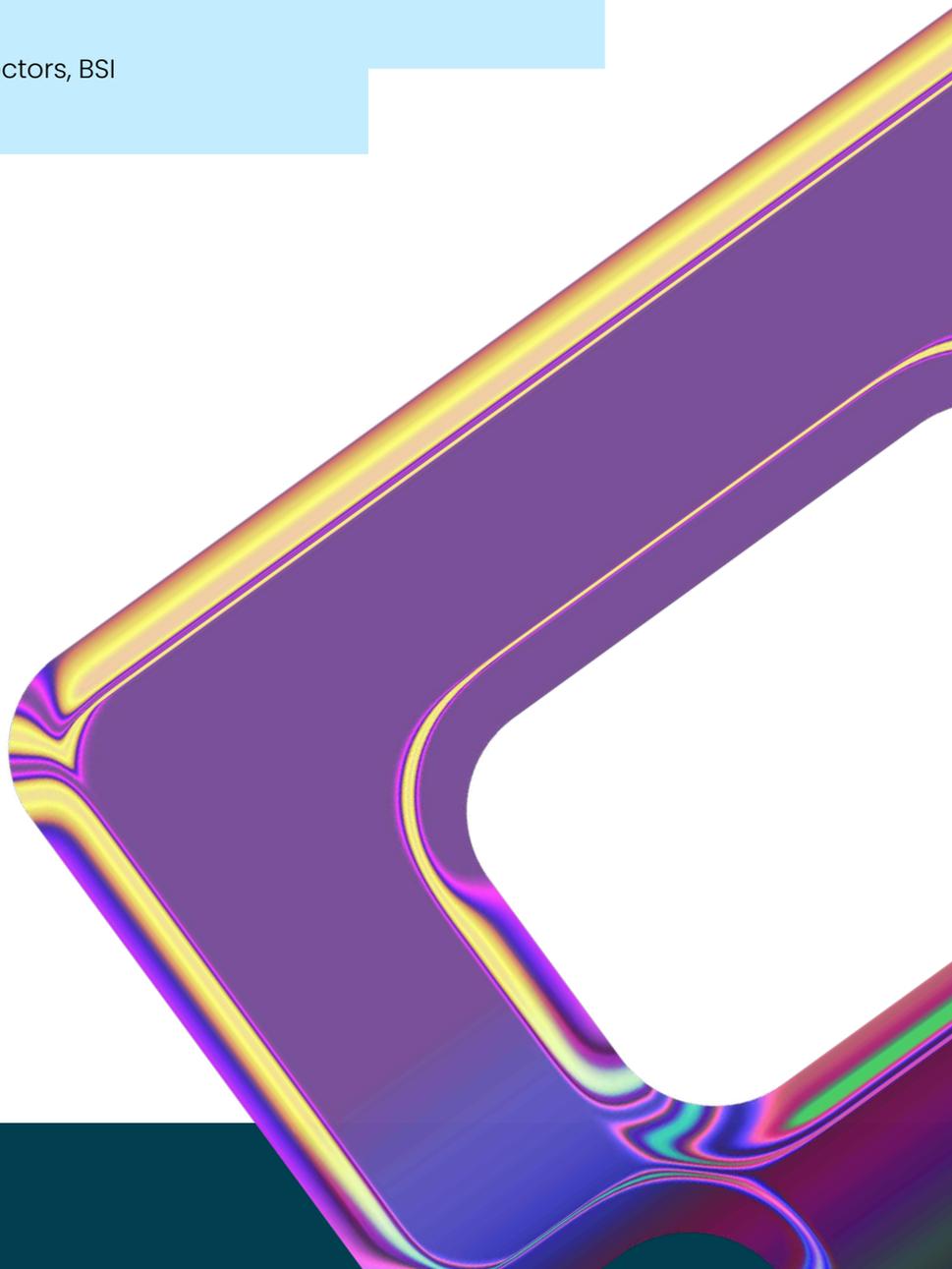
The AI Governance and Regulatory Innovation team from The Alan Turing Institute is conducting sector-specific research and leveraging expertise from the AI Standards Hub for the BridgeAI programme to disseminate AI governance, regulation and standards knowledge directly to the BridgeAI community. This knowledge will often be delivered in collaboration with the government departments and organisations leading on and authoring key AI strategies, policies and white papers.

