Bridging the AI divide

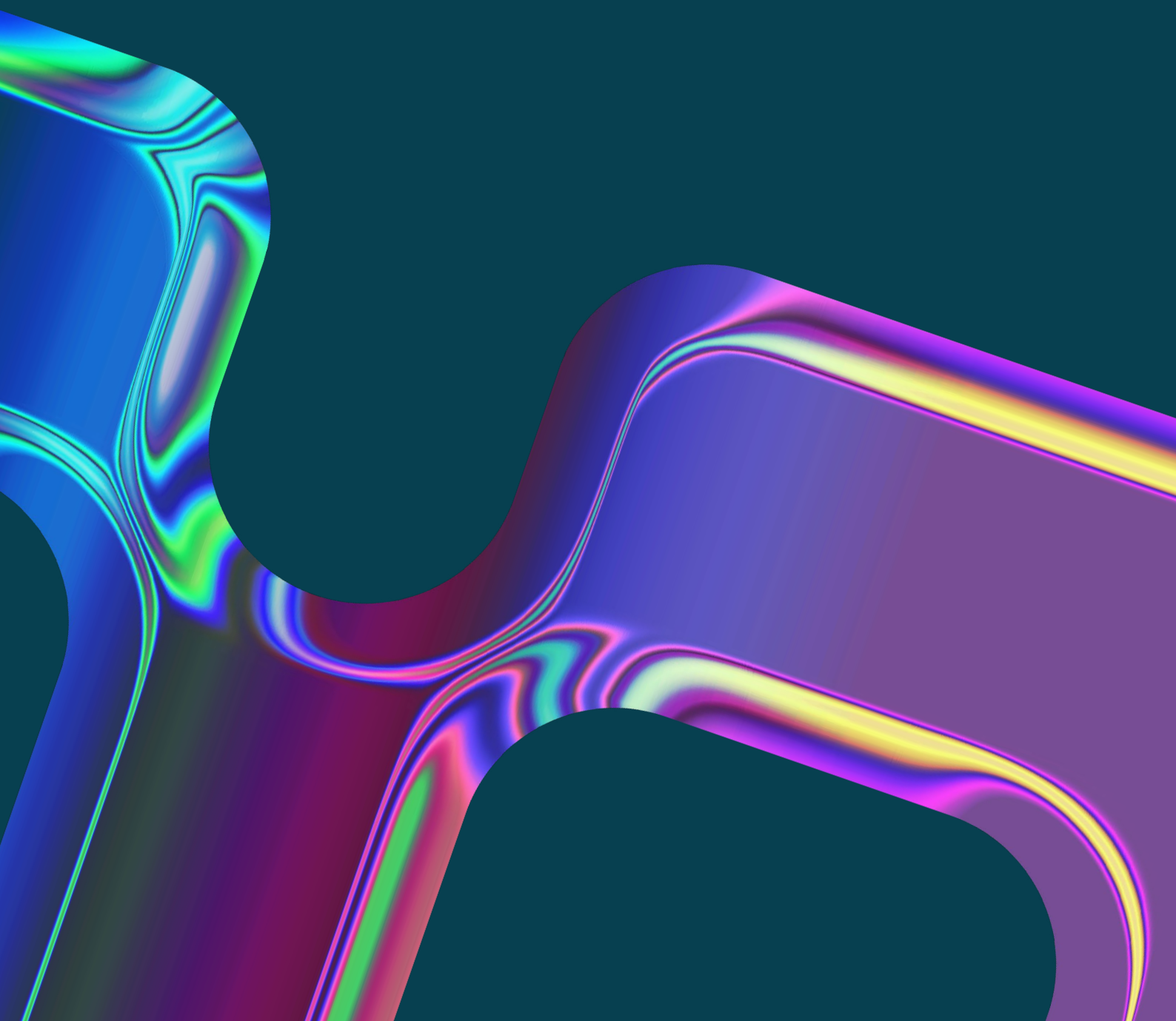
Innovate UK BridgeAI: year two in review

2024 - 2025

Innovate UK

BridgeAI

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.



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Ministerial Foreword

Parliamentary Under-Secretary of State for AI and Digital Government – Feryal Clark MP

Artificial intelligence is transforming the way we live and work, and has the potential to unlock new levels of productivity, drive economic growth, and improve lives across the UK.

The UK is a global leader in AI, ranking first in Europe and third in the world – behind only the USA and China – due to market size[1] and the number of AI unicorns.[2] This reflects our thriving research ecosystem, innovative businesses, and strong policy foundations. To maintain this leadership we must now go further — ensuring that we continue to develop world-class AI technologies, and that businesses across the economy can adopt and benefit from them at pace.

This government is taking decisive action to accelerate AI adoption, supporting businesses and job creators in harnessing its full potential. We are delivering on all fifty recommendations of the AI Opportunities Action Plan, setting out a clear roadmap for embedding AI across industries, unlocking new opportunities for economic growth, and enhancing the efficiency of our public services. Through this work, we are ensuring that AI is not just a driver of innovation but also a practical tool that empowers businesses, creates jobs, and strengthens the UK's position as a global leader in AI-driven transformation.

Innovate UK's BridgeAI programme plays a critical role in this effort: helping businesses across key sectors to integrate AI effectively, overcome adoption challenges, and realise AI's full potential. As well as financial support, BridgeAI provides businesses with access to expert knowledge, cutting-edge AI-driven solutions, and the skills needed to succeed in an AI-powered economy. It is building the vital connections between the UK's world-leading AI researchers, data scientists, and industry, ensuring that AI innovation translates into real-world impact.

As BridgeAI continues to deliver, this government remains fully committed to supporting the programme and recognising the transformative impact it is having across industries. This report marks an important milestone, highlighting the progress made so far and the early successes in driving AI adoption across the economy.

Through collaboration, investment, and a shared commitment to innovation, we can ensure that AI works for everyone — driving productivity, strengthening our industries, and shaping a future where AI-powered growth benefits businesses, individuals, and society as a whole.

Foreword by the Innovate UK Executive Director for Digital and Technologies

Innovate UK Executive Director for Digital and Technologies – Gary Cutts

Artificial intelligence presents a generational, transformative opportunity for UK industry. It not only has the potential to enhance productivity and efficiency, it can also be used to create entirely new ways of working, transforming how industries operate and, crucially, improving outcomes for citizens across the country.

The Innovate UK BridgeAI programme is a vital national initiative designed to support UK businesses in harnessing the power of AI. Delivered by a true partnership of leading organisations — Innovate UK, Digital Catapult, The Alan Turing Institute, STFC Hartree Centre, and BSI — it is addressing key challenges that have historically slowed AI adoption. Its holistic approach provides businesses with the knowledge, resources, and investment needed to implement AI solutions and provide valuable support at all stages of the AI adoption journey. And it is helping companies to upskill, funding AI-driven projects, and fostering collaboration between AI innovators, small and medium enterprises, and industry leaders.

By bridging the gap between the UK's world-class AI ecosystem and the businesses eager to adopt this technology, BridgeAI is strengthening AI capabilities across the economy and ensuring that AI adoption is both responsible and impactful.

This report marks the second year of BridgeAI, highlighting the programme's progress, key insights, and impact. It showcases real-world examples of AI adoption, demonstrating best practices and tangible benefits across sectors.

As AI continues to evolve, collaboration will be key to ensuring the UK remains at the forefront of innovation. By bringing together AI developers, industry leaders, policymakers, and researchers, BridgeAI is strengthening the UK's AI ecosystem, driving economic growth, and enabling businesses to harness the full potential of this transformative technology. The wide-ranging, demonstrable benefits of the BridgeAI programme over the last two years have been hugely encouraging to see. We look forward to building on the programme as we continue to support the UK government's AI Opportunities Action Plan.

Executive summary

The UK is in a strong position to be world-leading in artificial intelligence (AI) adoption and deployment. Yet, whilst AI adoption in UK businesses is growing steadily, with the right tools, skills and support, there is significant potential for wider and more rapid implementation.

It is essential for UK businesses to understand the productivity gains offered by AI, and the benefits of foundational digital and data practices. Concerns around AI risk and safety must also be effectively addressed and demonstrated through responsible AI deployment, bringing to bear proven, cross-sectoral approaches. The Innovate UK BridgeAI programme (BridgeAI) is playing a key role in solving these issues by:

- Encouraging more AI adoption in low adoption sectors, helping existing AI tech vendors to pivot, and enabling startups to provide products, services and innovation to all areas of the economy
- Enabling collaboration between data holders and AI developers that opens up economic growth for adopters, while driving the provision of new products and services
- Providing crucial, unbiased advice to businesses about all types of AI, cutting through the hype and supporting wider digitalisation of the economy
- Demonstrating through impact and case studies that AI can be implemented safely and responsibly, realising productivity and growth for all

BridgeAI's comprehensive set of resources and activities enable businesses to harness the power of AI technologies to drive innovation and growth, connecting innovators with industry adopters. Offerings include funding, training, partnerships and expert support, and are detailed within this report.

BridgeAI is reaching thousands of organisations across the UK, including many small and medium enterprises, and has driven hundreds of successful AI projects so far. And as the case studies and testimonials within this report demonstrate, engaging with BridgeAI has made a significant positive impact on participating organisations:

- Boosting collaboration by de-risking partnerships
- Overcoming data access challenges
- Demonstrating how AI can solve sector-specific and cross-sectoral challenges
- Showing how specialist support helps small businesses to unlock AI

Year 1 of the programme focused on building foundational knowledge across the target sectors and encouraging engagement with the programme. In Year 2, activities focused on operationalising and deploying AI in the target sectors.

This report provides an update on the rapidly evolving AI landscape and a summary of BridgeAI's achievements during its second year. It includes case studies that demonstrate the wide range of industry applications for AI, and show how support from BridgeAI has helped businesses to advance their AI adoption journey.

3,400+
organisations supported

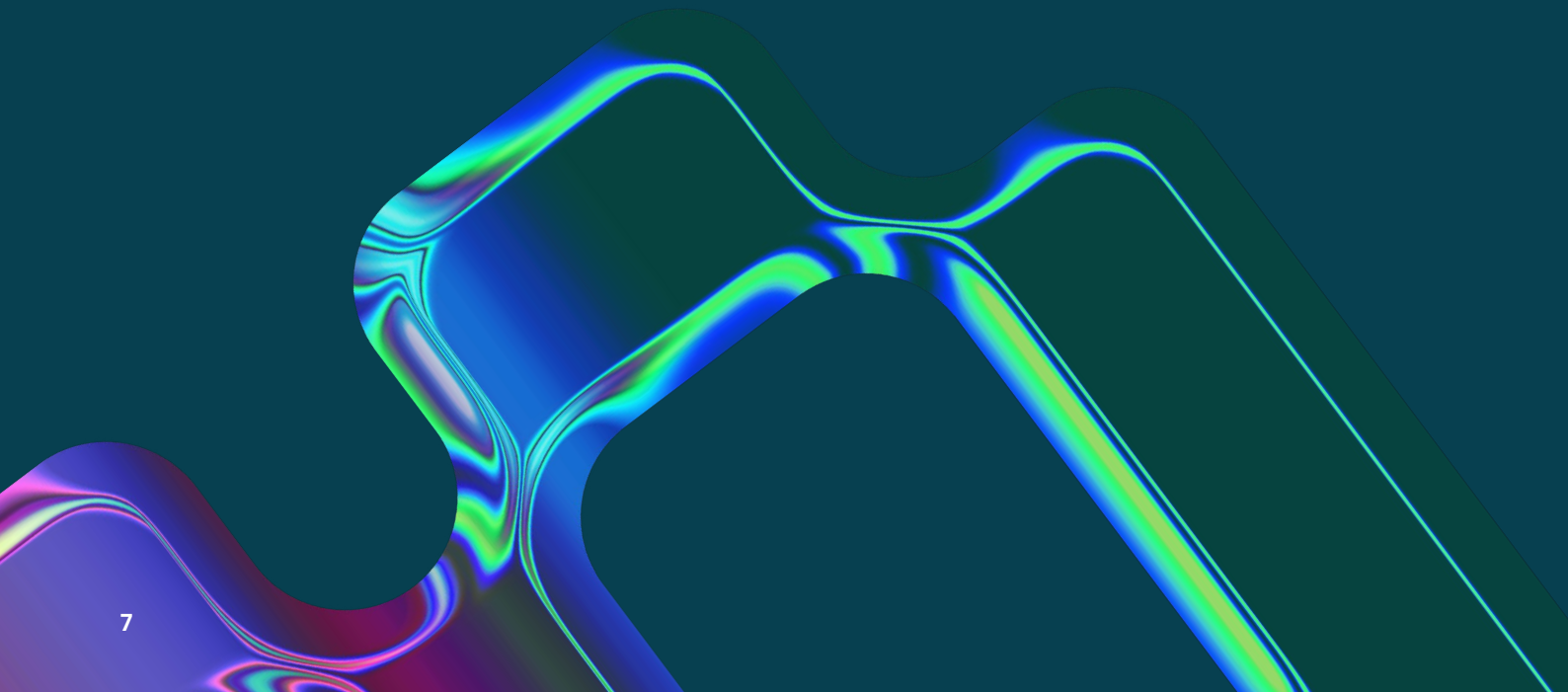
£73.8
million of grant funding allocated

