Bridging the AI divide

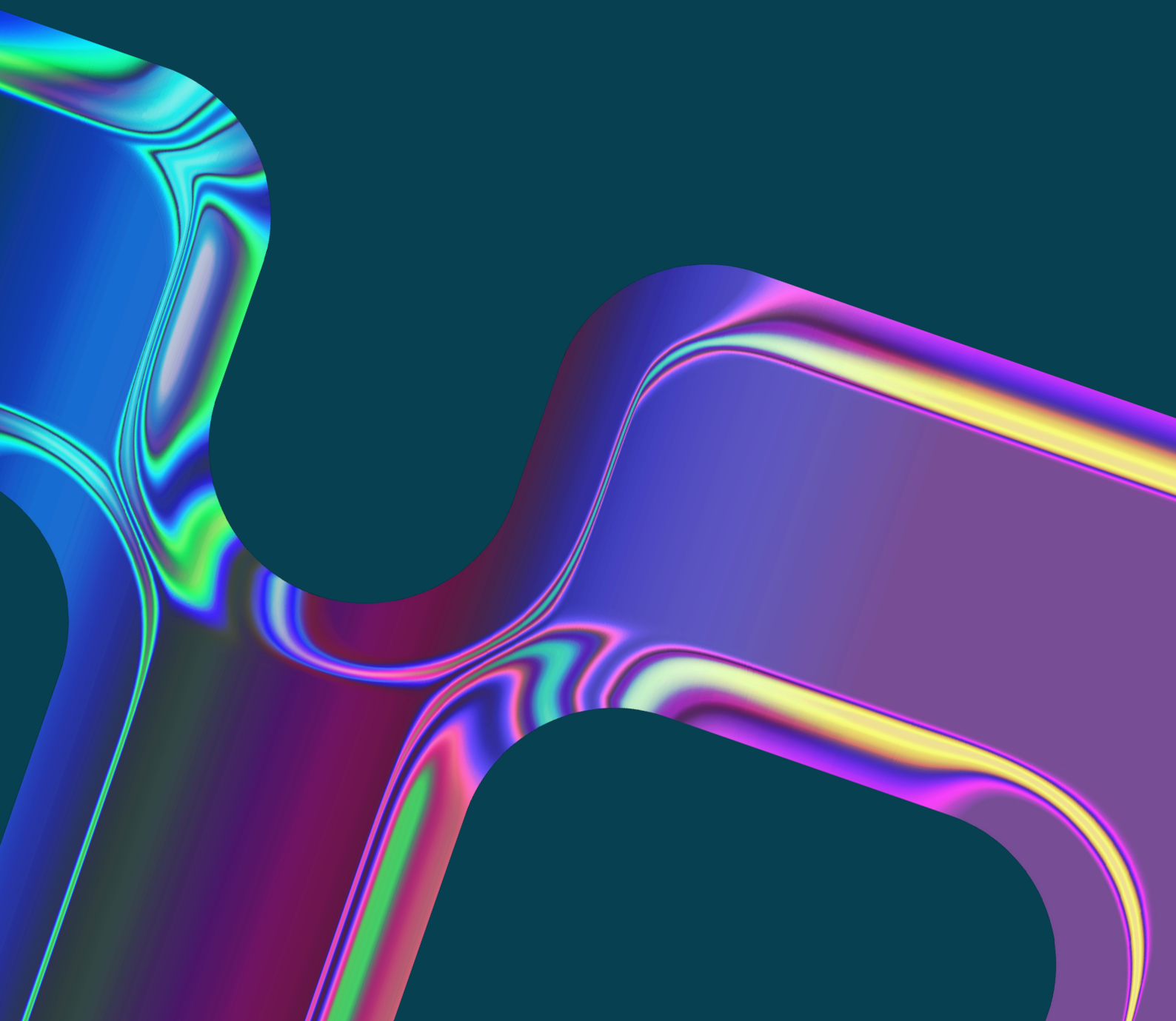
Innovate UK BridgeAI: Year three in review

2025-2026

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.



About BridgeAI

The Innovate UK BridgeAI programme 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.

BridgeAI delivers funding and support by:

- Providing funding to enable the co-creation of cutting-edge AI solutions through collaborative R&D and acceleration programmes.
- Connecting businesses with AI expertise, including 1-1 support, access to high performance compute, and providing AI adoption toolkits, frameworks, and other resources.
- Building new capabilities in businesses through training and upskilling in AI
- Addressing standards gaps: providing clarity and guidance, identifying standards gaps, and fast-tracking the development of appropriate standards.
- Building and disseminating technology awareness and knowledge through events, workshops, webinars and case studies.

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

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Foreword by the Minister for AI and Online Safety

The UK stands at a critical juncture, with artificial intelligence fast becoming one of the defining forces of our economic future. AI is reshaping industries, creating new business models, and offering powerful tools to improve public services and strengthen Britain's competitiveness in the world. The UK Government is clear that AI must serve the national interest: creating high-quality jobs, boosting productivity, and supporting long-term, sustainable economic growth across every region.

The **AI Opportunities Action Plan** sets out our commitment to turning the UK's research excellence and entrepreneurial energy into broad-based economic benefit. That means supporting adoption across the real economy, ensuring businesses have access to the skills, talent and infrastructure they need, and making sure that AI works for working people. This is central to the Labour government's missions: to restore economic security, rebuild our industrial base, and make Britain a leader in the industries of the future.

We are also entering a new phase in the global AI landscape. More capable models, new computing paradigms, the rise of agentic AI systems, and the increasing importance of sovereign AI capabilities demand a coherent, long-term national response. This is why we are investing in the foundations of national strength. These foundations include secure and sovereign compute, AI growth zones, AI adoption, and our AI for science strategy, which will ensure that UK companies can innovate with confidence and compete at the AI frontier, and on the global stage.