“International standards play a crucial role in supporting the accelerated and safe adoption of AI by providing frameworks and guidelines for consistency, interoperability and ethical considerations. Standards support innovation by fostering collaboration, ensuring quality and safety, and reducing barriers to entry into new markets. These principles contribute to the development of a thriving and dynamic ecosystem that supports ongoing innovation from start-ups to scale-ups and industry growth.

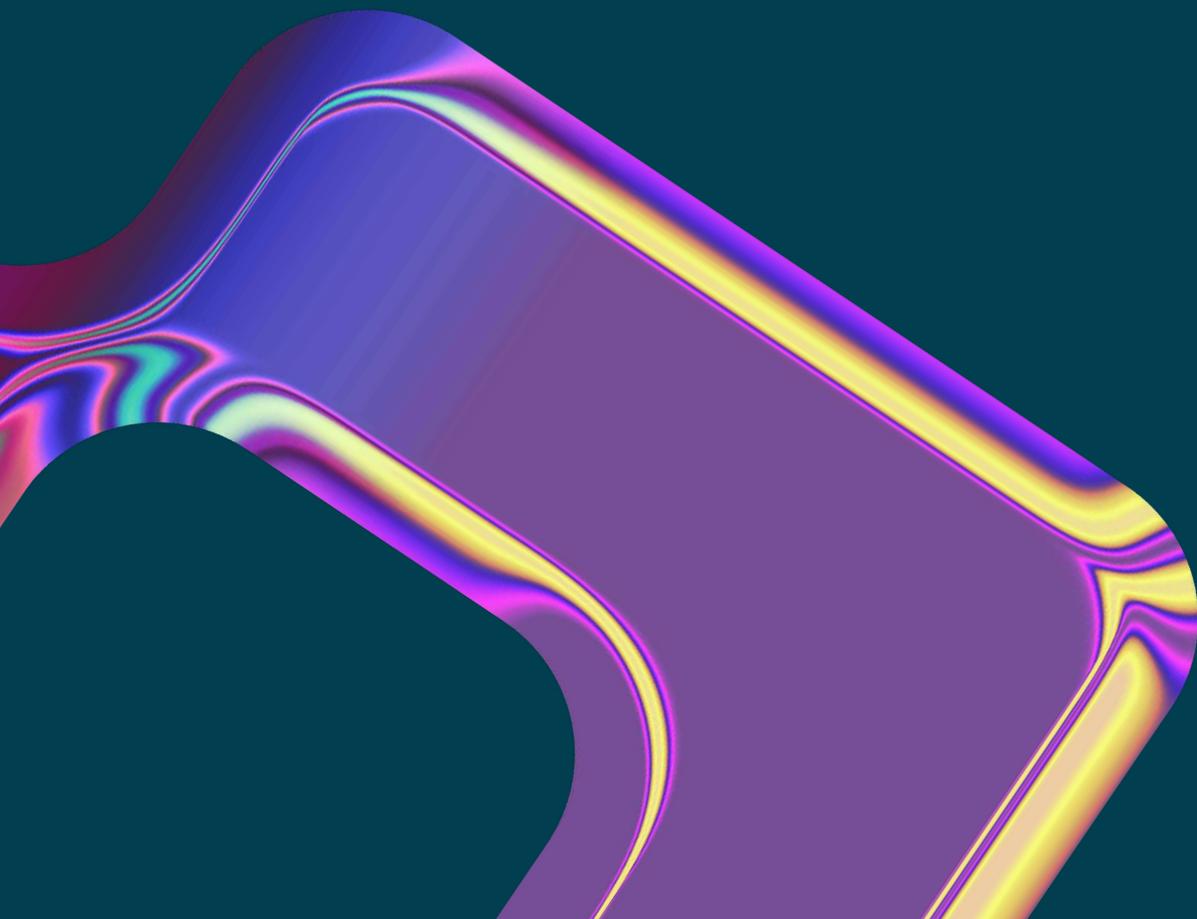
BSI has a long-standing commitment over many decades to promoting excellence and safety in emerging technologies, and our involvement in this initiative reaffirms our dedication to supporting our key stakeholders in advancing the accelerated and safe adoption of AI responsibly.”