9,000+
individuals reached

£48.7
million of co-investment achieved

450+
AI projects funded

1000+
AI skills courses completed

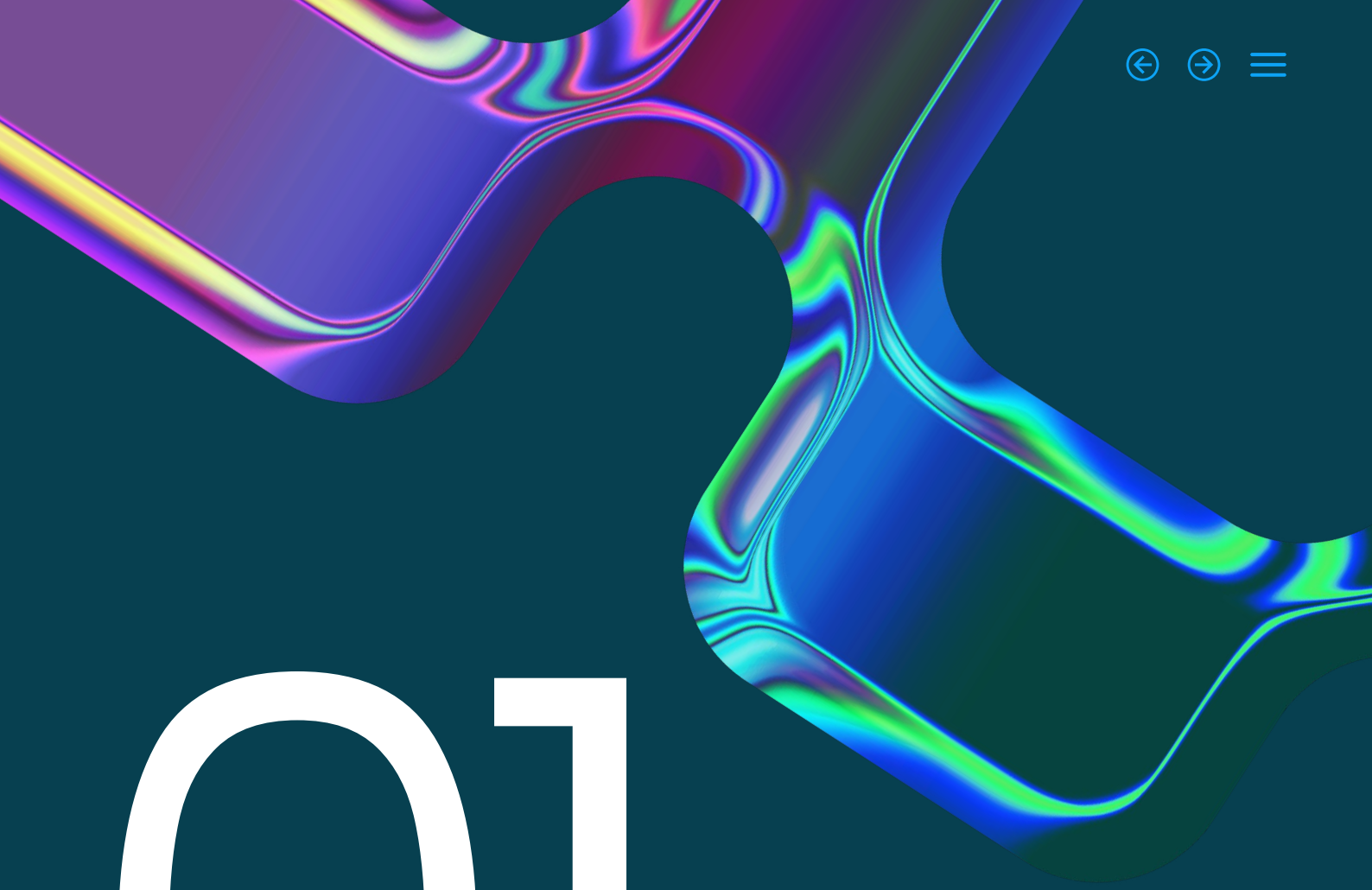


About BridgeAI

The Innovate UK BridgeAI programme (BridgeAI) is a nationwide programme driving growth and productivity in the UK economy through the adoption of artificial intelligence (AI) and machine learning (ML). It leverages the investment of £100 million from the UK Research and Innovation (UKRI) Technologies Mission Fund (TMF) and Innovate UK to foster a world class AI innovation network, bringing together leading businesses from priority sectors, AI experts and developers.

- It offers funding and support to four key sectors with high growth potential but low AI adoption rates – agrifood, construction, creative, and transport, warehousing and logistics – to enhance productivity
- It supports AI startups that can underpin adoption and help enterprises within the target sectors to upskill, understand and absorb AI technologies and boost productivity for the UK economy

BridgeAI is delivered by a consortium: Innovate UK, The Alan Turing Institute, British Standards Institution, Digital Catapult, and Science and Technology Facilities Council (STFC) Hartree Centre.



01

The AI landscape: investment, adoption and potential UK impact

The AI landscape

During 2024, many of the world's largest AI companies released updated models.[3] Many now outperform humans in tasks such as image recognition, visual reasoning and language understanding, although they continue to struggle with common-sense reasoning and complex problem-solving. So far in 2025, advanced capabilities can now also be developed using significantly less compute and resource.[4]

Although the UK has a strong AI ecosystem, it is falling behind in developing cutting-edge AI models that push the capability frontier. US organisations accounted for 37 such models in 2024, China for 11, and the UK only 6 (all of which were via Google DeepMind).[5] There were an estimated 3,700+ AI companies in the UK in 2023 with a revenue of £14 billion.[6] AI-related economic activity in the UK remains concentrated, and is often within internationally owned companies.

- The UK's top 10 AI companies contribute 62% of the sector's total GVA[7]
- International firms account for 47% of AI revenues in the UK[8]
- 75% of AI companies are based in London, the Southeast and East of England[9]

UK Government approach

The UK government takes a context-based approach to AI regulation, where the vast majority of AI systems are regulated at the point of use by regulators who apply existing rules to the use of AI in their respective domains. The Government has also committed to bringing forward legislation which will place targeted requirements on companies developing the most powerful AI models to ensure the UK can realise the benefits of these systems safely.

AI is at the heart of the Government's plans to kickstart economic growth and improve public services. In January all 50 recommendations of the AI Opportunities Action Plan were accepted by government to help the UK scale its globally competitive AI sector and drive adoption of AI across the whole economy.

Investment in AI

Since 2013, corporate investment in AI has grown rapidly, peaking in 2021 at £106 billion ($132 billion). By 2023, investment had fallen to £77 billion ($96 billion), largely due to general market conditions.[10] However, investment in Generative AI (GenAI) soared from £2.29 billion ($2.85 billion) in 2022 to £20.3 billion ($25.2 billion) in 2023.

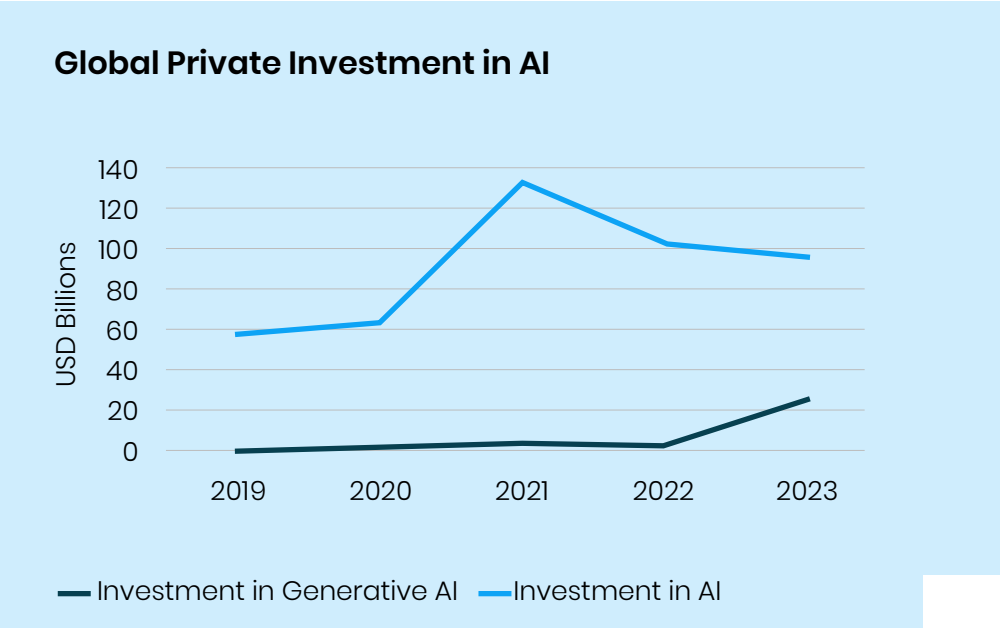


Figure 1: Global private investment in AI and GenAI from 2019 to 2023
Source: Stanford AI index, 2024

UK investment in AI mirrored global trends in 2023, dropping by 50% to £1.2 billion. However, from January to July 2024, UK AI companies raised £1.5 billion across 150 deals, exceeding the entire total investment of the previous year.[11]

Since July 2024, the UK AI sector has attracted

£200 million

a day in private investment,[12] with AI startups securing

25%

of all venture capital funding.[13]

AI adoption

In 2024, up to 72% of global enterprises are reported to have adopted AI (up from 55% in 2023). This was primarily driven by a significant increase in use of GenAI, which almost doubled, due to increased use of applications for visual content creation and text generation.[14] [15]

AI adoption by UK enterprises in 2023 was ahead of comparable economies, such as the USA, Germany and France, but behind other leading AI countries.

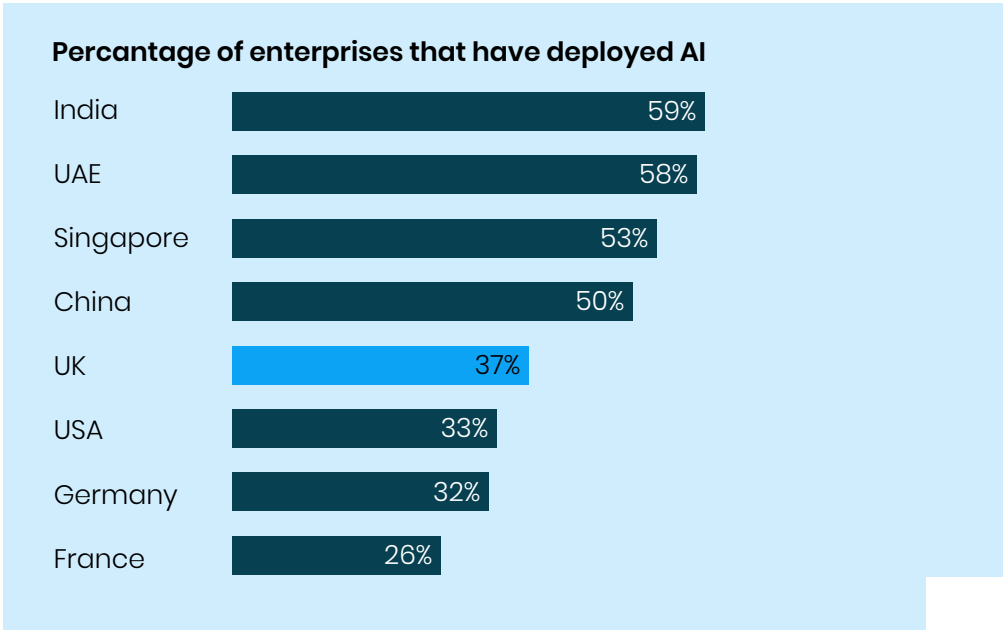


Figure 2: Enterprises (1,000+ employees) that have deployed AI by country
Source: IBM Global AI Adoption Index 2023

In 2024, AI adoption by **all businesses** in the UK also compares favourably to other similar economies:

- In the UK up to **15%** of all businesses were reported to be using AI in 2024[16]
- In Germany and France, adoption rates stood at **11.6%** and **5.9%** [17]
- The US adoption rate was reported as **5.0%** [18]

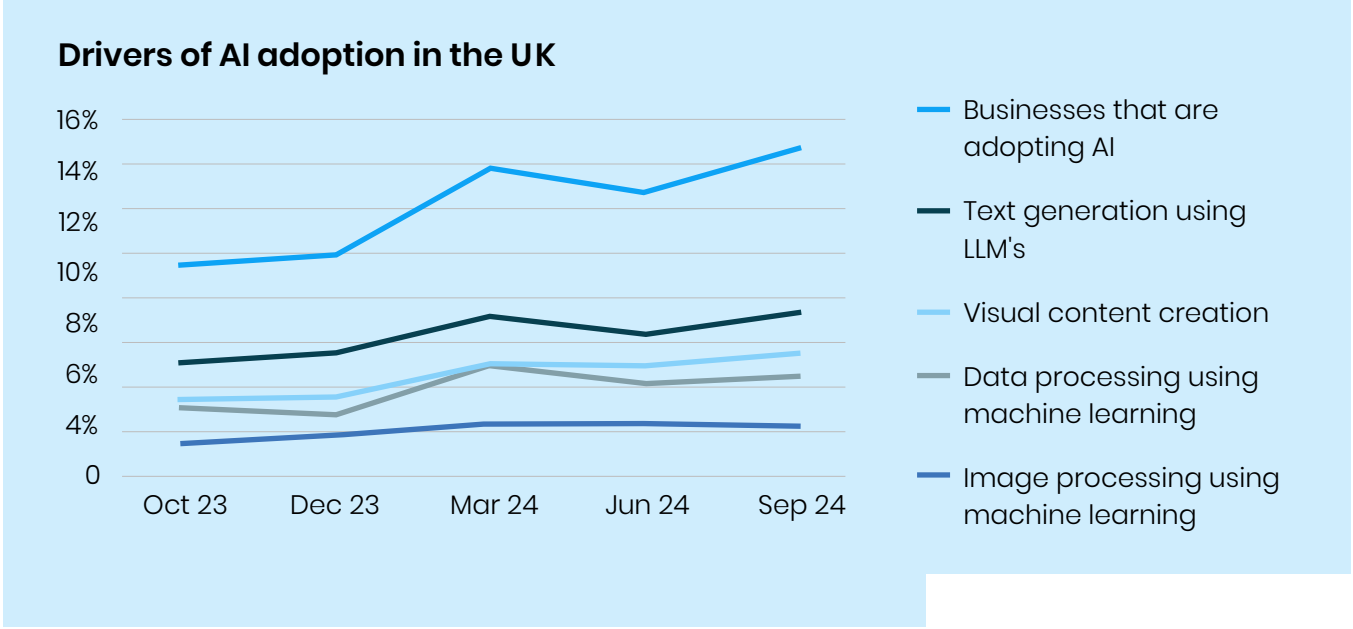


Figure 3: Drivers of AI adoption in the UK
Source: ONS Business Insights and Conditions Survey

A 2024 study by Deloitte estimates that seven million people in the UK now use GenAI tools in the workplace, while showing greater trust in this technology than their European counterparts. For example, when asked Would you personally trust Gen AI to recommend financial products? 64% of UK respondents answered Yes, compared to 54% of EU respondents.[19]

There is a risk that companies conflate AI with GenAI and overlook the AI use cases that centre on data and ML techniques. Companies that demonstrate good data and digital practices have greater capacity to adopt all forms of AI, and are also better placed to drive productivity using GenAI tools.[20]

AI adoption by sector

In 2024, there were two leading sectors in AI adoption across the UK, EU and the USA: information and communication, and professional, technical and scientific activities. Sectors such as transport, construction, and agriculture consistently showed the lowest levels of adoption, although direct comparisons of percentage points across national surveys are difficult, due to varying methodologies.