AI will also be a critical enabler for all eight priority sectors of the government's **Industrial Strategy**. From manufacturing and clean energy to life sciences, the creative economy, and financial services, AI has the potential to accelerate innovation and unlock growth that will benefit communities across the country. Our aim is to ensure that AI helps drive renewal and competitiveness across the wider economy, while nurturing world-leading AI firms here in the UK.

BridgeAI will play an important role in realising this vision: by helping businesses across the country to adopt AI effectively and responsibly, and by supporting developers to build the next generation of high-value AI companies here in the UK. The work undertaken through this programme reflects government ambition: practical, mission-driven, and focused on ensuring that the UK leads in the safe and strategic deployment of AI.

As Minister for AI and Online Safety, I am determined that we seize this moment with clarity, with responsibility, and with optimism. By working together across industry, academia, government, and civil society, we can ensure that AI strengthens our economy, improves lives, and builds the sovereign capability that will shape the future of AI at home and abroad.

Parliamentary Under-Secretary of State, Kanishka Narayan MP

Foreword by Sara El-Hanfy, Director, AI and Digital, Innovate UK

Over the past year, we have witnessed a profound acceleration in the capabilities of AI. Agentic systems are beginning to demonstrate levels of autonomy and orchestration once thought distant; sovereign AI – built with national resilience, talent and infrastructure – has moved from aspiration to priority; and the global race to harness AI for industrial transformation has intensified. Through all of this, the UK has continued to punch above its weight, with an ecosystem built on world-class science, a thriving developer community, and industry sectors ready to innovate at pace.

The **UK Government's AI Opportunities Action Plan** is capitalising on this momentum with clear national direction, backed by commitments to unlock barriers, widen adoption, and ensure that AI contributes meaningfully to economic growth and societal good.

Within this mission, BridgeAI has become one of the UK's most important vehicles for translating ambition into impact. Over its first three years, the programme has brought AI developers and adopters together in new ways, helping businesses to test ideas, deploy models safely, and build AI-enabled products and services that deliver real value. The result is more than 5 000 organisations supported in their AI adoption journeys, and the implementation of over 820 AI projects.

The next phase of BridgeAI aims to be even more transformative. As we look ahead, the programme will expand its reach across the wider economy, aligned with the UK Government's refreshed Industrial Strategy and UKRI's broader AI ambitions. BridgeAI will increasingly focus on building the UK's next generation of AI giants – companies capable of shaping new global technology frontiers from a UK base – by accelerating AI adoption across industries. BridgeAI will be an important part of UKRI and Innovate UK's portfolio of programmes. It will deliver on the ambitions set out within the UKRI AI strategic framework, designed to strengthen national AI capability, drive responsible development, and support AI innovators at every stage of their journey.

These ambitions will be underpinned by growing national investment in compute, data access, and secure environments. New facilities and partnerships such as the AI Research Resource, AI Growth Zones and AI Champions will equip innovators with the tools and support they need to train, test, and deploy cutting-edge systems responsibly. BridgeAI will play a central role in ensuring that these initiatives then translate into opportunity: empowering developers, strengthening regional innovation clusters, and enabling AI applications that will catalyse growth across the UK's industrial strategy sectors.

The possibilities ahead are extraordinary. If we continue to nurture talent, foster collaboration, and support bold experimentation, the UK can shape an AI future that is not only competitive, but inclusive, trusted, and globally influential.

Sara El-Hanfy, Director, AI and Digital, Innovate UK

Executive summary

BridgeAI plays a significant role in Innovate UK's work to accelerate the adoption of AI across the UK economy. Backed with £100 million from UKRI's Technologies Mission Fund and Innovate UK, the programme has supported cutting-edge AI innovation to enable UK productivity and growth.

This BridgeAI annual report explores the programme's third year of delivery following its launch in 2023. It demonstrates that the UK is in a globally advantageous position to leverage AI adoption for wider economic growth and that the relative strength of the UK AI ecosystem – evidenced by strong investment, government commitment, and leadership in responsible AI – makes the nation well-placed for faster adoption of AI in industry.

As this report shows, BridgeAI has made significant progress in addressing systemic barriers to AI adoption in target sectors – such as limited access to expertise, data, compute, and funding – through the development and subsequent initial impact of a comprehensive suite of interventions. These include hands-on AI implementation activities, skills and training courses, peer-to-peer learning and workshops, and events and webinars.

The real-world impact of these activities is further highlighted in the cutting-edge case studies featured in this report, and demonstrates how BridgeAI has enabled businesses to advance from experimentation to implementation, and from potential to performance.

Lastly, this report concludes that BridgeAI has provided key insights for future policy and through delivery of the programme it is apparent that barriers still exist in translating pilots into production, such as limited data access, lack of trust, and complicated regulatory environments. These valuable insights will help shape a broader, stronger portfolio of UKRI and Innovate UK programmes by building on what works, scaling ambition, and delivering even greater impact for the UK's AI ecosystem.