**David Cuckow,**

Associate Director, Digital & ICT Sectors, BSI



# BridgeAI interventions: Engaging the AI ecosystem



## Innovate UK scoping events

At the beginning of the BridgeAI programme, Innovate UK hosted four scoping events that took place in Newport, Edinburgh, Birmingham, and Belfast during January and February 2023.

Through these events, BridgeAI brought together stakeholders – including potential users and providers of AI – to discuss the focus and direction of the programme through presentations from the AI programme consortium and round table discussions.

## Digital Catapult and Innovate UK expert advisory

As part of the programme, an Advisory Group and four Expert Working Groups have been convened, one for each target sector. These groups provide expert advice, and promote BridgeAI through their networks. Through this collaboration, the programme has expanded its reach and forged new connections between AI adopters and developers.

## Innovate UK international missions

To facilitate the discovery of global market opportunities, and to access expertise from international networks that can help to accelerate UK business capabilities, BridgeAI is delivering Global Expert Missions and Global Business Innovation Programmes throughout the life of the programme.

- **Global Expert Missions (GEMs)** help inform future global focus areas and identify opportunities for UK businesses in specific countries related to their industry and technology area. A small group of experts will visit a market, with a report and workshop delivered shortly afterwards to disseminate the insights on future opportunities identified by the group.
- **Global Business Innovation Programmes (GBIPs)** each take a cohort of high growth businesses to another market to explore global opportunities, and build collaborations and partnerships in-country. Each business receives 9-12 months of support from an Innovate UK Business Growth specialist to help them prepare for the visit and exploit the opportunity on their return to the UK.

To date, a GEM to Switzerland for the construction sector has been completed, and insights are outlined in this [webinar](#). A resulting GBIP for eligible organisations will follow in the 2024/25 financial year.

So far, there have been two GBIPs: to Germany with a focus on AI for transport and logistics, and to the Netherlands, targeting AI in agriculture.