AI adoption	UK	EU	USA
Top three sectors	Information and communication **40.5%**	Information and communication **48.7%**	Information and communication **18.1%**
	Professional, scientific and technical **26.3%**	Professional, scientific and technical **30.5%**	Professional, scientific and technical **12.0%**
	Real estate **19.3%**	Administrative and support services **14.3%**	Educational services **9.1%**
Bottom three sectors	Construction **4.5%**	Transport and storage **8.1%**	Transport and storage **1.5%**
	Human health and social work **4%**	Accommodation and food services **6.1%**	Construction **1.4%**
	Transport and storage **0.8%**	Construction **6.1%**	Agriculture, forestry, fishing and hunting **1.4%**

*UK source **ONS (BICS)**, EU source **Eurostat**, US source **BTOS***

Sectors such as IT have data and digital practices baked into their business models – an important prerequisite for deploying AI, whereas sectors where digital and physical environments need to be connected can require technological innovation and greater investment to enable a data infrastructure for AI. This may lead to AI vendors and innovative startups choosing to work with more digitally mature sectors, or not recognising the market opportunity in sectors without a rich data landscape.

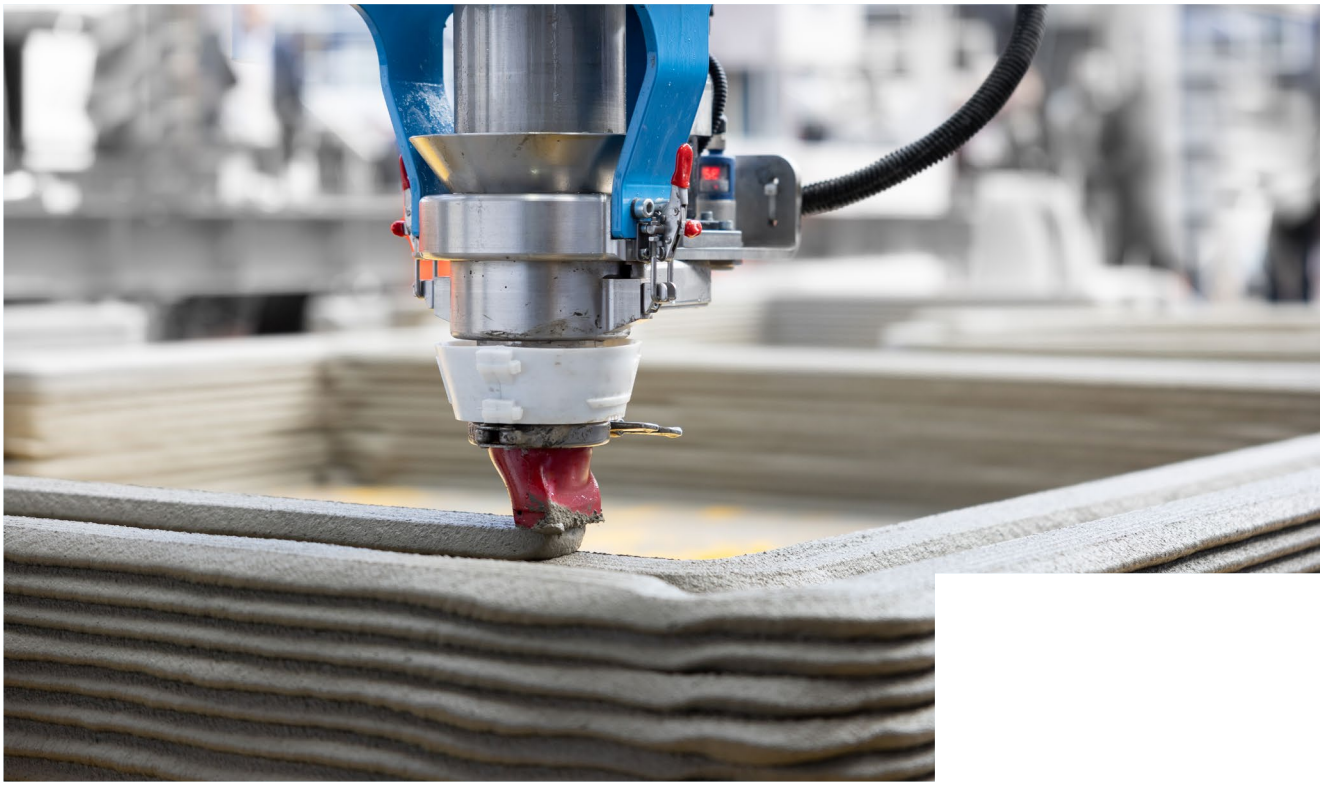
AI's impact and public attitudes in the UK

AI has the potential to increase productivity significantly, if adopted effectively.

- **£119 billion** in productivity could be unlocked by AI in the UK[21]
- UK firms could save almost a quarter of private sector workforce time – equivalent to the annual output of **6 million** workers[22]
- The sectors more exposed to AI experience **4.8 times greater** labour productivity growth than those that are less exposed[23]

However, negative public attitudes towards AI could impact on overall adoption and reduce productivity gains. Engendering public trust is vital for driving greater adoption, and this is likely to be achieved only by demonstrating the use of AI with risks effectively mitigated.

- **43%** of UK citizens expect AI to have a positive impact on society, compared to **33%** expecting a negative impact[24]
- The UK public sees AI as a top three global risk (**34%**), behind climate change (**49%**) and risk of war (**48%**)[25]



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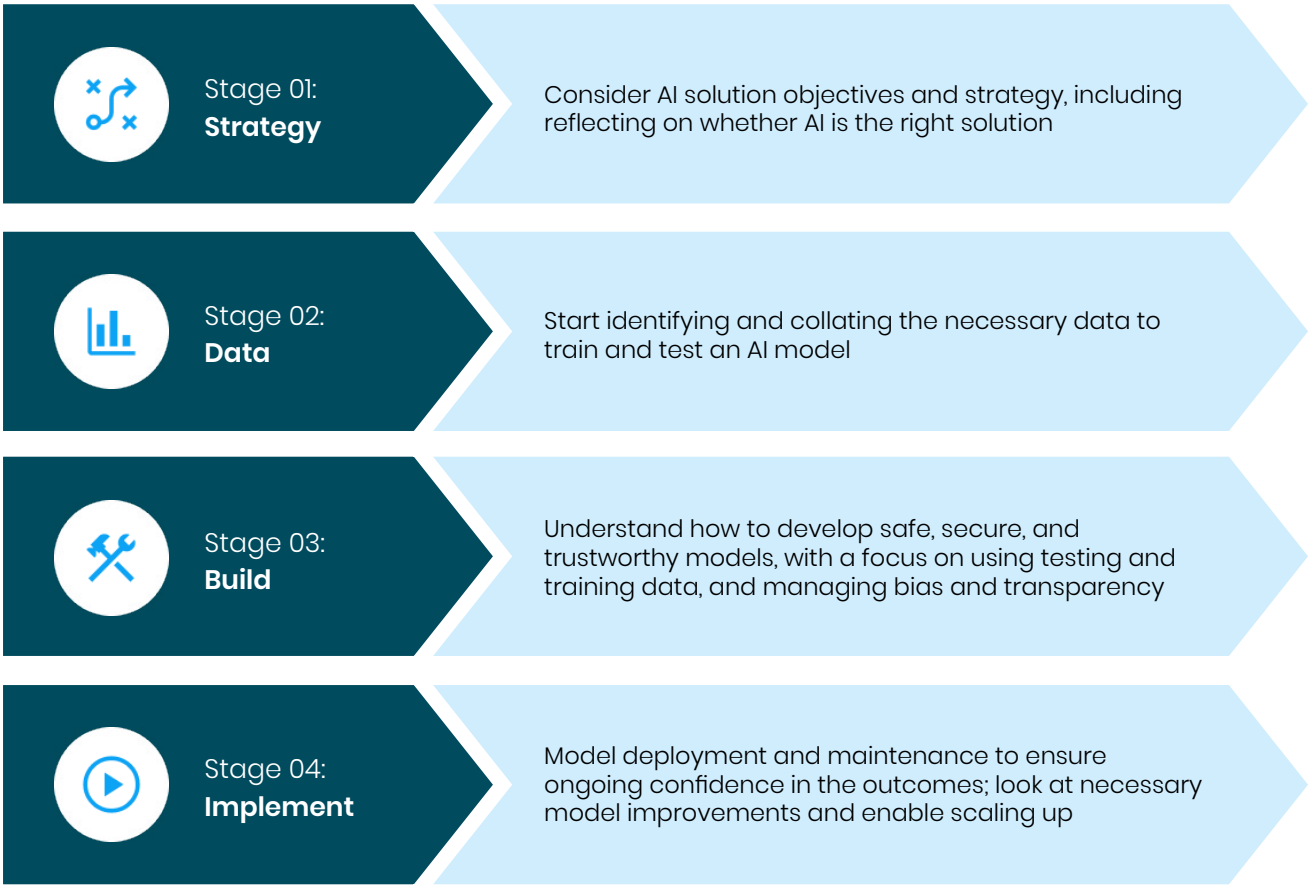
BridgeAI interventions and activities

The BridgeAI Adoption Framework

The **AI Adoption Framework** was developed to help businesses navigate the complex AI adoption journey. Based on extensive research, it covers four phases, helping users to identify where they are on the journey and source the right support from BridgeAI.



Within each stage of the AI Adoption Framework, the BridgeAI programme offers a comprehensive set of resources and activities, enabling businesses to harness the power of AI technologies to drive innovation and growth. Given that the AI adoption journey is often an iterative process, several offerings cut across different stages to help provide end-to-end support.

To find out about new and upcoming offerings please visit the **BridgeAI opportunities page.**

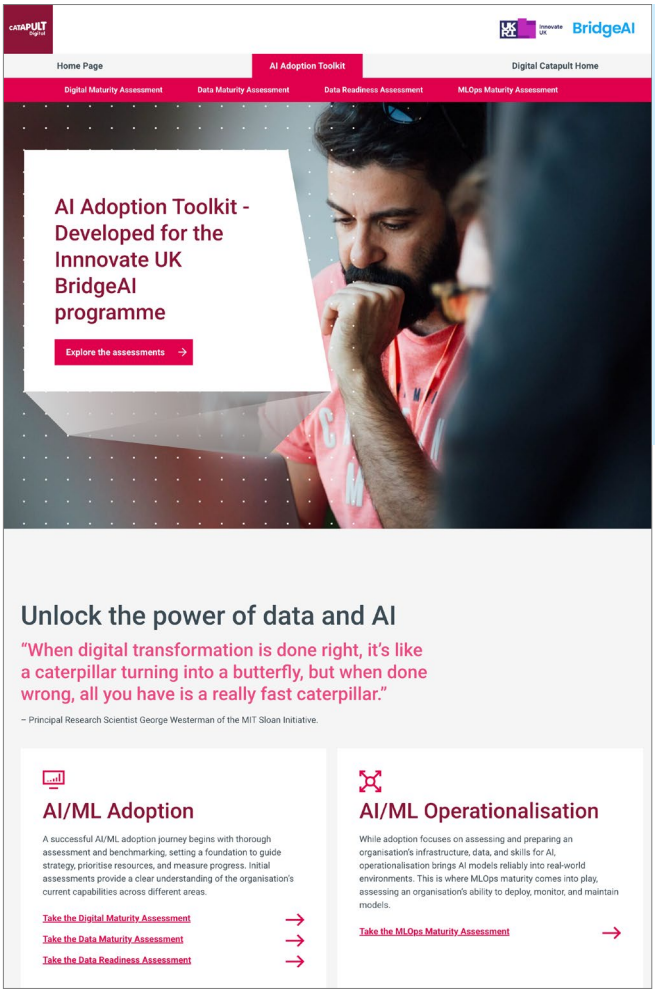
AI Adoption Toolkit, and digital and data frameworks

Many organisations struggle to understand the roadmap to successful AI adoption, which includes digital transformation and data excellence as important prerequisites. Before adopting AI, organisations must first assess and improve their digital maturity, infrastructure, data quality and readiness, as well as their technical capabilities.

The **AI Adoption Toolkit** features four online self-assessment tools to help companies benchmark their readiness and formulate strategies to address digital maturity, data maturity, and AI readiness.

Accompanying this toolkit, the **Data Strategy and Governance Framework** and **Digital Transformation Strategy Framework** provide practical steps to guide organisations along their AI adoption journey.

Developed and delivered by Digital Catapult



4x assessment toolkits developed:

- Digital maturity
- Data maturity
- Data readiness
- MLOps maturity

Over 110

unique companies have completed one or more assessments

AI Labs

AI Labs is an event series tailored for organisations at the early stages of AI adoption, or seeking clarity on its potential. Over the course of four weeks, virtual sessions delve into critical topics, allowing users to engage with peers and programme experts.

Delegates consider their AI adoption objectives by holistically evaluating four key pillars:

- Business strategy for AI adoption
- Data strategy
- Talent acquisition strategy
- Technology selection strategy

Through exploration of these topics, participant organisations can develop a dynamic and robust AI adoption strategy that ensures scalability and minimises risk of failure.

The programme concludes with an event that showcases the vision and AI strategy of organisations that have completed the four week course.

Developed and delivered by Innovate UK Business Connect

55

companies took part in AI Labs

100%

intend to participate in more BridgeAI activities after AI Labs

86%

of participants said that as result of AI Labs, they had taken further steps to procure, develop, pilot or pursue other means of adopting AI/ML in their organisation.

Discover Digital Transformation

The **Discover Digital Transformation** training programme was designed with decision-makers in mind. It supports businesses in exploring digital, data-driven and AI technologies, helping them to build an action plan to become digital-ready and plan their next steps in the journey to AI adoption.

The training is flexible and bespoke to attendee organisations. Consisting of five sessions across key technology areas, participants can access individual drop-in sessions or follow the entire series for a deep focus on the strategic and logistical elements of working with AI.