At the end of 2025

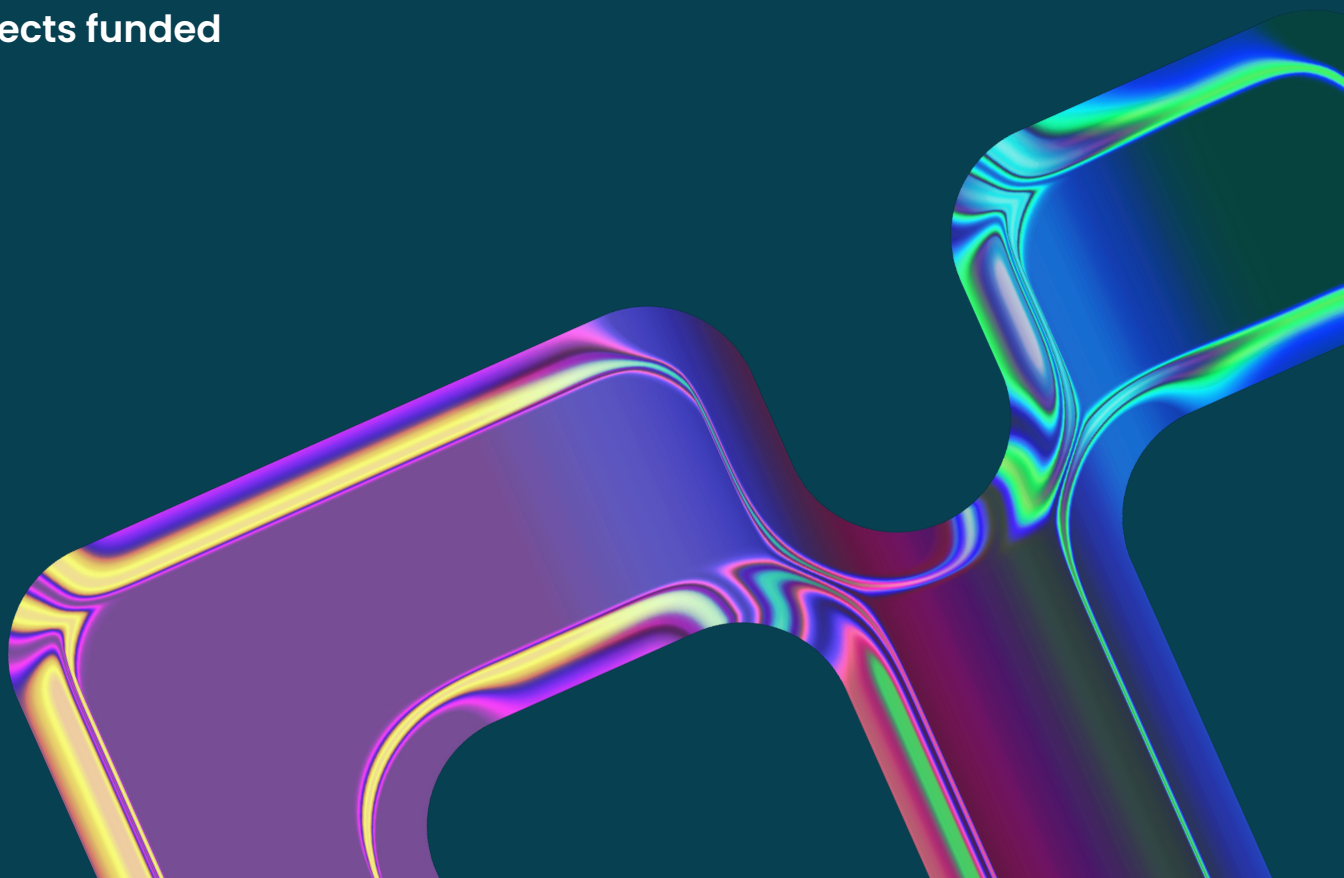
5 000+
organisations supported

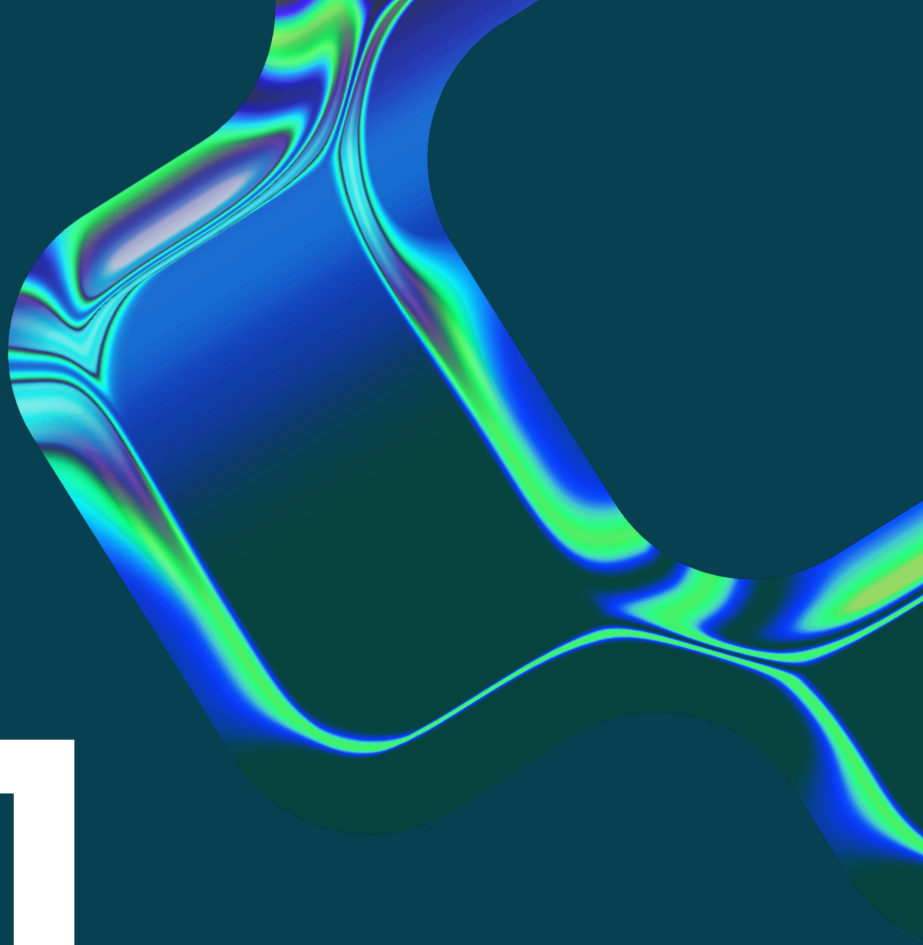
£74.6 million
of grant funding allocated

~12 000
individuals reached

1 700+
AI skills courses completed

820+
AI projects funded





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The AI landscape: strategy, investment and adoption in the UK

The UK AI landscape

UK Government AI strategy

The UK Government has positioned artificial intelligence (AI) as a central driver of productivity, innovation, and long-term economic growth. This is clearly signalled by the government's **AI Opportunities Action Plan** (January 2025), which highlights how AI could be used to boost productivity and improve public services. The plan emphasises partnership with industry, calling for sustainable infrastructure, clearer regulation, and economy-wide adoption of AI.