## All partners: events, webinars, and workshops

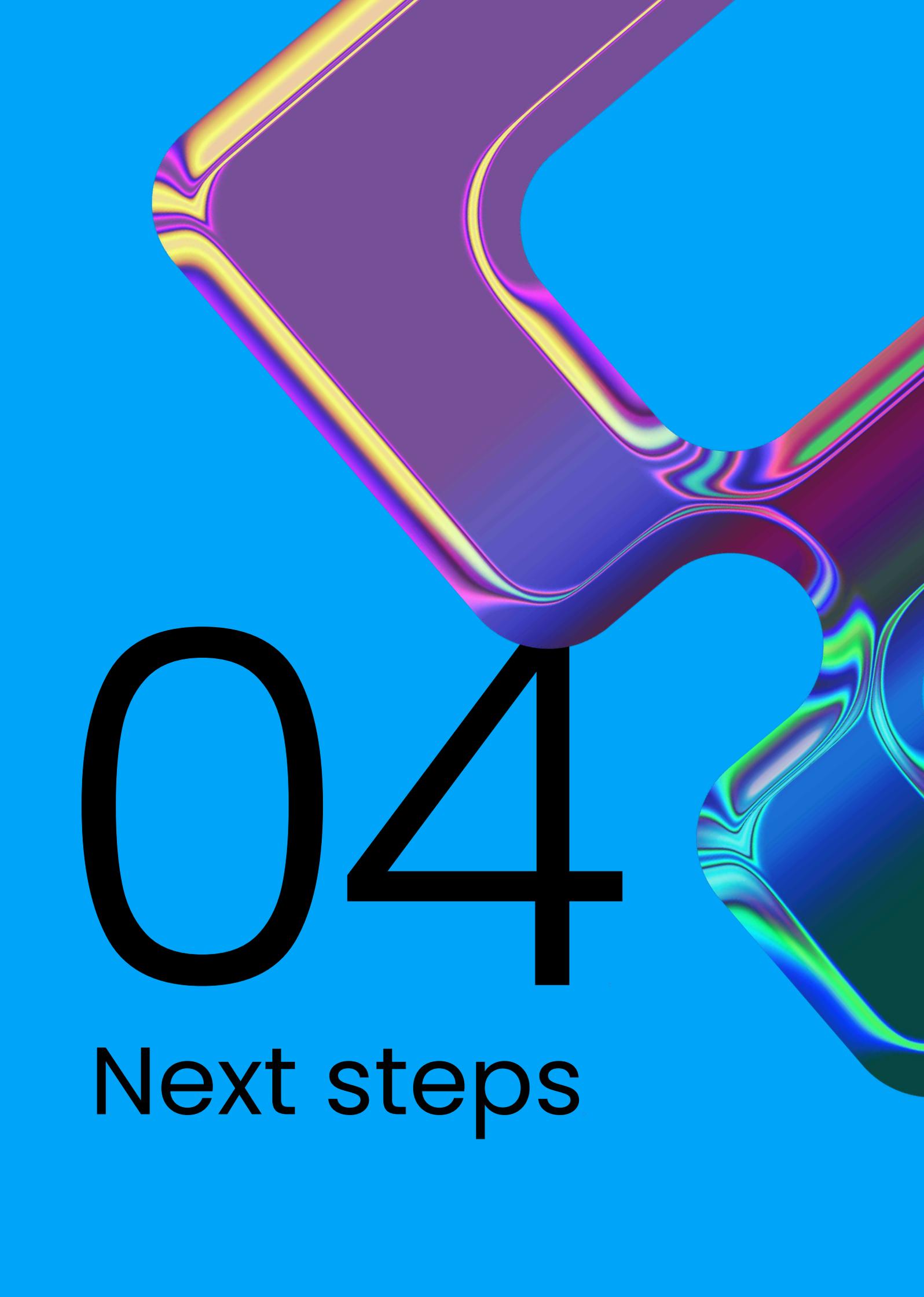
BridgeAI has hosted various events, webinars, and workshops which promote the programme's activities and case studies to a wider audience. BridgeAI's in-person events, workshops and webinars can be found on the [Innovate UK Events](#) page, and previous events and recordings can be found in the [Events archive](#).

These events and resources offer an opportunity for the AI ecosystem and community to engage with BridgeAI, and offer their expertise and learn from peers. Topics include responsible AI; data governance; mitigating bias; technical operational support; investment readiness for startups; industry and SME collaboration; and standards, policy and regulation.

## Additional resources

Businesses and organisations considering or already using artificial intelligence consistently cite the need for education and use cases to demonstrate returns on investment, and to stimulate adoption of AI. There is a clear need for education across the four target sectors on what AI can do for them, across all activities on the programme.

BridgeAI will continue to surface and publish use cases and [case studies](#) from organisations engaging with the various programme offerings and the funding competitions. Additionally, BridgeAI has started to publish a series of guides for adopting AI that are designed to demystify the process of AI adoption and help businesses start their journey.