Developed and delivered by STFC Hartree Centre

206

attendees took part in the training (106 through live sessions and 100 through self-paced online access)

25

AI Leader badges awarded to attendees who completed all five sessions

"The sessions provided clarity on various aspects of AI and digital tools/platforms and digital transformation. Simple language was used which was easy to understand."

Efi Tzoura
Innovation Manager, Ferrovial

Data Study Groups

In September 2024, BridgeAI ran a **Data Study Group** (DSG) with PhD students and early career researchers to look at how AI can be used to explore UK labour market data to understand the AI exposure risk for roles within BridgeAI's priority industry sectors (agriculture and food processing, construction, creative, and transport, logistics and warehousing).

This resulted in developing a proof-of-concept large language model (LLM) and conversational chatbot that could be used to assist in the development of apprenticeship standards.

BridgeAI also ran a mini Data Study Group at PhD Connect 2024, which explored improving the efficiency and reliability of construction cost estimation, and improving sustainability and productivity in the concrete industry using hyperspectral imaging.

Developed and delivered by The Alan Turing Institute

More than

40

AI professionals worked on the BridgeAI data challenges

"The DSG underscored the importance of incorporating human collaboration in making AI systems trustworthy and effective, guiding our perspective on the future direction for AI competencies towards greater transparency, inclusivity, and practical applicability.

Building a future-ready AI workforce requires more than technical proficiency; it demands a shared understanding of AI competencies across education and industry to create equitable pathways to AI careers, shape academic curriculum standards, and enhance diversity in AI."

Dr Neslihan Suzen
Lecturer in Applied Mathematics, School of Computing & Mathematical Sciences, University of Leicester

Funding and grant competitions

The BridgeAI programme provides a series of financial interventions to stimulate adoption of AI within its target sectors.

Lack of funding and uncertain return on investment are recognised barriers to AI adoption. By providing grant funding, BridgeAI has enabled developers to work alongside challenge holders to develop, implement and evaluate AI-driven solutions that can improve business productivity.

Grants are issued in several formats including collaborative research and development, feasibility studies and investor partnerships (which provide a connection through to private financing).

Two funding rounds of feasibility studies have supported almost 200 projects and 400 organisations, and further grant funding was allocated to support more mature innovations with collaborative R&D funding.

Developed and delivered by Innovate UK

8 grant competitions awarded 400 projects a total of

£73.8 million

in funding

£6.8 million

was allocated for investor partnerships, attracting

- **£3.35 million** in partner contributions
- **£20.7 million** in private investment

Support for

790+

organisations

Grant recipients have attracted

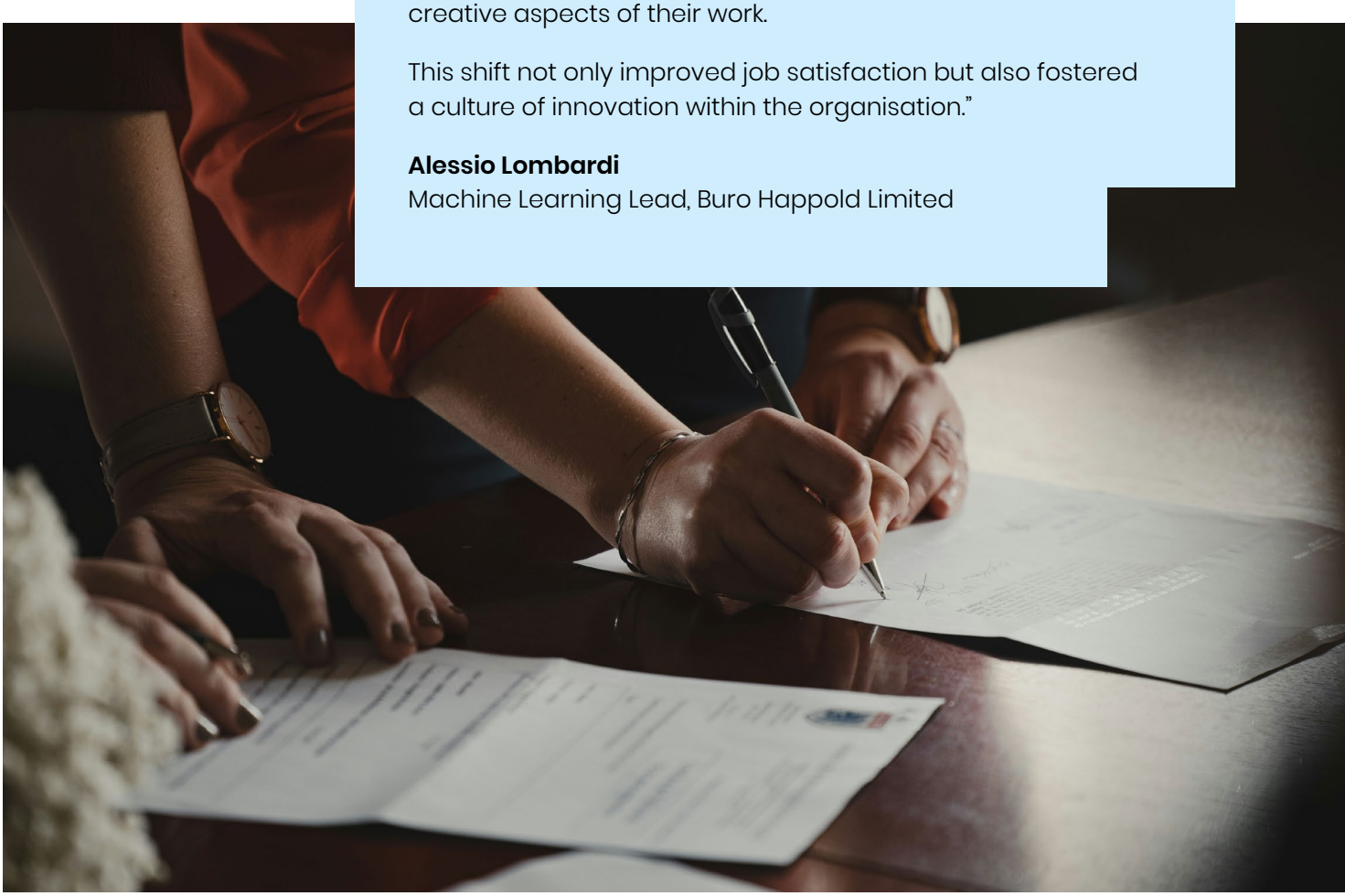
£47 million

in further funding

"By automating repetitive and time-consuming tasks, the AI tool allowed engineers to focus on more complex and creative aspects of their work.

This shift not only improved job satisfaction but also fostered a culture of innovation within the organisation."

Alessio Lombardi
Machine Learning Lead, Buro Happold Limited



High Growth AI Accelerators

BridgeAI's high growth AI accelerators help startups to develop ethical and impactful AI and ML solutions. These accelerator programmes create new opportunities for collaboration between startups and industrial partners in the long-term, driving sustainable growth of the targeted sector. Participants benefit from access to cloud credits, technical and business expertise, strategic guidance, holistic diagnostics, and tailored support.

Three accelerator programmes have taken place so far. The first cohort targeted all four of BridgeAI's key sectors, with the second and third targeting transport and creative respectively.

Startups tackle real-world challenges set by industry challenge owners (ICOs), which are leading enterprises within their sectors. The resulting solutions are sector-relevant and effective, helping to bridge the gap between demand and supply.

Developed and delivered by Digital Catapult

24

startups supported

Seven industry challenge owners onboarded

22 PoCs / MvPs enabled

Startups secured over

£1.7 million

in private funding within one year of participating in an accelerator

"Digital Catapult's AI Accelerator has given us unprecedented access to innovative startups, enabling us to explore fresh ideas and cutting-edge technologies to solve pressing business challenges. The program has facilitated innovation in ways that were new to our organisation, opening up opportunities to rethink strategies and drive impactful change."

Megan Wastell
Global Creative Director, Merlin Entertainments (industry challenge owner)

"Overall, the accelerator has significantly enhanced our capacity to innovate and scale, positioning Bahut at the forefront of AI-driven solutions in the transport sector. The support and resources offered by Digital Catapult have been instrumental in our journey, and we look forward to leveraging this momentum to drive further growth and impact."

Shevaan Jayasinghe
CEO, Bahut

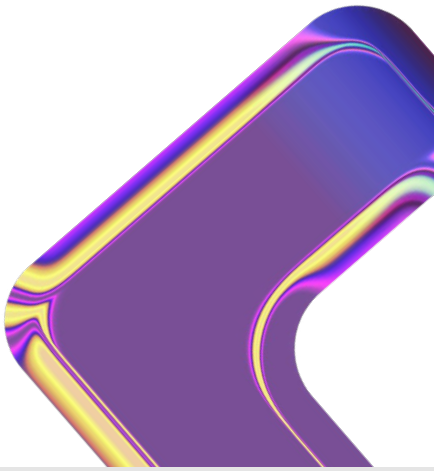
AI Skills for Business Competency framework

The **BridgeAI AI Skills for Business Competency framework** defines the high-level competencies required to enable responsible and safe AI adoption. It defines the knowledge, skills, attitudes and behaviours required to navigate practical challenges and exhibit competency within life and work.

To ensure the framework accurately reflects the needs of the UK workforce, it went through a three-month consultation process which engaged UK industry and brought together diverse professionals from a range of sectors and geographic locations.

Following the consultation, a revised version of the framework was publicly launched in May 2024.

Developed and delivered by The Alan Turing Institute



By the end of 2024

6500+ views

6500+ downloads

"The AI Skills for Business Competency Framework offers a clear roadmap for developing essential AI competencies, enabling organisations of all sizes and across all sectors to upskill their employees and remain competitive in a rapidly evolving digital landscape.

The framework continues to anchor government's wider work, informing subsequent policy development, research projects, and standards across government."

Jack Watson
Head of AI Skills, Department for Science, Innovation and Technology

Independent Scientific Advisors

The Independent Scientific Advisors (ISAs) are a diverse group of experts, including research and data scientists, engineers, and sociotechnical specialists. They provide tailored mentoring for organisations adopting AI across BridgeAI sectors, offering guidance that drives productivity, aligns AI applications with international standards, and fosters innovation.

Small and medium enterprises can access up to 16 hours of advisory support that helps address various aspects of AI adoption, including technology implementation, strategic AI roadmap development, governance, skills development, collaboration opportunities, and more. This support is designed to strengthen confidence and equip participating businesses to scale their AI solutions effectively.

The ISAs also deliver the **AI Insight Chat series**, featuring informal yet structured discussions on topics of shared interest for AI adopters. This series continues in 2025.

Developed and delivered by The Alan Turing Institute

18

Independent Scientific and Associate Advisors recruited

134

businesses on the programme

400

registrations for AI Insight Chat

"Working with the ISA is fantastic, as they have been adept at: getting into and understanding the nuances of our problem; rapid brainstorming of development ideas; bringing new ideas to the table and sharing resource ideas; evaluating results; generally being an open minded, positive, supportive and highly intelligent yet accessible person to work with.

The ISA is someone our Lead Engineer can engage with deeply... This is particularly valuable to a small team, especially being able to do this over a period of time as it takes time to get under the skin of a problem and then to ideate and test."

Alexandra Harrod
CEO, Zori Tex

"Our assigned ISA has been instrumental in guiding us through a complex AI challenge, offering both confidence and strategic direction. His expert technical support has empowered our Data Product Analyst in leading ML discovery, while also upskilling the wider team in this process.

His ongoing insights and critical signposting are shaping our AI approach—not just for our organisation, but for the broader arts and culture sector".

Stephen Miller
CTO, The Audience Agency

Innovation Vouchers

Innovation Vouchers are used to help businesses advance their AI adoption journeys. Valued at either £5,000 or £15,000, they can be used for either 8-10 or 24-31 days of work from technical experts in data science and AI.

Each Innovation Voucher offers businesses an initial consultation with a technical expert, followed by a customised project that helps them understand how to tackle their challenges using AI.

Developed and delivered by STFC Hartree Centre

Vouchers can be used for various purposes, including:

- AI integration advice
- Data review
- Feasibility studies
- Proof-of-concept projects
- Digital roadmap development
- Short feasibility studies into using data science or AI to solve a given business problem
- Access to developers to work on algorithms and technology

27

projects completed

100% significantly reduced the cost of product development/R&D

100% significantly optimised their processes

93%

of companies surveyed said they were 'satisfied' or 'very satisfied' with the work carried out

11 projects are exploring follow-on projects through the Hartree National Centre for Digital Innovation (HNCDI) and commercial opportunities

"Collaborating with the Hartree Centre has been an inspiring learning experience that has helped my organisation to explore technologies that we wouldn't otherwise have had an opportunity to investigate."

Carol Maughan
Director of Company Communications & Digital Innovation, Turley

BridgeAI Standards Community

The **BridgeAI Standards Community** is an online platform that provides insights, guidance and support on key standards that underpin the development or adoption of AI solutions, helping companies to unlock the full potential of AI in a responsible, ethical and trustworthy way.

By joining the community, small and medium enterprises have access to insights on key foundational standards, case studies, articles and other resources, including member-events, to help them understand the role of standards in AI and how to apply them to their solutions.

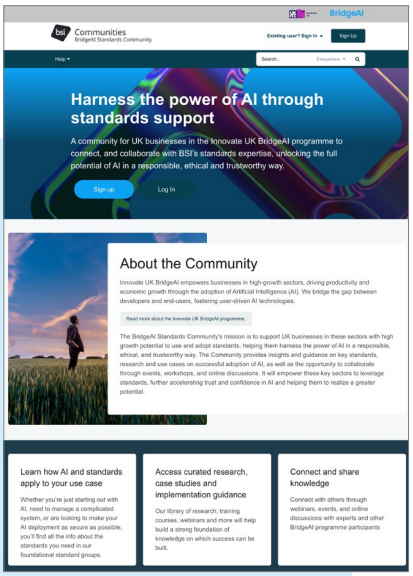
Among other useful resources, the community has a set of key international standards for organisations using AI solutions, ranging from specific AI standards to those focused on data governance, DevOps, risk management, ethical and societal concerns, and data/digital standards within the programme's sectors of focus.

Developed and delivered by BSI

Approx

400

community members have joined



"At Box O Fun, sustainability is at the heart of our mission to transform the ceramics industry responsibly. Joining the BridgeAI Standards Community has been extremely helpful in our journey, offering us a deeper understanding into ethical AI adoption and standards and how to implement them. We aim to ensure that our AI-driven solutions not only improves efficiency but also upholds the highest standards of sustainability and ethical responsibility."