- AI has been prioritised as a key technological enabler, and high growth potential sector within **the Modern Industrial Strategy, Digital and Technologies Sector Plan**, with a view to both growing the UK's AI companies, and harnessing AI sector growth to catalyse other areas of the industrial strategy and UK economy.
- The government has announced related initiatives to drive efficiency and growth, including the establishment of AI growth zones, investment in new infrastructure, and the creation of a **National Data Library** to expand access to data.
- The government's **Compute Roadmap** (July 2025) sets out how the government will deploy the £1 billion earmarked in the Spending Review to strengthen the UK's compute infrastructure. The roadmap is designed to reduce dependence on foreign computing resources while enabling the UK to accelerate domestic AI development. The government has also opened up routes for organisations to access compute capacity in the **AI Research Resource**.
- In recognition of the importance of responsible AI as a critical enabler of adoption, the government has published the **Trusted Third-Party Assurance Roadmap** (September 2025) which outlines how the UK can grow a trustworthy, independent market for AI assurance, give organisations confidence in using AI responsibly, and position the UK as a global leader in AI governance.

Within this landscape, BridgeAI has played a critical role in driving adoption through direct support of cutting-edge AI solutions and is building momentum to enable the UK economy to embrace the opportunity – responsibly and sustainably.

The UK's global standing in AI

Over recent years, global investment in AI has continued to expand, with global corporate investment in AI reaching $252.3 billion (£198.5 billion) in 2024, a **25.5% increase from 2023**. A significant portion of this growth was fuelled by generative AI-related investments, which attracted $33.9 billion (£26.7 billion) in private investment, up 18.7% on 2023 and an eightfold increase on 2022. This surge highlights the speed with which generative technologies are reshaping investment priorities and the continued enthusiasm for AI technologies.

The UK's ecosystem mirrors the global picture and has seen a similar continued boom in AI investment and company creation. Between 2020 and 2024, UK AI investment increased at CAGR 8.7%, with AI startups capturing as much as **27% of all UK venture capital investment in 2024**. In 2024, dedicated AI companies (those providing a proprietary AI technical service, product, platform or hardware as their primary revenue source) raised **£2.9 billion**, eclipsing the peak of 2022 investment of £2.5 billion.

The number of UK AI businesses has also increased dramatically in the last year, from 3 713 in 2023 to 5 862 in 2024 – **an increase of over 36%.** More than 90% of these firms are SMEs, highlighting strong support across the economy for AI startups.

According to these measures of investment and company creation, the UK's AI ecosystem is maintaining its 'best of the rest' status and consistently ranks third in the world – representing a promising national picture for state-of-the-art innovation and wider adoption.

Rank	Newly-funded AI companies 2024	Newly-funded AI companies 2013–24	Private investment in AI 2024 ($ bn)	Private investment in AI 2013–24 ($ bn)	AI 'vibrancy' ranking	Global AI index
1	USA (1 073)	USA (6 956)	USA (109.08)	USA (470.92)	USA (70.06)	USA (100)
2	UK (116)	China (1 605)	China (9.29)	China (119.32)	China (40.17)	China (53.88)
3	China (98)	UK (885)	UK (4.52)	UK (28.17)	UK (27.21)	Singapore (32.33)
4	India (74)	Israel (492)	Sweden (4.34)	Canada (15.31)	India (25.54)	UK (29.85)
5	Germany (67)	Canada (481)	Canada (2.89)	Israel (14.96)	UAE (22.72)	France (28.09)

Comparison table of AI indexes and dimensions of AI rankings – Sources: **Stanford HAI AI Index Report**, **Stanford HAI Global AI Vibrancy Tool**, *and* **Tortoise Media Global AI Index**

However, the picture is not all positive. When looking at dedicated AI companies in the UK, analysis indicates that **82% are only in the early stages of company formation** (seed or venture stage). This suggests a strength by the UK's ability in generating new ideas in the form of startups whilst highlighting the need for greater scaling and growth investment. This is a UK weakness that is often cited: **UK startups struggle to scale** and need to relocate or access foreign investment if they are to grow effectively.

When looking at the **four key dimensions** for enabling smooth AI adoption (digital infrastructure, human capital, technological innovation, and legal frameworks) the UK ranks thirteenth behind key comparable economies such as Singapore (first), Denmark (second), Netherlands (fourth), Germany (ninth), and Japan (twelfth).