04

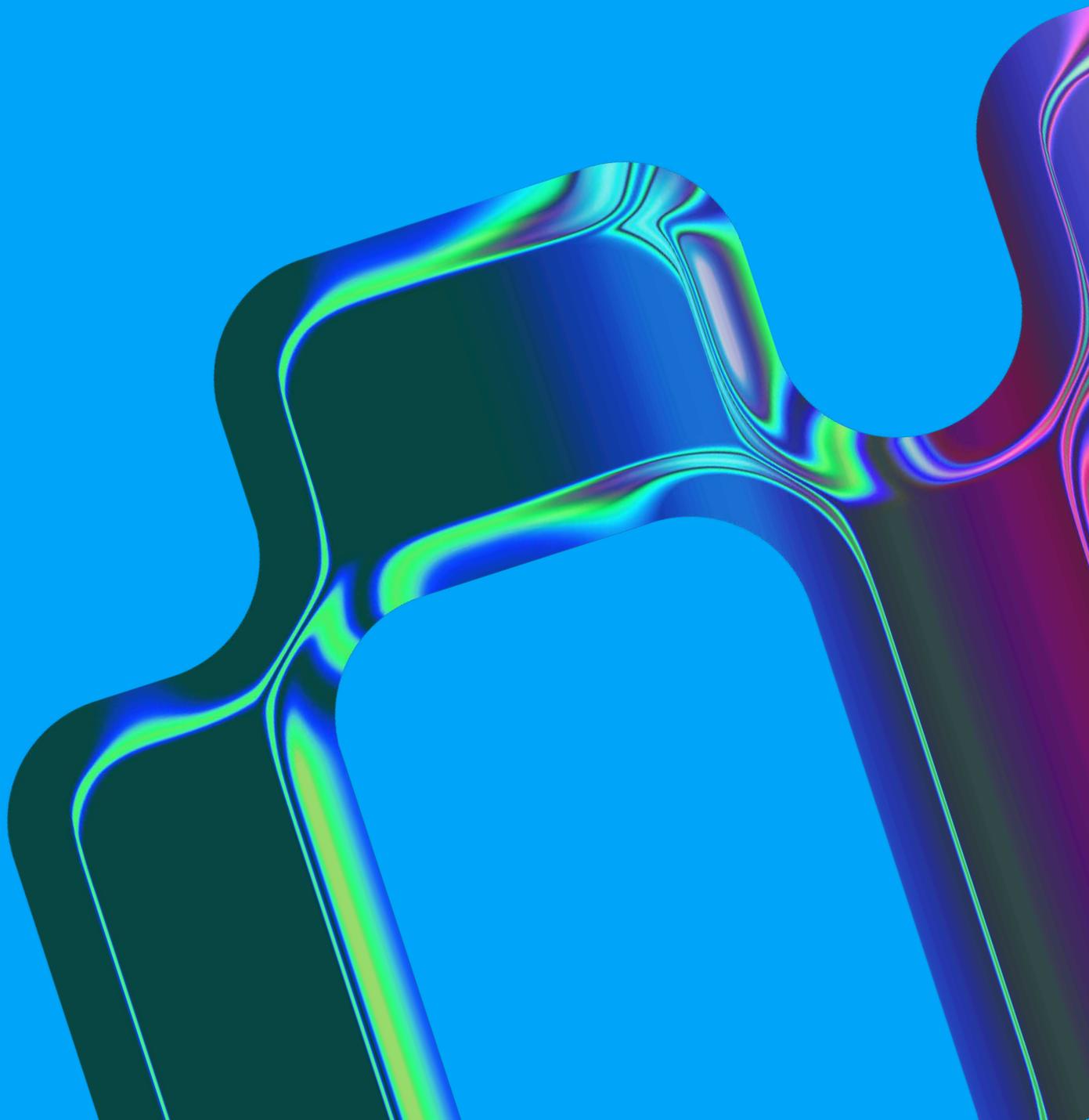
Next steps

The first year of BridgeAI saw 260+ funded projects take place, demonstrating industry's significant appetite for enabling AI adoption. As these funded research projects develop, the programme will continue to produce valuable learnings at technical and granular level; enable AI adoption in funded organisations; and demonstrate clear use cases for the wider industry adoption of AI.

Delivery partners are continuing their work in year two, and are looking for ways to adapt their solutions to suit the changing needs of the four key BridgeAI sectors, as well as offering new initiatives to meet the needs of the dynamic AI ecosystem.



# BridgeAI year two overview



## Innovate UK

In year two of the programme, Innovate UK will continue to play a central role in overseeing the BridgeAI investment and shaping the programme's vision. The focus remains on offering a comprehensive suite of support to the community, and providing funding to develop trusted, end-user-driven AI products and services.

Innovate UK's interventions in year two will emphasise the creation of a hub for new communities of practice that will enable new connections through expanding networks, and provide forums to discover and learn of opportunities and best practice to overcome sectoral challenges through AI. In addition, Innovate UK will provide support in the development of AI adoption strategies through AI Labs, access to skills and knowledge through Knowledge Transfer Partnerships, and enhance businesses capabilities through Innovation Exchange.

Innovate UK will also continue to facilitate access to international growth opportunities through the Global Business Innovation Programme and foster collaboration through coordinated ecosystem activities. This will include organising targeted sector-specific events, exhibitions, and labs, ensuring valuable knowledge exchange among participants.