Layla Hashim
Director, Box O Fun

"This BridgeAI Standards Community was the number one influence in the development of our Company AI Use Policy. The BridgeAI Standards Community webinars, resources and discussion pieces have proved integral to our increased AI adoption and use. Most notably, the webinars and clear presentation slides assisted greatly in communicating the specific elements relevant to our work in the construction sector, alongside the wider general ethos of safe, secure and ethical AI use."

Luke Moore
Practice Information/BIM Manager at Ingleton Wood LLP

Standards training

BridgeAI offers **AI Management Standards training** to help small and medium enterprises enhance their business and skills profiles. Through these courses, participants learn how to leverage the power of AI in safe, ethical, and responsible ways, while earning a globally recognised certificate.

The courses cover international standards in information management, and system and risk management. A mixture of eLearning and instructor-led training is available for small to medium-sized businesses, covering the ISO standards that are critically important to a business wanting to grow while building client trust, including:

- information security (ISO/IEC 27001)
- the world's first AI information management system standard (ISO/IEC 42001)
- risk management (ISO/IEC 31000)

Developed and delivered by BSI

88
organisations trained

"The course [ISO/IEC 31000 – Risk Management Guidelines] presented a great opportunity for me to reflect on the importance of maintaining a relevant risk register and risk management policy within the organisation, enabling an environment for continuous improvement."

Ifeyinwa Kanu
CEO & Founder, IntelliDigest

"I thought the content of the course [ISO/IEC 31000 – Risk Management Guidelines] was very good... It gave me a high-level understanding that all the different risk management processes that I had been aware of from previous roles (such as compliance risk, health and safety risk, project risk, etc.) really all follow the same principles."

Daniel Lee
Operations Director, NACD

Turing Online Learning Platform

The **Turing Online Learning Platform** hosts free and open learning resources on data science and AI. The platform features 12 self-paced courses covering a range of topics relating to responsible AI, and are suitable for researchers, educators and industry practitioners.

For BridgeAI, the Turing skills team also delivered a series of sector-specific live training events on mitigating bias in AI and operationalising ethics (eight sessions over eight weeks).

Developed and delivered by The Alan Turing Institute with live training in collaboration with Holistic AI and Trilateral Research

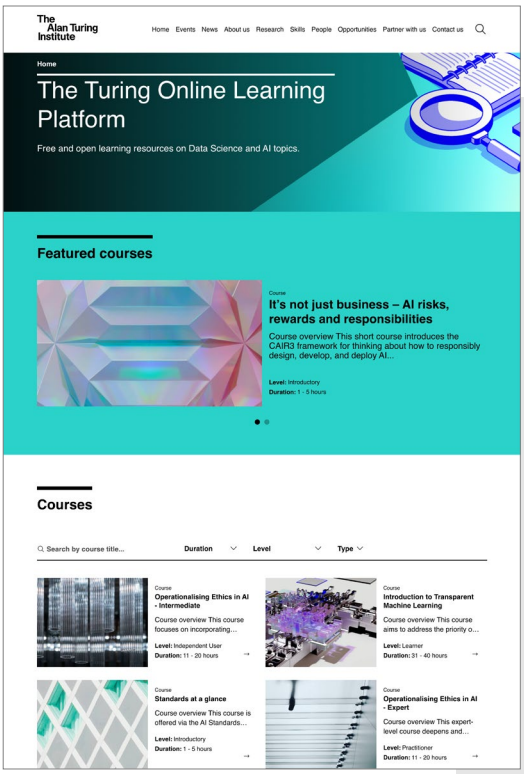
631

BridgeAI users

227

live participants

All courses rated 4 out of 5 or higher by users



"I really enjoyed the clear and concise video presentations and the editable artefacts provided in the course, which I will reuse in the future. I also really appreciated that the course is neutral in terms of nationality, and can be applied in any business context. A great way to introduce ethics in business and product development."

Pierre Morel
Director, CRITICAL P3M Ltd.

"The course enabled participants to recognise the potential harm and challenges associated with AI and provided them with the tools to procure, develop, and deploy AI responsibly."

Sachin Beepath
AI Assurance Officer (Course Facilitator), Holistic AI

The Turing Way Practitioner's Hub

The **Turing Way Practitioner's Hub** is a 6-month cohort-based programme that fosters collaboration and knowledge-sharing among organisations committed to advancing technology, skills and ethical data practices through open source, open data and open collaboration.

Participating organisations designate an **Expert in Residence** (EiR) — leaders, managers, or specialists — to represent them within the hub. EiRs are offered training, practical solutions and networking opportunities, and are supported to champion industry best practices within their organisation, while collaborating on open source and open data across sectors.

As part of the second cohort in November 2024, The Turing Way Practitioner's Hub ran a public conference on Open Source, Ethics and Innovation in AI (OSEIAI24) that convened over 100 experts from across industry, academia, government and the third sector for a two-day deep dive into these topics. The conference featured a keynote speech by Chi Onwurah, MP, Chair of the Science, Innovation and Technology Committee.

Developed and delivered by The Alan Turing Institute

20 organisations onboarded

40

experts in residence

9 workshops

3 AI/ML clinics across 4 technical modules

240+ registrations for OSEIAI24

1,000+

downloads of cohort 1 case studies, with more being developed in 2025

"The Turing Way and Innovate UK BridgeAI programme can really help [businesses] understand industry standards and playbooks [with which] we can educate our employees, and [provides an opportunity] to contribute [your domain knowledge] back to the community".

Wenjia Tang
Head of Data, DigiHaul

AI webinars

BridgeAI programme partners have delivered a number of webinars on various topics relating to AI adoption. For example:

- The Alan Turing Institute organised a series of webinars exploring AI governance, and two sessions were delivered for the Confederation of British Industry's AI and Data Protection Expert Group, and the Canterbury Christ Church University's AI for Business and Enterprise Conference.
- BSI delivered webinars on the benefits of standards for small and medium enterprises, such as the new ISO/IEC 42001 AI management systems standard, AI data governance standards (ISO/IEC 5259 series), and how standards are part of an AI assurance ecosystem.

Total audience of

1500+

"The session provided valuable insights into the implications of the EU AI Act for UK businesses, particularly highlighting the complexities and responsibilities for providers and deployers of AI systems.

The presentation and subsequent discussion were thoroughly prepared and detailed, providing valuable insight and considerations for our members."

Melissa McLaughlin
Policy Advisor, CBI

International missions

BridgeAI's international activities such as Global Expert Missions (GEMs) and Global Business Innovation Programmes (GBIPs) help to create global growth opportunities. They enable innovative small and medium enterprises to collaborate internationally and explore global markets, accelerating business growth.

Following 2023's successful Global Exploratory Mission (GEM) to Switzerland, in 2024 eleven innovative UK construction companies visited Zurich as part of BridgeAI's GBIP activity. Switzerland was the chosen destination as it is ranked first in the world in the Global Innovation Index, and is recognised as a European leader for AI in construction. Through the GBIP, the cohort met leading Swiss construction innovators, increasing the visibility of UK AI innovation and opening up opportunities for business development, which could be exploited upon the return to the UK with one-to-one support from an Innovate UK Business Growth innovation and growth specialist

In March 2024, BridgeAI ran two further GBIPs, taking fifteen creative small and medium businesses to SXSW in the US, and eleven transport SMEs to Singapore.

Developed and delivered by Innovate UK

11

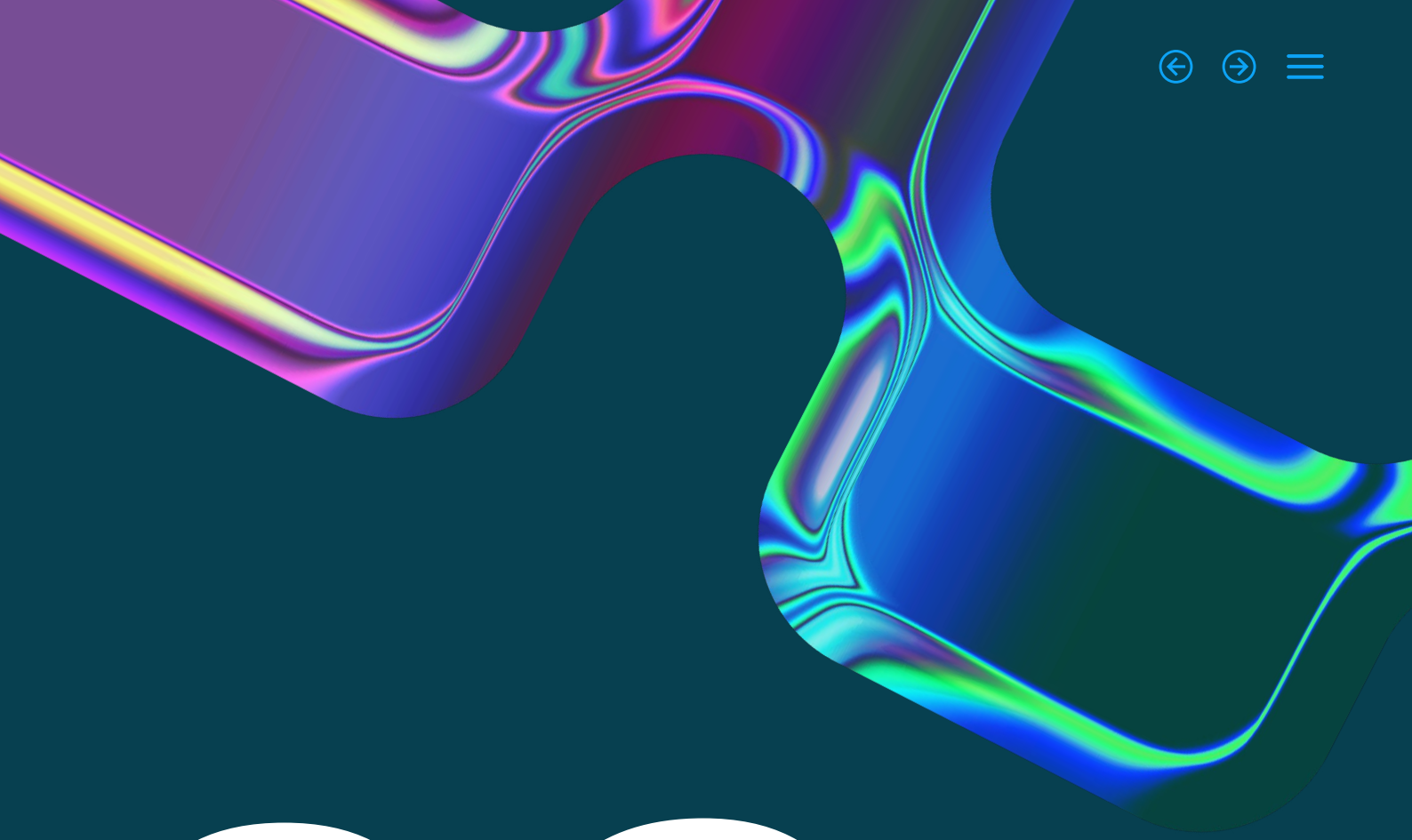
small and medium UK construction businesses received nine months of support and an in-market visit.

5 agreed international collaborations with a further 22 in discussion

3 agreed UK collaborations with a further 9 in discussion

"This GBIP has opened our eyes to the cutting-edge of AI and how this can be leveraged to solve problems on the construction site in novel, useful ways. These collaborations will enhance our technology's capability and enable us to implement carbon-negative solutions in future global construction projects at even lower costs and higher efficiencies."

Will Campion
CEO & Founder, Offgrid Works



03

AI adoption journeys with BridgeAI

CASE STUDY

FarmSmarter

Improving decision-making in farming

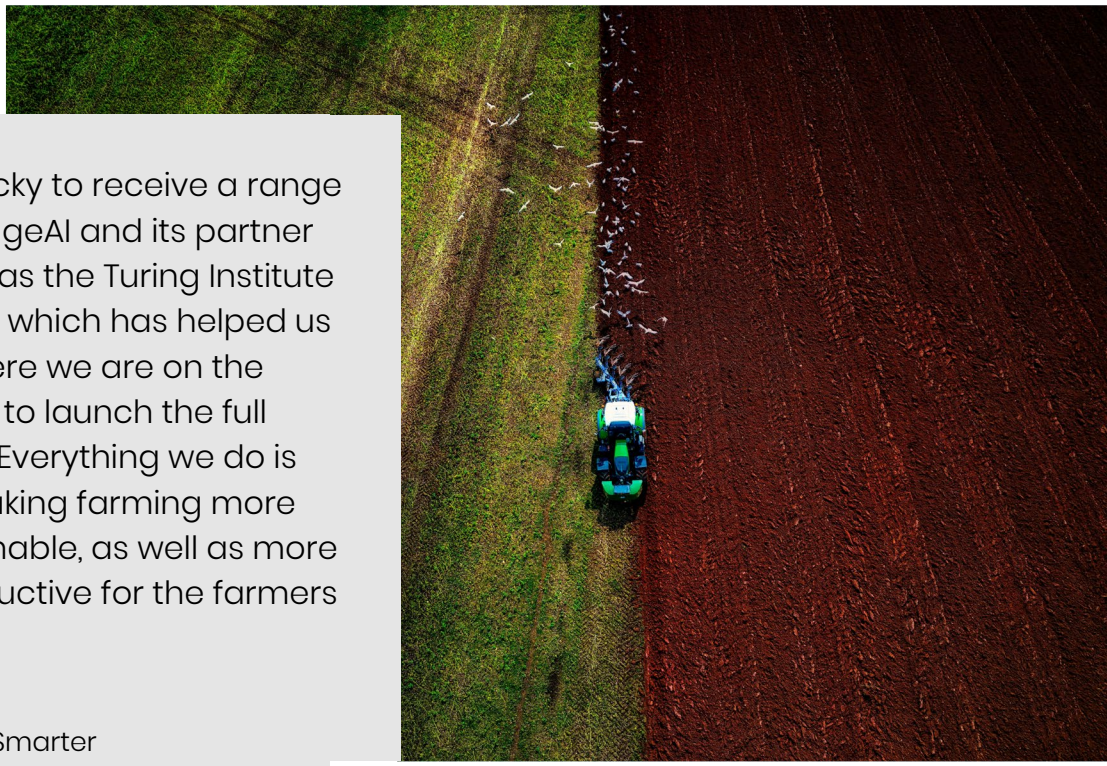
Whether for smallholder farms or large-scale agribusinesses, AI is becoming a critical ally in managing resources, improving crop yields and controlling pests.