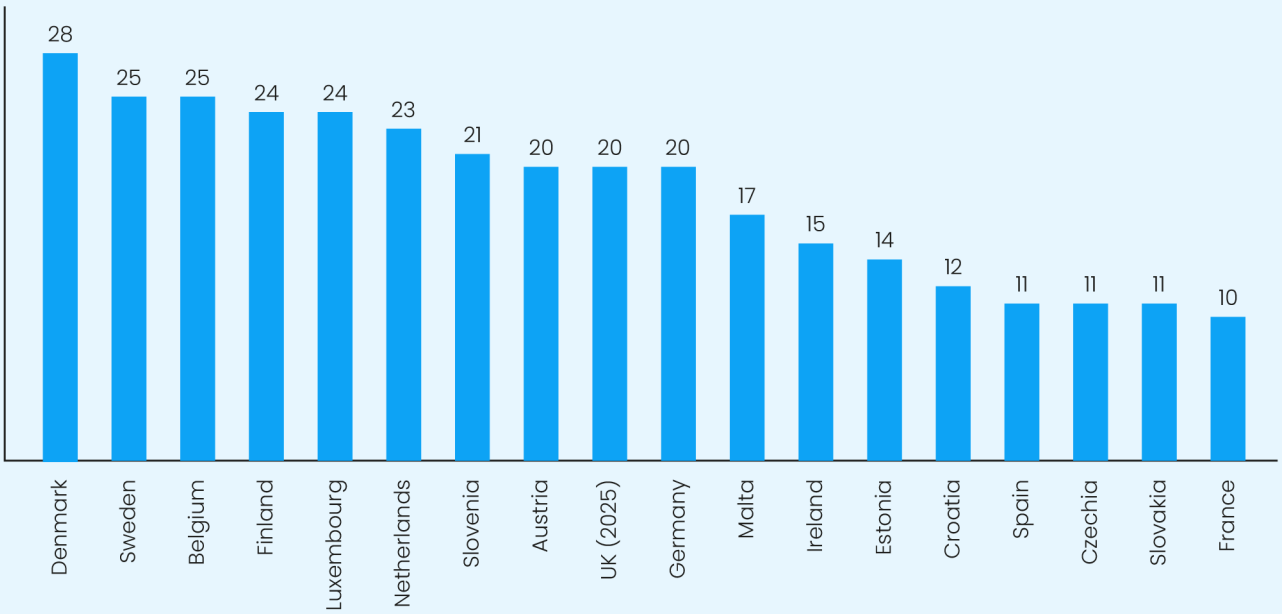
While the UK is clearly in a strong position to leverage AI technologies and has a strong R&D base, there is still value to be gained from wider adoption and growth of AI within the economy.

AI adoption trends, globally and in the UK

Adoption of AI continues to grow year on year, with as many as **88% of larger enterprises deploying AI** in at least one business function in 2025, compared with 55% in 2023. Generative AI has been the primary driver of expansion, with usage more than doubling year on year: 79% of organisations in 2025 reported regular use of GenAI, up from 33% in 2023. This trend suggests that AI, and particularly GenAI, is shifting from being a productivity enhancer at the margins to being used for more general capabilities. However, GenAI is not yet being deployed in all areas, with most applications in areas such as marketing and sales, product and service development, service operations, and software engineering. Only 7% of businesses in the survey reported AI use as 'fully scaled', suggesting a growing gap between AI pilots and realised value creation.

AI adoption in the UK is showing steady but unremarkable growth, with over 20% of all UK businesses (including SMEs) using the technology **as of June 2025**, an increase from 15% in September 2024. However, some European countries, such as Sweden and Denmark, have seen a greater acceleration in adoption, reporting adoption rates of **25% and 28% respectively in 2024**. And while experimentation and adoption continue to surge, the return on investment remains patchy. In July 2025, a survey found that **95% of respondents were getting zero return** from GenAI projects.

Percentage of businesses using AI in the EU and UK



UK reported AI adoption compared with the top EU countries Source: **Eurostat** *and* **ONS** *– figures are indicative, as survey methodologies differ*

Responsible AI and AI assurance

AI's advancing capabilities have led to a rapid rise in AI-related policies worldwide. To date, **39 countries** have enacted at least one AI-related law, reflecting the growing recognition of AI's economic and societal impact.

As AI becomes more embedded in the UK economy and society, and **AI incidents** increase, responsible AI and AI assurance have emerged as critical priorities.

123

global AI incidents in 2023

17

UK-based AI assurance companies in 2023

233

global AI incidents in 2024

84

UK-based AI assurance companies in 2024

Source: **Artificial Intelligence Index Report 2025**

Although there is growing recognition of the risks presented by AI, there is a gap in active mitigation strategies. This is exacerbated by lack of public trust in AI technologies – people in the UK are more likely to see AI as a risk than as an opportunity.

- **59%** of people see AI as a risk to UK national security
- **45%** of people see AI as a risk to UK society
- **39%** of people see AI as a risk to the UK economy

Risk awareness vs active mitigation

Source: **Ipsos and the Tony Blair Institute for Global Change** *Global business-reported risk awareness and mitigation Source*: **Stanford AI Index 2025**

While many businesses view AI as potentially transformative and are willing to experiment, there is a need for practical deployment driven by expert advice and guidance both on technical feasibility and risk mitigation.

This report highlights how the BridgeAI programme's interventions and case studies are operating at the cutting edge of AI adoption and deploying responsible AI that delivers value.

02

BridgeAI in 2025

The BridgeAI programme

BridgeAI enables businesses to harness the power of AI technologies to drive their innovation and growth. It works to address key barriers to AI adoption such as funding, skills, data access, commercialisation, and governance, and connects and collaborates with business, government, funders, research and the research community.

Our comprehensive programme of activities supported growth in AI adoption by providing targeted interventions across the AI lifecycle. Designed to complement each other and support businesses in their AI journey, these activities fell into three main categories.

AI implementation

BridgeAI's implementation activities deliver longer-term, in-depth engagement with target sector organisations, and focus on the development and deployment of real-world AI models, PoCs, MVPs, and other related AI projects.

AI skills, support and resources

The BridgeAI programme delivers a range of e-learning and in-person training courses to upskill teams looking to adopt and commercialise AI. Alongside this training, through extensive research and engagement with the AI ecosystem, the BridgeAI programme publishes a wide range of on-demand resources.

AI knowledge transfer and collaboration

BridgeAI delivers peer-to-peer collaborations to share best practice and holds in-person and virtual events to disseminate key insights and resources to all parts of the UK.

AI IMPLEMENTATION

BridgeAI Funding and grant competitions

Developed and delivered by Innovate UK

The BridgeAI programme has provided a series of financial interventions to stimulate adoption of AI within its priority sectors.