## The Alan Turing Institute

In the second year, The Alan Turing Institute will continue to provide independent scientific advice direct to companies, to make it easier for them to adopt AI in priority sectors. Independent Scientific Advisers (ISAs) will work to identify trends in data and AI needs across the community, collaborating with other BridgeAI delivery partners to either lead or contribute to the development of guidance for companies looking to adopt AI.

The Turing will continue to focus on AI upskilling and build on the [AI Skills for Business Framework](#) developed in 2023-24, to maximise its impact across BridgeAI priority sectors. This will include the addition of new data and AI training material through the online training platform, as well as through delivery of live training for cohorts of companies needing to upskill in AI.

The Turing Way Practitioners Hub will continue to offer a forum for experts and practitioners implementing best practices in AI and data science, fostering cross-sector engagement, knowledge exchange and skills development. The Hub will also organise themed webinars and events to connect community stakeholders and disseminate insights from The Turing Way to the broader BridgeAI network. Upcoming cohorts will contribute [case studies](#) that showcase successes, challenges, and practical recommendations, serving as a valuable resource for industries exploring the potential of AI and the advantages of open methodologies.

Small and medium-sized businesses joining the Practitioners Hub will receive dedicated support through tailored workshops, coaching sessions and collaborative opportunities. This will empower them to adopt open-source approaches and ensure the reproducibility of AI deployment within their organisations.

The Turing Institute will also continue its work on AI governance, delivering high-quality research and insights accessible through the AI Standards Hub, and providing much-needed training for the BridgeAI community to help companies understand and operationalise best practices in AI governance.

## **British Standards Institution**

BSI is continuing its work as a strategic partner to provide standards-centric support throughout the programme. They are building a vibrant community via the BridgeAI Standards Community, where small and medium-sized businesses can engage with BSI on standards and related guidance, as well as the opportunity to collaborate through events, workshops, and online discussions. This will empower these organisations within the key sectors to leverage standards and learn from like-minded peers, further accelerating trust and confidence in AI and helping them to realise greater potential.

In year two, BSI will also be providing training on key standards (eLearning, in-person, virtual and instructor-led), whether organisations are just beginning their AI journey, need to manage a complicated system, or are looking to make AI deployment as secure as possible. These courses will be featured on the BridgeAI programme's opportunities page.

Over the longer-term, BSI will work with Innovate UK and small and medium-sized businesses to develop guidance and standards to support them on their journey to adopting and realising the benefits of international standards.

## **Digital Catapult**

Digital Catapult will continue to foster collaboration across the AI ecosystem, in particular between supply and demand sides through their FutureScope High Growth AI Accelerator. They will deliver two accelerators this year, focusing on the transport, and on the creative industries. These accelerators will support organisations in the development of responsible and ethical AI solutions that drive business productivity.

Digital Catapult is also building on the foundations established in the BridgeAI's first year to further support the ecosystem and innovator community. The team will be developing capabilities to support innovation scaling within organisations, moving beyond PoC development into AI adoption with a focus on MLOps. These new capabilities will give BridgeAI members a unique opportunity to better understand how to adopt AI within an organisation at scale, through toolkits, webinars and more in-depth support.

The Digital Catapult team will continue to provide innovation support through tailored workshops covering on responsible and ethical AI, data readiness, collaboration, and investment support. During the second year of the programme, they will also be bringing to light real-world case studies of AI adoption in industry, to help others in the wider ecosystem to identify areas for AI adoption within their own organisations.

Finally, year two will also see continued engagement with the industries through the Expert Working Groups. The insights and learnings from these groups will be fed into the BridgeAI programme to help shape programme offerings.