FarmSmarter's free, easy-to-use smartphone app was originally designed for use in developing countries. It uses AI models to generate advice for farmers, overcoming barriers such as lack of access to specialist equipment or lower levels of literacy. The app supports smallholder farmers by giving them accurate, real-time information and advice, including weather forecasts, field mapping, crop health reports and yield predictions – there's a huge appetite for this type of information.

To do this effectively, efficient machine learning models are essential, yet making sense of the vast number of data points collected is often difficult, such as when sampling images of crops to detect disease. The answer is to combine two techniques: automated deep learning and human-supervised active learning.

> "AI has huge potential in the agriculture sector... it has been incredibly rewarding to help FarmSmarter adopt its AI-driven solutions. Seeing the tangible impact reinforces the value of innovation in driving growth for small and medium-sized enterprises."
>
> **Dr Po Yang**
> Senior Lecturer in Large-scale Data Fusion, University of Sheffield

As a BridgeAI Independent Scientific Advisor, Dr Po Yang has worked with the FarmSmarter team to optimise its deep learning models for crop disease recognition, as well as advising on the vital recruitment of AI research engineers to further develop and implement the technology.



"We've been very lucky to receive a range of support from BridgeAI and its partner organisations such as the Turing Institute and Hartree Centre, which has helped us get to the point where we are on the verge of being able to launch the full version of our app. Everything we do is geared towards making farming more efficient and sustainable, as well as more profitable and productive for the farmers themselves."

Rebecca Cole-Coker
Creative Director, FarmSmarter

FarmSmarter is now developing an improved AI model, increasing the scope of its disease identification tool, supporting the next step in its mission to open its services to millions of farmers globally in the next five years.

A roadmap focusing on the viable AI models available to FarmSmarter has been developed in collaboration with the Hartree Centre, and further work on modifying and improving the existing model is ongoing. This has already increased the productivity of FarmSmarter's R&D, and predicted future impact will be exponential.

The beta version of the app, made possible with BridgeAI support, is now available in the Google Play store, and is being tested by farmers in Nigeria ahead of a planned full rollout in 2025. Meanwhile, an ongoing project with STFC Hartree is exploring how to adapt the app's AI model for farmers in Europe (including the UK) and South America, where conditions can differ significantly.

CASE STUDY

Covailent

Fixing pipes before they burst

Pipeline failures are a significant challenge for the construction industry. They can often result in costly repairs for businesses, have potential safety impacts on citizens, and lead to negative consequences for the environment.

AI technologies can help improve the rate at which failures are detected and repaired. Covailent is a startup developing an automated pipeline survey tool that uses machine vision and natural language processing to detect, categorise and report on faults.

Traditional pipeline surveys are prohibitively expensive, as they rely on manual, expert-driven fault identification, and experts are often required to write lengthy reports on their inspections.

Covailent's SMARTlines solution automates pipeline inspections. It collects CCTV inspection footage, captured by pipeline surveyors using push-rod cameras and robot crawlers equipped with cameras. The SMARTlines tool reviews the footage to automatically identify and categorise faults, allowing experts to analyse defects faster, including those that might previously have been inaccessible. SMARTlines then generates comprehensive textual survey reports covering the pipe section's condition, streamlining the entire survey process.

Covailent claims its solution improves overall survey productivity by more than 200% and improves video review and fault identification by more than 400%, enabling surveyors to handle more tasks in less time.

Covailent received an innovation grant through BridgeAI to develop their AI-driven solution. This has enabled their team to create a demonstrator that highlights SMARTlines benefits for customers. They have also benefited from attending a number of BridgeAI networking events and online webinars.

"BridgeAI's support has been instrumental to the success of our SMARTlines project, helping us deliver an advanced AI-powered tool that aims to revolutionise pipeline surveys in the UK construction sector. The programme's unique combination of AI-focussed resources, grant funding support and networking opportunities have been a game-changer for us, not only positioning COVAILENT for rapid short-term growth but also providing a strong foundation for ongoing innovation. We highly recommend BridgeAI to other startups aiming for tangible, transformative impacts in the AI space."

Mark Cordner
Founder, COVAILENT

CASE STUDY

Climbing Turn (StageSwift)

Turning experience into insights for the performing arts

Climbing Turn is a UK-based micro software, website and app development agency, with expertise in design, UX, and marketing. They identified a gap in the market for a planning and scheduling tool designed specifically for national and international touring performing arts organisations, such as theatres, dance shows, orchestras, operas, and circuses. This would make it much easier and less time-consuming to get everyone needed to the right place at the right time for the right activity, such as rehearsals, performances, or travel.

Many performing arts organisations aren't able to make best use of historic data (such as venue details or financial reports) when planning and scheduling new tours. It may not be stored at a central location or in a consistent format, and many producers have to start from scratch when planning and scheduling new tours.

Existing events planning and scheduling tools have largely been designed for bands with smaller numbers of performers, and with different requirements to performing arts events.

> "The BridgeAI grant has given us the time to find interested parties and gather information on the most desirable uses for the AI in this project. Most importantly it has enabled us to learn how to use generative AI and the tactics that we can employ to overcome its limitations. Without the grant, we would not have been able to experiment and find the best solutions."
>
> **Dorothy Molloy,**
> Director, StageSwift

Climbing Turn has developed StageSwift, a digital solution that enables performing arts organisations to plan and schedule tours more easily and efficiently. Using information from Statistica, PWC, IBIS World, MRFR and Arts Council England, and a conservative estimate of 35,165 relevant organisations, Climbing Turn has estimated that the potential market for such an application would be worth £4.5 million worldwide.

StageSwift includes an AI agent that allows users to query data from previous tours to inform their planning and scheduling. They can ask questions such as *Have we been to this venue before? How many tickets did we sell? Which lighting technicians did we work with*? This significantly reduces the amount of time that producers currently spend on research, as well as time spent on handling calls and emails from the freelancers they're working with. As an AI agent, StageSwift can answer their queries instead.

Before joining BridgeAI, the main challenge Climbing Turn faced was training the AI agent to generate answers based on full rather than partial data. However, function calling was identified as a solution by an Independent Scientific Advisor.

Climbing Turn attended **BSI's AI Standards for SMEs** webinar, and now plans to adopt the AI Management System Standard BS ISO/IEC 42001:2023.

Pre-launch, Climbing Turn conducted a BridgeAI-funded feasibility study of StageSwift with a range of theatre, dance, opera, orchestra and circus organisations. This showed that the application will save tour organisers considerable time and stress when planning and scheduling new tours.

CASE STUDY

OpenCapacity

Growing transport capacity for all

OpenCapacity is an AI-driven capacity monitoring and forecasting startup. They work primarily with public transport operators, using existing data sensors (such as load weight data, CCTV cameras, and door counters) to provide real-time information on passenger numbers and locations. This data is then enriched with external data points – such as weather, events and seasonal trends – to help predict future capacity demands.

Over recent years, shifting working patterns have created changes in demand for public transport, increasing the need for accurate forecasting. Previously, operators relied on collecting crowd data using surveys or spot checks, often leading to unreliable predictions. OpenCapacity's AI-powered analysis of large real-time datasets produces more accurate predictions, helping public transport operators to better manage their customer routes and services, including planning for large-scale events (such as sporting fixtures or festivals) and long-term capacity management.

The BridgeAI High Growth AI Accelerator enabled OpenCapacity to build and test a new AI product that uses London bus CCTV footage to automatically identify whether priority spaces are occupied or free. It then lets wheelchair users know whether or not an upcoming service has available space for them. The accelerator allowed OpenCapacity to test their product with Transport for London, while facilitating consultation directly with wheelchair users, actively engaging them in product development and ensuring that the service was market-ready and scalable.

OpenCapacity's solution has shown remarkable accuracy in a short 14-week development cycle, and with more improvements will become fully operational. It improves journeys for disabled customers and reduces dwell times for services, helping to optimise scheduling.

"Participating in the BridgeAI accelerator... provided us with expert mentorship, advanced resources, and crucial industry insights, allowing us to refine our AI-driven real-time video analytics solution for wheelchair and buggy detection on buses.

Collaboration with TfL not only validated our technology but also highlighted its importance in enhancing accessibility for passengers. The accelerator has boosted our growth, expanded our network, and positioned OpenCapacity as a leader in AI-driven transportation solutions."

Gerrit Boehm
Founder & CEO, OpenCapacity

The relationship between the OpenCapacity team and TfL is ongoing, and they intend to capitalise on being granted a UK and European patent for their technology, which is already being used in the UK, Europe and Singapore. The team has plans to expand to other countries, while seeking investment to accelerate growth of the business.

OpenCapacity has also applied for a BridgeAI Innovation Voucher, and will work with STFC Hartree to explore how different AI solutions could leverage data analysis and mapping techniques, as well as estimating the true number of passengers using Wi-Fi counts and automatic passenger counts (APC). They hope to enable a better understanding of available capacity on individual vehicles on a carriage-by-carriage basis in advance and in real-time, supporting better planning and decision-making.

Explore more BridgeAI case studies >

CASE STUDY

Mutus Tech

Improving resilience through precision farming

Agriculture can generate a lot of data, but what farmers need is clear, actionable insights to help them solve problems relating to yield, cost-effectiveness and sustainability. For example, according to one study, improper use of fertiliser can lead to 30% wastage. This is where AI-driven tools can have a big impact.

Mutus Tech's goal is to provide farmers with smart, AI-driven solutions for crop monitoring, pest control, sustainable fertiliser management and carbon prediction. Its PestGPT app, for example, incorporates GenAI technology to help farmers and agribusinesses detect and quantify pests, then provides useful advice on how to manage the threat.

Working with a BridgeAI Independent Scientific Advisor (ISA) has given Mutus Tech access to the latest research and technical guidance to help them refine their tools – in particular by using emerging technology such as large language models to reduce the time, cost, and computing power needed to train the company's AI algorithms.

Through BridgeAI, the Mutus team conducted a structured evaluation of its pest management system, Pezego. They worked with ten carefully crafted pest scenarios, each accompanied by two sets of recommendations: one derived from the Agriculture and Horticulture Development Board Encyclopaedia, and the other generated by Pezego's AI. Respondents were asked to evaluate the quality of the recommendations identifying areas where Pezego outperformed existing resources, such as by providing more context-specific advice tailored to real-world conditions, as well as areas for improvement, such as refining how the AI interprets ambiguous pest descriptions.

> "We're very appreciative of the guidance Po has given us, and also of the wider BridgeAI opportunities, such as being able to showcase our products at major events and having access to leading AI and machine learning researchers in the UK.
>
> Our ambition now is to show farmers and agronomists that our products can have strong value and impact in the real world."
>
> **Qing Xue**
> Product Manager, Mutus Tech

Insights from the study have led to algorithm updates, improving diagnostic accuracy by 15% and reducing processing time by 20%. These advancements have accelerated Pezego's journey to market and solidified its value as a trusted resource for sustainable agriculture.

Mutus Tech continues to work with their ISA to refine tools and gather feedback ahead of an official launch, while seeking further investment and funding opportunities.

> "Mutus Tech's advanced, AI-driven agricultural data science solutions address some of the key challenges in modern farming, from pests and disease to climate change and sustainability. Witnessing the company's impressive growth over the past few months has been both inspiring and rewarding for my ISA journey."
>
> **Dr Po Yang**
> Senior Lecturer in Large-scale Data Fusion, University of Sheffield

CASE STUDY

Cahill Design Consultants

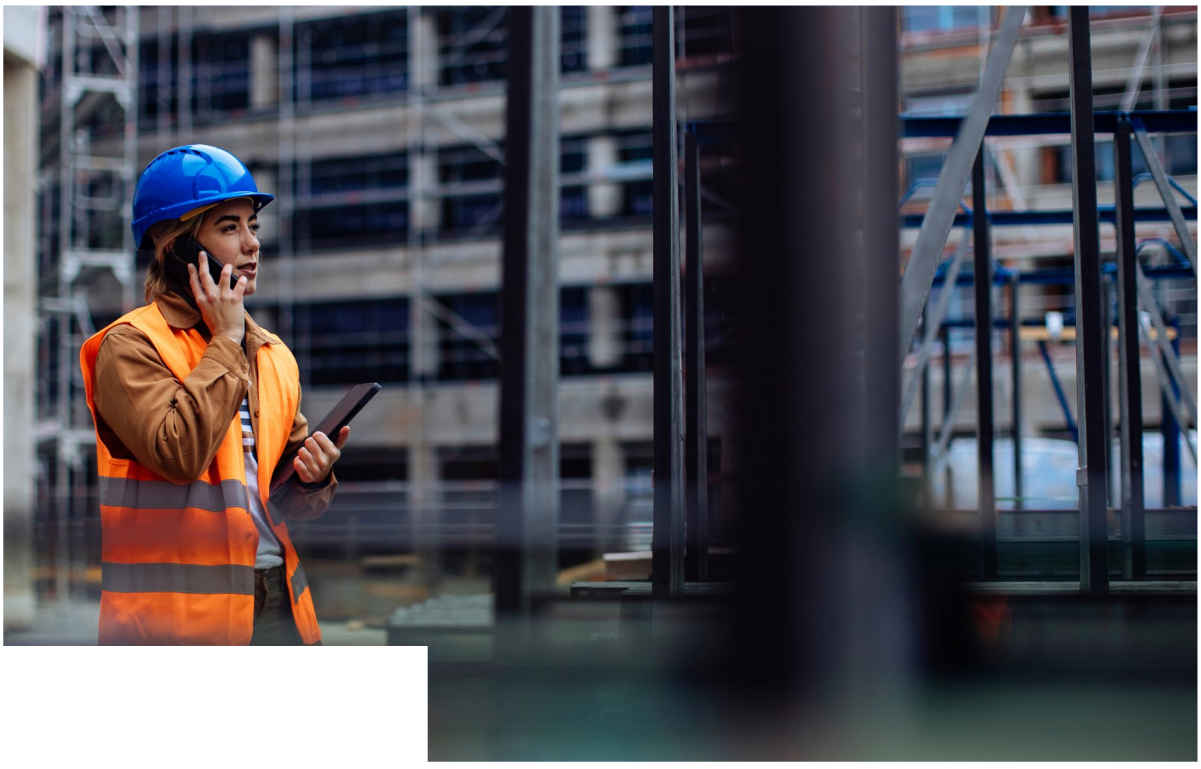
Exploring AI productivity solutions

Many companies want to understand how AI can align with their strategic imperatives and drive their competitive advantage. One such company is Cahill Design Consultants, an acoustic design, fire engineering, and building surveying consultancy company, based in Essex. The business provides expert technical advisory services to clients across the built environment.