By providing grant funding, BridgeAI enabled AI developers to work alongside challenge holders (demand-side organisations with industry challenges that can be solved through AI) to develop, implement and evaluate AI-driven solutions that can improve business productivity. Grants were issued in several formats including collaborative research and development, feasibility studies and **investor partnerships** to connect innovators with private financing.

Innovate UK also established the Supply Chain Demonstrator funding competition to tackle one of the most persistent barriers to innovation across UK industry – the inability of organisations to share and utilise data securely across supply chains. Concerns over confidentiality, interoperability, and trust limit the use of data in developing AI solutions. Through this competition, the **SauceAI: National Food Redistribution Project** was funded, creating an end-to-end AI-driven solution designed to eliminate food waste in the manufacturing supply chain.

At the end of 2025

£74.6 million
in funding issued

11
grant competitions

417
projects funded

824
organisations supported

"Support from the Innovate UK Investor Partnership has been instrumental to NavLive's growth, enabling the development of real-time edge-AI algorithms and the eventual commercialisation of our handheld 3D scanner, NavLive Radius. This support significantly accelerated the delivery of our industry-leading solution and helped unlock additional venture capital investment."

David Wisth
Founder and CTO, NavLive

AI IMPLEMENTATION

High Growth AI Accelerators

Developed and delivered by Digital Catapult

BridgeAI's High Growth AI Accelerators help startups to develop ethical and impactful AI and ML solutions, and enable real world industry adoption. 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.

Startups tackle real-world challenges set by industry challenge owners (ICOs), which are leading enterprises within their sectors. The challenges are based on industry-centric priorities, such as detecting disease in crops, optimising port operations, automating housing retrofit processes, and enhancing visitor attractions. The resulting solutions created by participating start-ups are sector-relevant and effective, helping to bridge the gap between demand and supply.

Five accelerator programmes have been delivered, with one targeting all four of BridgeAI's priority sectors, and the other four accelerators targeting each priority sector specifically. In 2025 the accelerators focused on AI solutions in the construction and agrifood sectors.

"Being part of Digital Catapult's High Growth AI Accelerator has been transformational for BOHM. The programme helped us sharpen our product and refine our pitch. Huge thanks to our Golden Thread challenge owner, Foster + Partners, whose engagement brought real-world focus to our solution.

The support from the Digital Catapult team was exceptional – from the investment readiness sessions to workshops with product strategists, and ethical AI experts. We leave the programme with a clearer path to market."

Liam Tootill
Co-founder of BOHM

"Digital Catapult combines laser-focused technology development driven by challenge owners with the breadth and depth of support from its team and network. This unique approach accelerated our progress and opened valuable connections for DONAA."

Dr. Anas Achouri
Founder and CEO of DONAA

"We're delighted to have supported Digital Catapult in the BridgeAI Accelerator programme as a challenge partner for Industrialised Construction. The programme offered valuable opportunity for knowledge exchange and greater understanding of AI-enabled solutions. We'll continue to shape these conversations with the network as we seek to address the industry challenges ahead."

Lucy Devall
Innovation Framework Lead, Buro Happold

At the end of 2025

43
startups and 14 industry challenge owners

24
PoCs and 19 MVPs built

3 x
continuing partnerships formed between startups and industry challenge owners

93%
of start-ups still growing and operational

AI IMPLEMENTATION

Innovation and High Performance Computing Vouchers

Developed and delivered by The Hartree Centre

BridgeAI provides businesses with access to two forms of expertise based at the STFC Hartree Centre: Innovation Vouchers and High Performance Computing (HPC) Vouchers.

Innovation Vouchers support organisations at different stages of their AI adoption journey. Businesses can access a voucher worth up to £15 000, covering up to 31 days of support from specialist technical experts in data science and artificial intelligence. Each Innovation Voucher includes an initial consultation, followed by a tailored, AI-focused project. This may include advice on AI integration, dataset review, feasibility studies, or proof-of-concept development.

HPC vouchers enable companies to access advanced computing capabilities in a low-risk, low-investment environment. BridgeAI offers vouchers of up to £5 000 to support access to a supercomputer, providing robust computational performance for demanding workloads.

As the system is designed for experienced users, participating companies are required to complete mandatory training to ensure they can use the resources effectively and maximise their impact. On completion, participants attain an HPC 'driving licence', certifying their readiness to work with high-performance computing systems.

At the end of 2025

72
PoCs

90
innovation and HPC vouchers delivered

60–70%
of voucher recipients reported reduced costs, increased productivity, and/or improved efficiency

"Engaging with the Hartree Centre through BridgeAI has been a really motivating experience. We were very impressed by the high level of expertise and how they succinctly summarise complex technical problems into manageable and tangible pieces of work that can easily generate valuable insights. They found hidden value in our scientifc experimentation data and showed us the way forward to exploit it!"

Cesar Torres
Founder, The Good Pulse Company

"The project research support was invaluable to us as an early-stage startup with limited resources. It signifcantly accelerated the development of our solution."

Harold Cabrera
CEO, Gpeto AI Limited

AI IMPLEMENTATION

Innovation Exchange (iX)

Developed and delivered by Innovate UK

Innovation Exchange bridges the gap between the challenges faced by industry and the innovators already developing solutions to those challenges. BridgeAI ran an open iX competition which selected 20 AI solution providers to pitch their solutions for four industry challenges to a panel of sector experts, AI experts and companies that could directly benefit from the AI solutions. The successful applicants were awarded £50 000 in funding to develop a prototype solution for their chosen challenge. The industry challenges addressed are outlined below.

Enabling data-driven decisions in the bicycle industry

The Bicycle Association, (the national trade association for the UK cycling industry) set the challenge to develop an AI-powered solution that simplifies access to market insights for SMEs and non-technical users, allowing them to make data-driven decisions on inventory, sales, and supply chain optimisation.