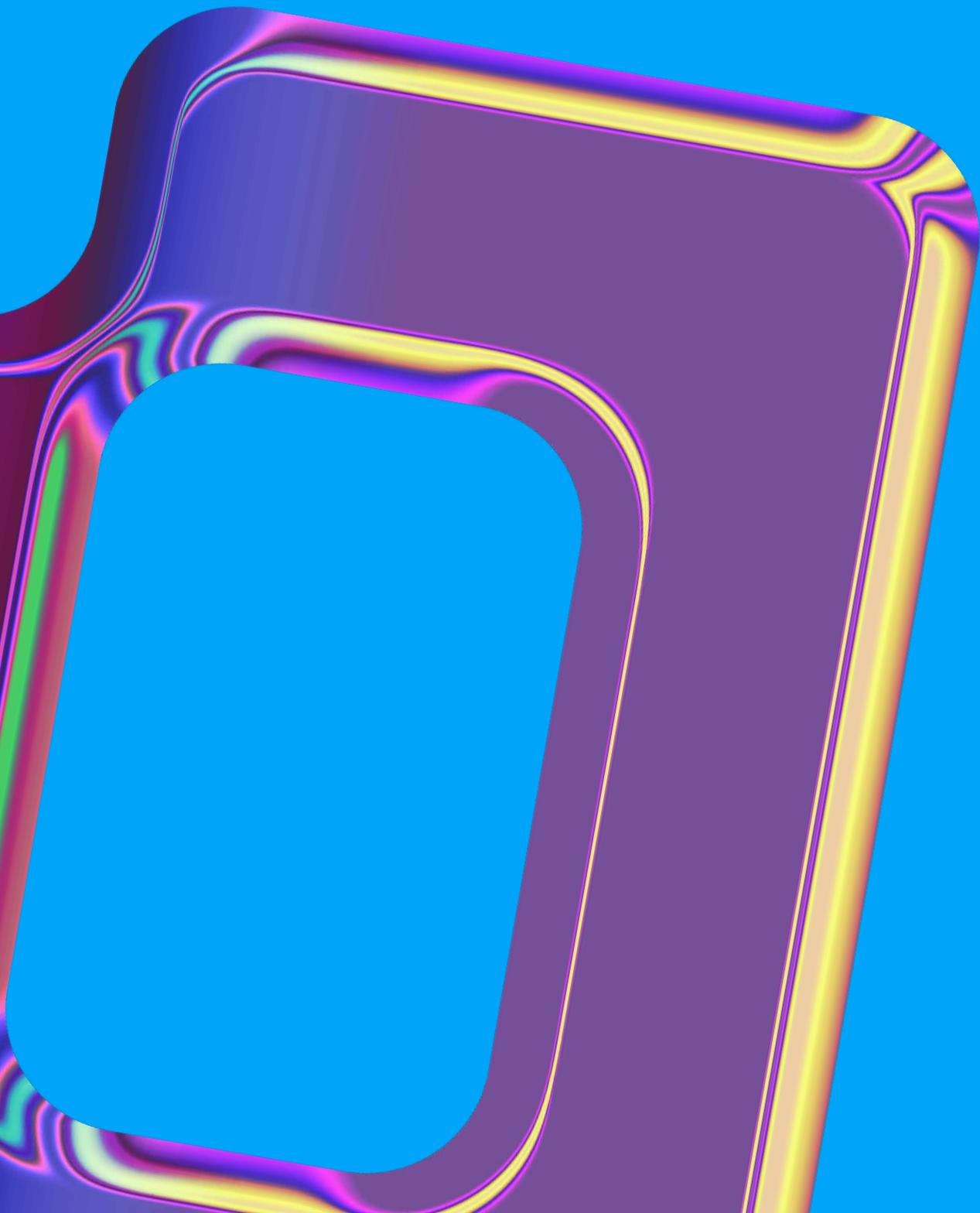
## **STFC Hartree Centre**

The STFC Hartree Centre will continue to provide access to AI adoption support, expertise and training through its range of BridgeAI offerings. Within the first year, the Hartree Centre has established its technical support, supercomputing access and training offerings, and has begun delivering them to UK companies, assisting them in the familiarisation, exploration and adoption of AI.

These offerings will continue throughout the second year of the programme, in the form of innovation vouchers, high performance computing (HPC) vouchers, and training. Innovation vouchers are also offered (to the value of £5,000 or £15,000), with applications being opened and assessed at regular intervals throughout the year. Through these innovation vouchers, companies will continue to access technical support from data science and AI experts in order to identify AI opportunities; carry out feasibility studies; and develop digital roadmaps to help them on their journey to AI adoption. Organisations will also be able to apply for £5,000 vouchers for HPC access to allow them to benefit from the power of world-class supercomputing for development of their AI applications and solutions.