Cahill Design first engaged with BridgeAI at Digital Construction Week in 2024, and subsequently received support from an Independent Scientific Advisor, attended various webinars and online courses provided by the Hartree Centre, and signed up to BSI's BridgeAI Standards Community and training on ISO 27001 (information security management systems). The Cahill Design team then developed several AI adoption ideas.

Automating reports

While reporting is standardised, it is still time-consuming for consultants to produce. Cahill Design is exploring a bespoke AI system, trained on its own report data, to produce and update report elements for consultants to sign off. This would increase the time consultants have available for the more challenging aspects of their projects, and for advising their clients.



Answering FAQs

Cahill Design wanted to develop an AI system to triage client questions on reports, answering simple queries directly and involving human consultants when required. This would reduce the time the organisation's consultants spend on answering frequently asked questions.

Analysing acoustic data

When creating designs, consultants measure sound levels and then analyse the data to detect different types of noise sources. An AI system could process and analyse this data for them, identifying and removing atypical noise types and levels, and then potentially making initial design recommendations for the consultant to review.

Although Cahill Design has not yet implemented an operational AI system to deliver these solutions, the team is conducting significant research and experimentation through BridgeAI. The programme has enabled them to better define a coherent AI strategy to fulfil their business objectives, and they have benefited from BSI training on ISO 27001 to ensure their IT and digital systems are in line with best practice – an important pre-requisite for AI adoption. Cahill Design Consultants' aim is to soon benefit from deploying and operationalising its AI models.

> "Our scientific advisor has been incredibly helpful. We have been provided with an advisor most suited to the types of AI projects we are trying to progress, and he has provided us with some excellent training resources which are enabling us to upskill the team. There is now a real sense of purpose around the business in relation to AI and the healthy scepticism is becoming inquisitive progressive thinking."
>
> **Mark Scaife**
> Head of Acoustics, Cahill Design Consultants

CASE STUDY

Truss Technologies

Supporting fashion resale with enhanced data

British consumers spent £2.4 billion on second-hand clothing in 2023 and the resale market has become an important part of the fashion industry. However, second-hand items usually lack essential product details, and creating accurate pricing and listings requires time-consuming manual research. Matching images of second-hand products is made even more difficult by variations in photographic style.

Truss is a British deep tech startup that uses AI to simplify fashion resale by providing resellers with detailed product information. By aggregating data from photo listings of clothing items, they have created a vast, structured and unique database that supports second-hand marketplaces with automatically enriched product listings.

AutoID, uses computer vision to identify and match fashion items based on historical image data. It then aggregates item information, such as current market price, style, colour and size, within its database. Truss can then create rapid, one-click listings, reducing the cataloguing process from 5 minutes to as little as three seconds.

Truss's technology reduces data entry costs and shortens the cataloguing process, improving productivity for its users. Accurate pricing data leads to better click through and conversion rates for sellers, and the enriched data is improving customer engagement with listings and resale platforms.

Truss's AI adoption journey was significantly shaped by participation in the BridgeAI High Growth AI Accelerator. This enabled the Truss team to access AI resources and mentorship, build connections with industry experts, and refine their strategy – including going to market sooner, a strategic pivot that allowed them to engage with clients earlier than expected.

"It was a transformative experience, marking a significant period in our business development. Throughout the accelerator programme, we not only gained early customers and secured funding but also forged lasting connections that I will continue to value.

Digital Catapult's guidance was crucial in boosting our confidence in our solutions and affirming our potential to build a remarkable company in this dynamic field of AI."

Woody Lello
CEO & Co-Founder, Truss Technologies

Truss secured a BridgeAI grant through the Collaborative AI Solutions competition, with a view to improving AutoID's performance. With this grant, they are now working in partnership with the Depop, Selfridges, and the University of Warwick to refine and develop the AutoID model to improve accuracy and performance with varying levels of image quality.

The Truss team hopes to expand into new product categories and international markets, and to integrate predictive analytics for trend forecasting. By providing a data economy for circular retail, Truss is helping to reduce waste and contribute towards a sustainable future.

CASE STUDY

Cyclopic

Reimagining the wheel – mechanical engineering meets AI

Cyclopic is a UK-based autonomous mobility startup. Their modular EV platform could have a huge impact on society: helping people get around towns and cities, assisting in warehouses, handling 'last mile' deliveries, or even exploring other planets. At its heart is a patented centreless wheel that offers enhanced manoeuvrability and stability.

Cyclopic's unique EV platform has four integrated drive units, each connected to an independently acting centreless wheel to provide drive, steering, suspension and braking. Each drive unit is autonomous, with all software housed directly within the drive system. With integrated AI, the platform could be used as a logistics and delivery robot, an autonomous transportation pod, or even a multi-purpose unmanned aerial vehicle.

Through BridgeAI, the Cyclopic team carried out a feasibility study for an autonomous mobile robot (AMR) for warehouses. This demonstrated that advanced AI can work with Cyclopic's mechanical levelling system to provide automated balancing. Existing AMRs operating in tight, busy spaces have issues with stability, versatility, manoeuvrability and speed, and struggle to cope with slopes and obstacles. Cyclopic's advanced electric drive system offers much greater precision.

The Cyclopic team has been working with BridgeAI Independent Scientific Advisor Professor Hongkai Wen, who has helped them network with potential partners in academia and industry – including leading researchers at the Universities of Surrey, Warwick and Oxford. Professor Wen is helping them to explore new applications for the technology, providing technical guidance in areas such as adapting existing autonomous mobility algorithms to Cyclopic's system, and refining a digital twin that can test algorithms in a controlled virtual environment.

"Once we developed the platform from a mechanical engineering perspective, it was clear that we needed to integrate AI to make it autonomous and allow it to reach its full potential. We have been helped enormously by Innovate UK initiatives – including BridgeAI – that help small businesses progress along their AI adoption journey. That's how the ISA programme came onto our radar, and we were delighted to be chosen to take part and matched with Hongkai."

Carol Rallings
Co-Founder, Cyclopic

A proposed partnership with Coventry City Council could see Cyclopic's autonomous pods helping people with mobility issues to get around the city. The Cyclopic team is seeking additional partners – investors, research collaborators and organisations that can make use of the technology – and is continuing to work towards commercialising its products.

"I believe Cyclopic's innovative technology can have a transformative impact in its sector, with many downstream applications – particularly with the integration of AI and machine learning. It has been super exciting to learn about Cyclopic's technology and the business side of things in my capacity as ISA, and even more rewarding to be able to contribute my expertise to its development through AI adoption."

Professor Hongkai Wen
Chair in Machine Learning Systems, University of Warwick

04

Insights from the BridgeAI programme

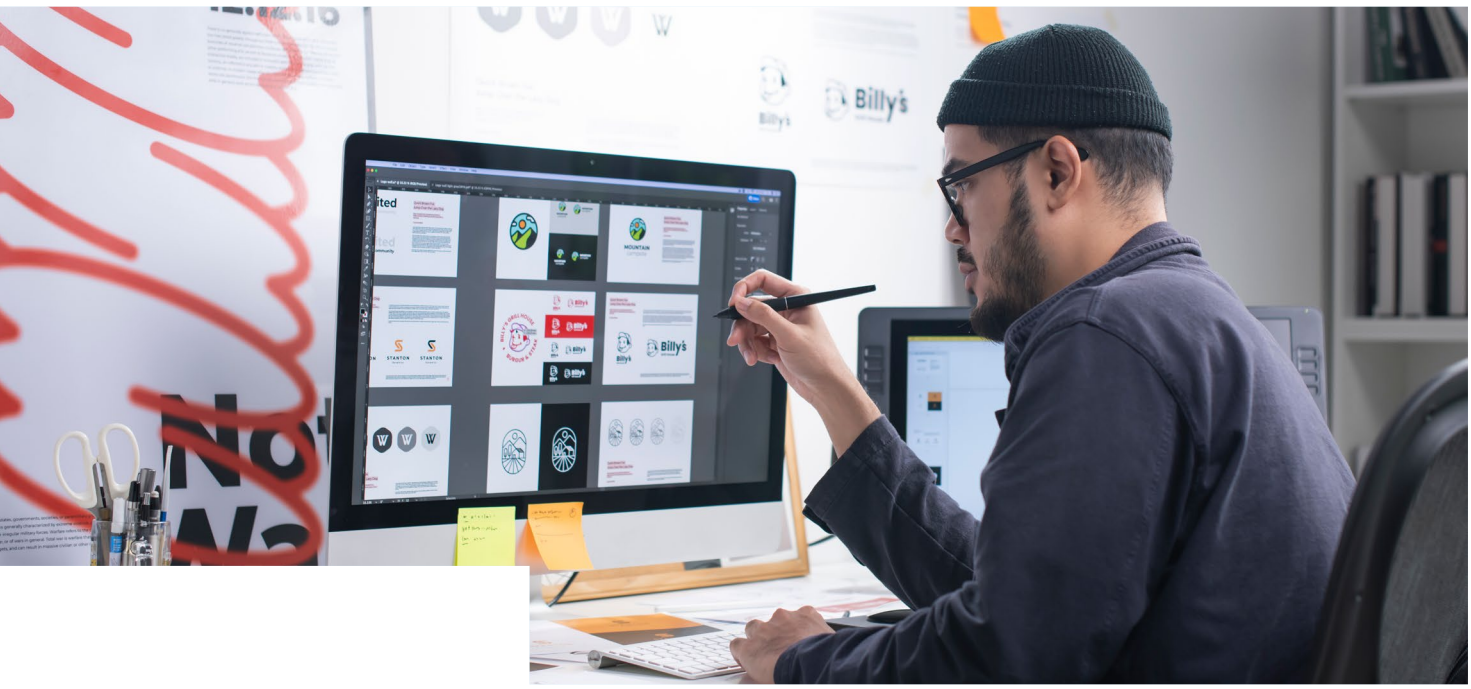
Insights from the BridgeAI programme

Across the programme's engagement with the UK's AI ecosystem, valuable insights have been gathered, shedding light on key challenges and opportunities for greater AI adoption.

Enabling partnerships and collaboration to foster innovation

AI startups are pivotal in driving the adoption of AI technologies across the economy. Along with small and medium enterprises they are generally more likely to adopt advanced digital technologies, as they tend to have a higher risk appetite, and lower technical debt. Using AI, they can develop tailored solutions that address specific industry challenges, in many cases providing businesses with solutions that could not have been built in-house, thereby creating new markets, and driving economic innovation.

By providing the initial capital and encouraging collaboration and partnerships, BridgeAI is making AI a reality for the UK economy. It has enabled innovators to work with key players in relevant industries to develop, implement and evaluate AI-driven solutions that will benefit business productivity.



Effective facilitation of this collaboration and iterative feedback process has been key to project success: BridgeAI's offerings provide the frameworks, guidance, training, support, expertise and funding that de-risk the partnership for both parties. The following grant projects demonstrate the capability of AI technologies to enhance productivity in multiple sectors, and how the right type of collaboration can lead to scaled and effective solutions.

CASE STUDY **Pixel Research and Revolution Software**

Pixel Research and Revolution Software collaborated to develop an AI-driven pipeline that supports design artists in upscaling old game assets when remastering classic game titles. Working alongside graphic designers enabled rapid experimentation, resulting in buy-in from the Revolution Software project team, and integration of the AI-driven solution into their day-to-day workflows. Trials showed that the potential increase in business productivity would be 30-50%.

CASE STUDY **Messium**

Through small-scale trials, Messium worked with farmers who were open to collaboration and innovation. They combined ground-breaking hyperspectral satellite technology with large-scale on-ground validation to build a unique ML model that accurately estimates the nitrogen levels in wheat crops from space – a potential industry first. This insight enabled farmers to optimise their fertilizer applications and improve yields while reducing nitrous oxide emissions. Transparency helped to build trust, with positive and negative results shared, and farmers were able to see the tangible value of the solution. Early-stage trials demonstrated an average yield boost of 8%.

CASE STUDY **Anteam**

Anteam has been developing and testing an AI-driven solution to improve use of logistics capacity, and was keen to demonstrate the technology on a large scale. With grant funding, the team worked with a national UK retailer to survey drivers and managers, while refining their system specifications based on feedback from the retailer's senior leadership team. This collaboration made it possible to successfully demonstrate dynamic route sharing, planned route sharing and system integration, and how this significantly increases productivity for the logistics operation, while reducing CO2 emissions.

Data challenges can be overcome

BridgeAI has shown how being data-ready plays a vital part in an AI adopter's ability to collaborate with an innovator. When a large port operator – the AI adopter – partnered with a startup developing an AI-driven solution for arranging and moving containers, they already had good data practices and a high level of digital and data maturity. They were able to provide access to many years of well-organised historical data as a bespoke ready-to-go data set for training the model.

A trusted legal foundation for partnership is hugely beneficial for collaborations involving data sharing. Yet accessing high-quality data can still be a significant hurdle for startups. Organisations may be reluctant to share data due to concerns over privacy, security, and market competition, or there may be regulatory restrictions in place (such as GDPR).

CASE STUDY **Accelerator example: seeking and creating new sources of data**

When real-world source data for a TfL challenge – CCTV footage from buses – was not readily available (due to GDPR and storage in silos), the two participating startups were both able to overcome the problem. One found publicly available data sources as an alternative for training their computer vision model. The other created their own dataset by taking photographs on buses themselves. These custom datasets were able to train the computer vision model without access to live footage and achieve a good degree of accuracy.

CASE STUDY **Accelerator example: trial data sets**

When a startup was developing an AI-driven multi-modal model to categorise a content archive for a large media publisher, they were given access to a partial dataset that was large enough to build a Proof of Concept (PoC). Once the PoC was developed, the publisher shared more data for model refinement and operationalising the solution. This modification approach allows an adopter to maintain dataset control and privacy when piloting and collaborating with a startup before scaling up a system for launch.