Using AI to streamline local authority planning processes

Lichfields, a planning and development consultancy, set the challenge to develop an AI-powered planning co-pilot that streamlines policy interpretation, automates document analysis, and assists in application assessments.

Encourage travellers to switch to sustainable transport

The Walk Wheel Cycle Trust, a charity that campaigns for more sustainable transport choices (formerly Sustrans), set the challenge to develop an AI-powered segmentation and engagement tool that can identify individuals likely to switch travel modes, and deliver personalised interventions to encourage them to use sustainable transport.

Using AI to automate and optimise site reinstatement processes

United Infrastructure (formerly United Living), a UK-based construction and infrastructure company, set the challenge to develop an AI-driven solution that automates site assessments, detects quality defects in real-time, and integrates geospatial data to optimise reinstatement processes.

"The reinstatement AI app has given United Infrastructure a scalable, low-disruption way to improve Street works quality while protecting margin. By identifying reinstatement defects early, it reduces rework, repeat visits, fines and chargebacks before sign-off.

The app brings consistency to quality checks through objective, standardised image assessment, strengthening compliance and client confidence. It integrates seamlessly with existing Totalmobile workflows, avoiding disruption to site teams. The auditable digital trail supports governance and dispute resolution, while aggregated insights enable targeted improvement.

Overall, it demonstrates a practical, data-led use of AI that enhances delivery performance and reputation across water and utilities contracts."

Jonny Evans
Business Support Director, United Infrastructure

"The BridgeAI project played a key role in helping us innovate and push the boundaries of applied AI for SMEs. Through this project, we successfully designed and validated an AI system capable not only of automating market data intelligence analysis, but also of executing actionable decisions to improve sales performance. We'll launch our first product for SMEs in Q2 2026.

BridgeAI enabled us to move beyond market intelligence insights alone, towards AI that can actively manage and optimise real-world digital channels online. The project significantly strengthened our product maturity and accelerated our path to commercially impactful AI solutions for SMEs."

Denis Chernenko
CEO NLSQL LIMITED

At the end of 2025

4

funded partnerships between solutions providers and challenge owners

AI IMPLEMENTATION

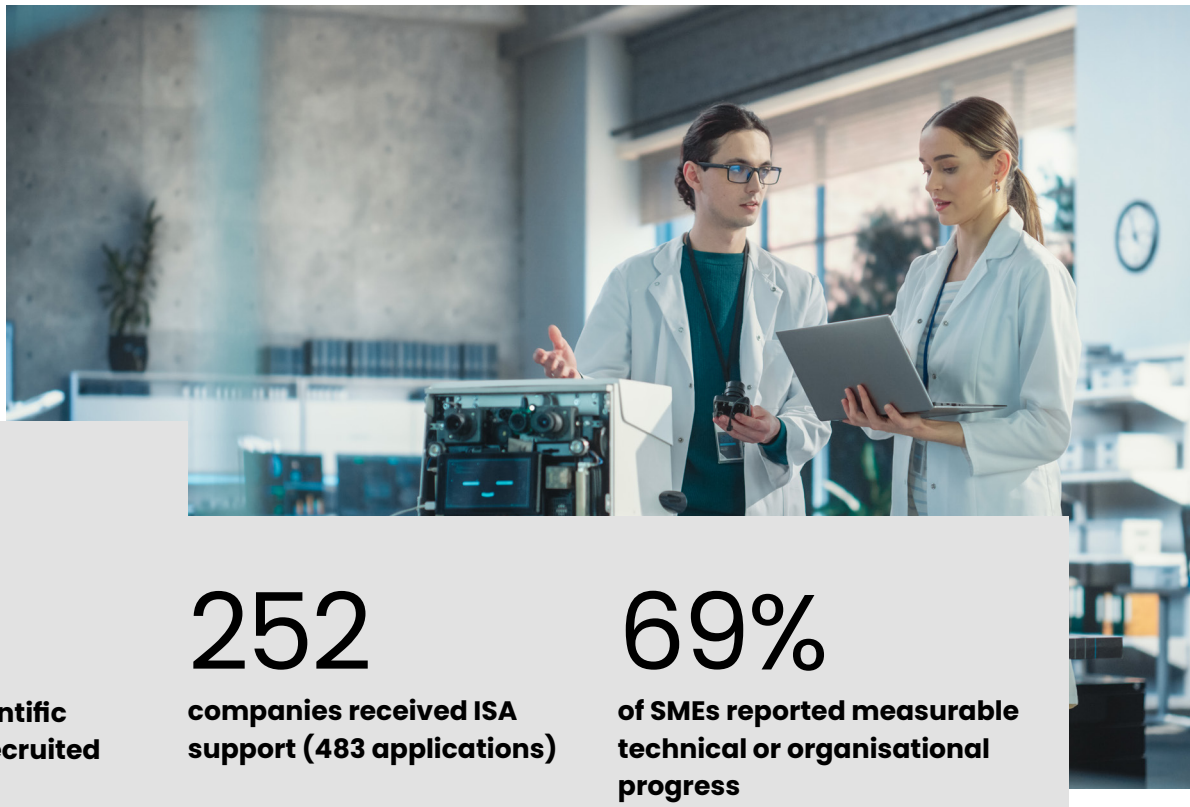
Independent Scientific Advisors

Developed and delivered by The Alan Turing Institute

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 within BridgeAI priority 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.

ISA support also extended to providing pathways for internships through the Turing Internship Network (TIN). BridgeAI organisations on the ISA programme can be matched with PhD researchers to work on a three-month project (managed by the ISA), enabling interns to apply their research skills to practical implementation challenges.