Throughout the second year of BridgeAI, open access to the Hartree Centre online self-learning training portal will continue to be available for individuals and businesses wanting to upskill at their own pace. The centre will also deliver two further cohorts of the Discover Digital Transformation Training programme, beginning in April 2024 and September 2024. Each series will contain five live training sessions covering different topics within the theme of applied data science, digital twinning and AI.

# Get involved



Artificial intelligence holds enormous potential for businesses in enhancing productivity and competitiveness, but adopting AI can be challenging.

If you are an AI developer or industry adopter, BridgeAI can equip you with the skills, knowledge, and expertise to navigate the evolving AI landscape, adopt AI responsibly and ethically, and drive your organisation's productivity.

If you want to learn more about the programme or are interested in becoming a part of the BridgeAI community please get in touch.

- [Find out more](#) about the BridgeAI programme
- [Subscribe](#) for regular updates
- [Upcoming events](#)
- [Explore current opportunities](#)

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Innovate UK, part of UK Research and Innovation, is the UK's innovation agency. It works to create a better future helping companies to develop and commercialise new products, processes and services, supported by an outstanding innovation ecosystem.

The Alan Turing Institute is the national institute for data science and AI, tackling big challenges in science, society, and the economy through research and innovation.

BSI is the UK's national standards body, which champions progress and supports a global community of experts to shape sustainable and ethical solutions.

Digital Catapult is the UK authority on advanced digital technology, bringing together an expert and enterprising community to discover new ways to solve the big challenges limiting the UK's future potential.

The Science and Technology Facilities Council (STFC) Hartree Centre helps UK industry take advantage of high-performance computing, data science and AI technologies to boost productivity and innovation.

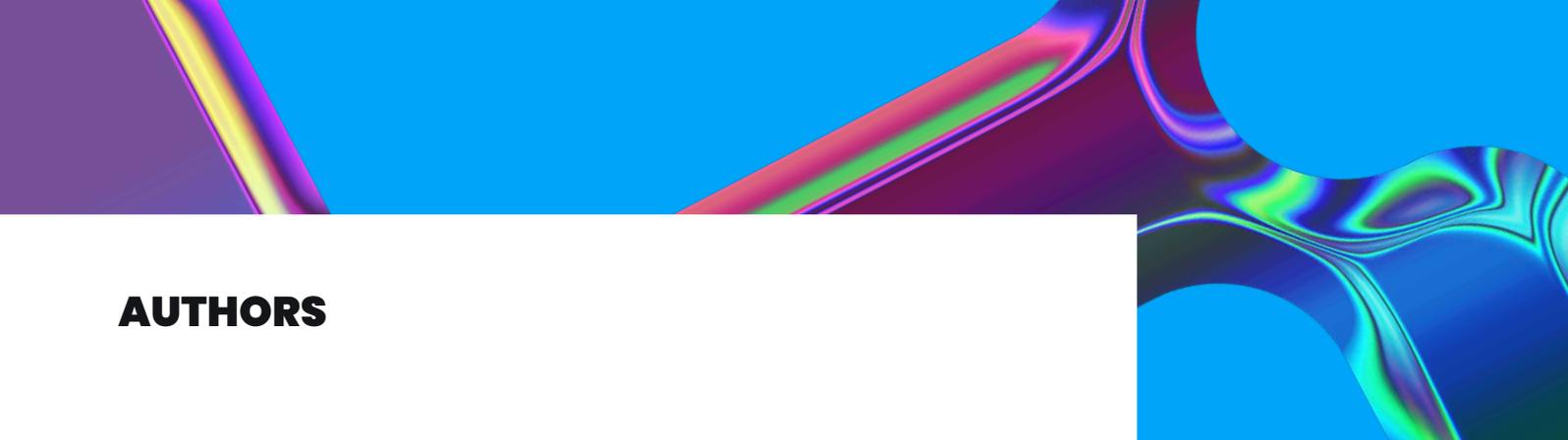
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