The startup was also able to identify new use cases for their model, such as helping filmmakers categorise hours of footage and streamline editing processes – a good example of how an AI model trained for one use case can open up new opportunities in others.

"Robust contractual arrangements are vital for collaborations between large enterprises and innovative AI start-ups. These agreements can clearly define terms to protect the enterprise's valuable data while safeguarding the start-up's technology and ideas. By outlining background and foreground IP rights clearly up-front, strong contractual agreements increase trust, minimise disputes, and foster mutually beneficial innovation."

Matthew Jefferies
Partner, Chartered (UK) and European Patent Attorney, Marks & Clerk LLP

AI can solve sector-specific challenges

The transport sector faces challenges around sustainability, safety and innovation to remain commercially viable. This is compounded by global supply chain disruptions, transition to electric vehicles, economic pressures, and international competition. AI can play a valuable role in solving these challenges.

- Increasing sustainability by optimising fuel use, cutting emissions, and speeding up the transition to EVs, through smarter energy management and data-driven insights
- Reducing accidents and improving safety through real-time hazard detection
- Increasing supply chain agility by streamlining operations, predicting maintenance needs, managing inventory, and forecasting demand
- Allowing companies to adapt to changing requirements by providing deeper insights into customer behaviour

BridgeAI Innovation Vouchers have helped various companies to develop AI-driven solutions and unlock valuable insights through data exploration. For example, one EV manufacturer invested their Innovation Voucher in a solution that improves fault prediction, reduces battery degradation and extends vehicle lifetime. Another invested theirs in mapping out the most cost-effective placements for installing EV chargers using open-source and real-time data.

Innovation Vouchers have also been used to increase safety operations, for example allowing AI developer teams to streamline and improve the process of aircraft maintenance; come up with a solution to track vessels to improve river traffic; and reduce the occurrence of defects in car production.

Whilst these use cases and solutions are specific to the transport sector, the methods and AI technologies explored through BridgeAI can be deployed to solve sector-specific challenges across multiple industries.

BridgeAI is helping small businesses to unlock AI

BridgeAI's ISAs offer vital guidance to support smaller businesses on their AI adoption journeys, and can connect them with relevant experts and communities. With targeted specialist support at the right time, challenges can be overcome.

Idea generation and exploration

Architectural firm Orms has been working with ISA Dr Andy Corbett to investigate how AI adoption can make the company's internal processes more efficient – and to identify the right tools for the job, including generative AI software such as ChatGPT and Midjourney.

> "We knew there were likely to be aspects of our workflow that could be made more efficient with AI. Our conversations with Andy have given us the confidence to start using out-of-the-box AI in a number of day-to-day tasks, freeing up time for other aspects of the job."
>
> **Rachel Hoolahan**
> Associate Director, Orms

Specialist technical support

AI adoption requires specialised technical expertise that small and medium enterprises often don't have. Gpeto AI is developing AI algorithms to help pre-validate and assess planning applications, making life easier for the applicant and the local authority. Their team is working with ISA Dr Andy Corbett on training a computer vision model to assess architectural drawings, including the differences between current and proposed plans.

> "Andy's technical support on our algorithm development has been very valuable. Being part of a programme like BridgeAI is great for startups with limited resources and definitely gives you a better chance of success."
>
> **Harold Cabrera**
> CEO, Gpeto AI

Recruiting the right talent

Finding the right talent is critical for small and medium enterprises looking to bring AI expertise in-house, but recruitment can be challenging when it's in a new or technical field. When a consultancy supporting social housing providers in their decarbonisation efforts wanted to recruit a Senior Data Engineer, ISA Dr Andy Corbett was able to help.

> "The meetings I've had with Andy about recruitment have been really beneficial – particularly as I don't have a technical background myself. We've discussed what we need from this important new role in terms of skills and in the context of what we're aiming to do with data and AI."
>
> **Anonymised participant**

Networking and opportunities

Making the right connections can drive success in AI adoption, whether meeting potential collaborators or hearing about opportunities to access funding and support. BridgeAI matched AI adopter PorthouseDean, which provides structural calculations for building projects, with ISA Dr Rachael Stickland. Rachael has helped them to engage with relevant support networks for valuable insights and opportunities.

> "Rachael has helped us engage with the broader ecosystem of support that exists across the UK through organisations such as Innovate UK, as well as The Turing's own activities."
>
> **Dr Guy Marshall**
> Chief Technology Officer, PorthouseDean

Insights from wider industry engagement

Throughout 2024, the BridgeAI team was speaking and exhibiting at trade shows and conferences, including Futurebuild and Digital Construction Week, A3 Scotland, CENEX, Beyond 2024, Content London, and the Data Science Festival.

This has raised awareness of the potential benefits of AI, and directed businesses towards the resources available through BridgeAI. The result has been conversations with hundreds of organisations, many of which resulted in an increased appetite and interest in understanding how AI could help them achieve their business goals.

- Many companies at trade events demonstrated a clear acceptance that AI will impact every business
- Although understanding of AI covered a wide spectrum, very few companies had a completely negative outlook
- Companies holding a lot of data were the keenest to engage with BridgeAI and learn how it could support their business needs
- Wayve's record-breaking investment success ($1.3 billion for AI-driven transport solutions) shows how UK-based companies can attract high-value funding, provided they leverage AI in groundbreaking ways, although global competition and fewer local opportunities may be challenges for smaller startups

Many insights gleaned reinforce the importance of targeted interventions for specific sector needs.

Sector	Needs
Agriculture	As most farming involves natural variability, innovative companies had identified many applications where AI prediction and data modelling would be a huge benefit to them
Construction	Where structured data is available there are already many solutions available to aid workflows, including visual recognition systems
Transport	While some areas (especially automotive original equipment manufacturers) have integrated AI into their core technologies, much of the transport sector has yet to fully explore its potential, underscoring the need for tailored support and guidance to ensure AI benefits are realised across the board
Creative	There are concerns about the impact of AI, but some optimism remains around its democratising potential: for example, AI can aid in content dubbing – more languages means that wider audiences can be reached

The importance of standards in AI adoption

Standards play a crucial role in AI adoption by providing frameworks that enhance productivity, reduce risks, and foster innovation. They also improve market accessibility and customer satisfaction – adhering to international standards or obtaining certification shows a company's serious commitment to using AI in a responsible, ethical and trustworthy way. This plays a valuable part in building customer and public trust, and helps to put AI adopters in a strong position in competitive markets.

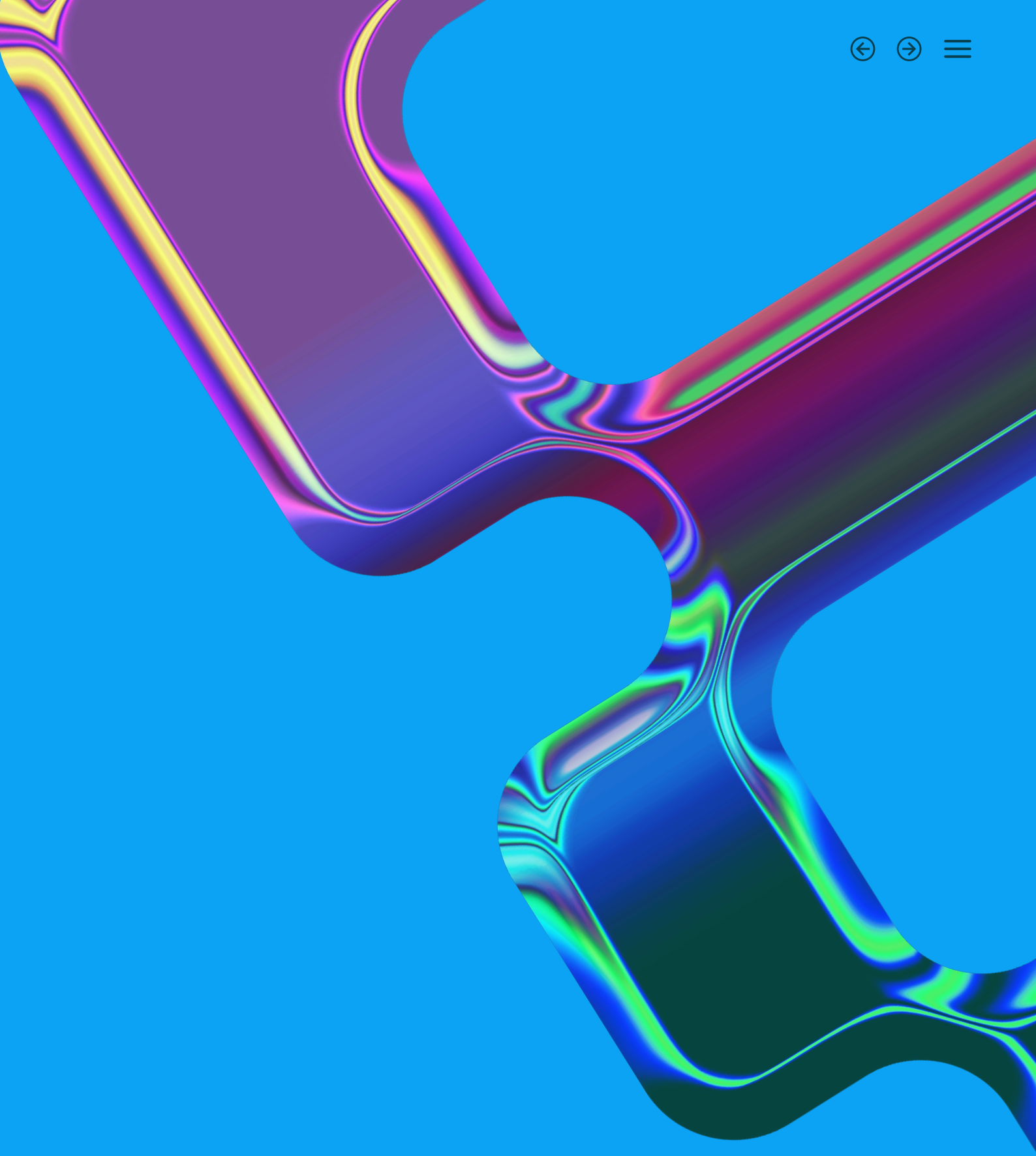
Understanding the needs of small and medium enterprises

Through BridgeAI engagements with small and medium-sized enterprises there are clearly some sector-agnostic challenges around understanding and adopting AI standards.

- Many organisations, particularly those in the creative and agricultural industries, struggle with data structuring and quality for AI, and may have low awareness of existing data governance standards
- Conversely, construction businesses have a huge number of standards to comply with, prompting calls for simplification
- A high interest was shown in guidance that would surface relevant standards to support the AI adoption/development journey, including a view on sector-specific data and digital standards
- There is a strong need for practical guidance and case studies that share experiences in adopting standards across all stages of the AI journey, from consideration to its adoption and management

There were some notable sector-specific challenges:

Sector	Challenges
Agriculture	Many remote, smaller businesses have significant challenges with data quality and software integration
Construction	Liability concerns can be a significant barrier to change
Transport	Liability and security concerns are most important, as well as trust issues regarding sharing data between different operators and service providers
Creative	IP and copyright issues are this sector's main concern, as well as data availability and quality



Conclusions and next steps

BridgeAI impact

The Innovate UK BridgeAI programme has made significant progress in engaging the AI ecosystem and providing businesses with the support needed to adopt AI technologies in key sectors. This is evidenced by the programme's reach to date, with over 3,000 organisations and 9,000 individuals engaged. As the case studies and testimonials within this report demonstrate, engaging with BridgeAI has made a significant positive impact on participating organisations.

More can still be done to build on this success: creating further opportunities in the use of AI across the UK, building local capabilities, connecting and developing new AI solutions, skills and talent across sectors and end users, and providing more targeted and tailored support to the UK's AI startups and scaleups. In doing so BridgeAI can deliver on the Government's AI Opportunities Action Plan by addressing private-sector-user-adoption barriers, and supporting the adoption of AI in key sectors of the Industrial Strategy.

Plans for Year 3

The programme will continue to tailor its existing offerings and develop new ones in line with business demand and needs, and in line with the market dynamics of the evolving AI landscape, examples of which are included below:

Building more local capability

BridgeAI has already reached a huge number of organisations across the UK. Unsurprisingly, most of these organisations have been in London and the South East, so in an effort to extend the programme's reach to other areas, BridgeAI is now engaging with regional innovation communities.

The BridgeAI annual showcase was held in Manchester in May 2024, reaching a broad audience, particularly in the North West, and in early 2025 the programme hosted a number of beacon events across the UK that included Wales, the North East, the South West and Northern Ireland. This year, the programme will conduct more regionally focused activities, targeting important local industrial clusters with high potential for AI adoption.

Facilitating upskilling

Building on the BridgeAI AI Skills for Business Competency Framework, Innovate UK is investing in a new AI skills hub to address skills-related barriers that industries face in adopting AI. The hub will be an online dynamic ecosystem, bringing together industry stakeholders, training providers and AI technology partners to foster learning and unify the fragmented AI skills landscape. It will focus on connecting industry stakeholders with curated training programmes, developing talent pipelines, promoting best practices, and championing industry-relevant AI innovation. The hub will also produce granular analytics on AI skill gaps to further the understanding and build an evidenced based baseline for future interventions.

Alongside the Skills Hub, BridgeAI is delivering AI & Data Leadership Training to equip non-technical business leaders with the knowledge and skills to develop and implement AI strategies. Tailored for UK businesses, these courses provide a practical understanding of AI and ML, helping leaders identify opportunities, bridge the gap between business and technical teams, and take a strategic approach to AI adoption.

Enabling cross-sector data interoperability

Data issues are consistently cited as a barrier to AI adoption. BridgeAI's £2 million competition to fund a supply chain data interoperability demonstrator will demonstrate how cross-sector AI-driven solutions can accelerate adoption and diffusion of AI and ML technologies, while unlocking value from data silos.

Explore BridgeAI resources

AI holds enormous potential for businesses in enhancing productivity and competitiveness, but adopting AI is a challenge. If you are an AI developer or industry adopter, BridgeAI can equip you with the skills, knowledge and expertise to navigate the AI landscape, adopt AI responsibly and ethically, and drive your organisation's productivity.

- **Find out more** about the BridgeAI programme
- **Subscribe** for regular updates
- **Upcoming events**
- **Explore current opportunities**

Acknowledgements

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