At the end of 2025

21
Independent Scientific Advisors (ISAs) recruited

252
companies received ISA support (483 applications)

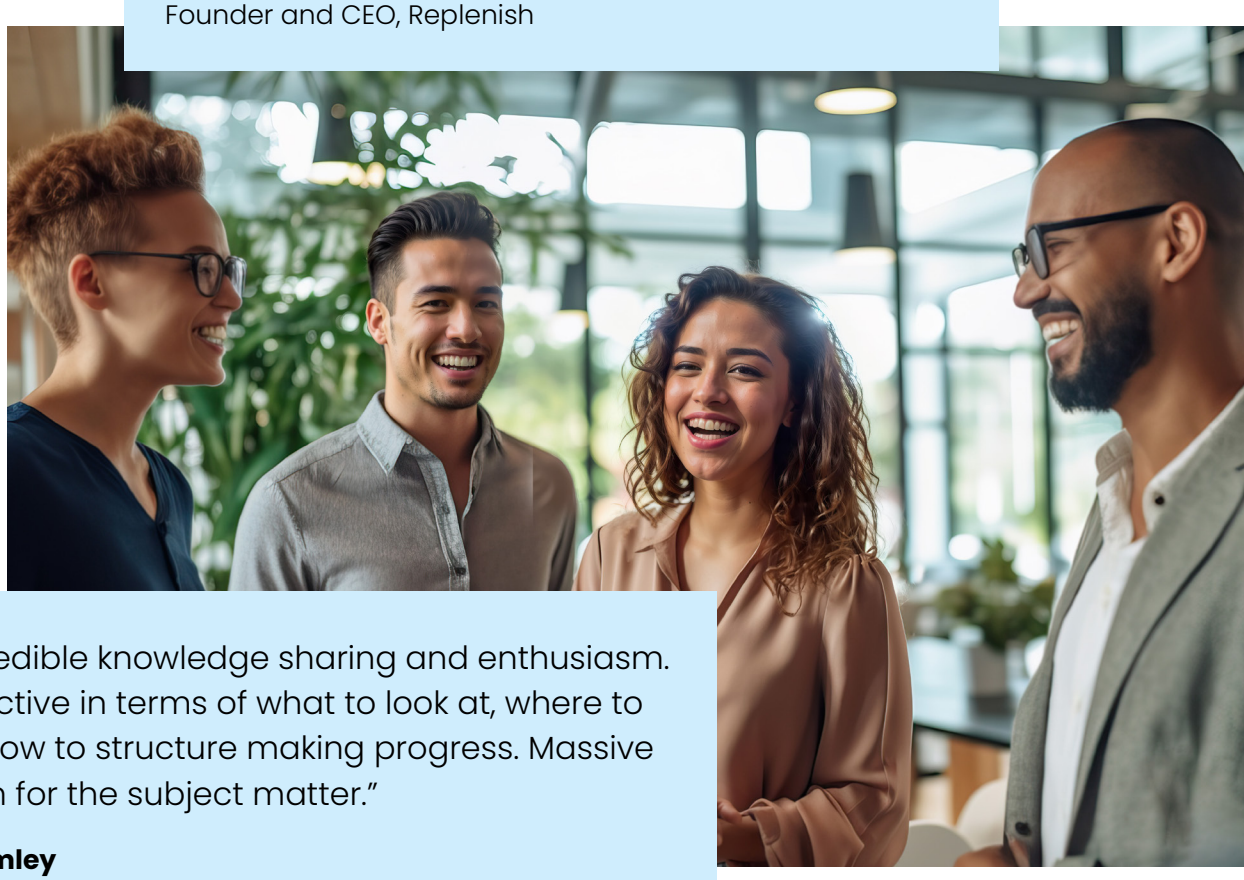
69%
of SMEs reported measurable technical or organisational progress

"We had really engaging discussions about opportunities for IP generation in key areas of image generation and language detection. We have defined a new goal of creating system architecture diagrams for these processes, which I think will be incredibly useful in later development."

Kyle Burke
Founder, Tomale.ai

"Ogerta has been very helpful in building my understanding of the entire data modelling process in a structured and approachable way. Having identified and discussed relevant data sets, she offered guidance on next steps, helping me to structure a clearer development roadmap for the solution."

Daniel Adamczyk
Founder and CEO, Replenish



"Really incredible knowledge sharing and enthusiasm. Very productive in terms of what to look at, where to start. And how to structure making progress. Massive enthusiasm for the subject matter."

Daniel Bottomley
Co-Founder, VoxAnn

AI IMPLEMENTATION

AI management standards training and consultancy

Developed and delivered by BSI

The **AI management standards training** course provides SMEs with the opportunity to gain an industry recognised qualification: the AI Management Practitioner qualification from BSI. The training courses were centred around the world's first Artificial Intelligence Management System (AIMS) framework ISO/IEC 42001:2023 and are designed to tackle challenges such as model opacity, bias, cybersecurity risks, and more.

Building on this training, SMEs were also offered the opportunity to also benefit from **expert consultancy from BSI**, giving them free advice on standards adoption, for AI and information security management systems (ISO 27001 and ISO 42001). This offer was designed to help SMEs build on the knowledge obtained during training, futureproof their business, manage risks, and embed reliable and trustworthy AI systems, while addressing the specific needs and challenges of the participating SME's sector and organisation.

Successful applicants were matched with a BSI consultant who provided three days of expert support, including gap analysis to evaluate current business practices against standards; practical and tailored recommendations to address identified gaps; and a roadmap for achieving improvements.

At the end of 2025

171
SMEs upskilled across ISO 27001, ISO 31000 and ISO 42001

37
organisations received the AI management practitioner qualification

20
SMEs received bespoke standards consultancy

"I haven't come across a more complete, thoughtful and detailed AI management system framework [as ISO 42001] … [BSI's AI Management Practitioner Course] really enhanced my knowledge and willingness to work based on a standard and framework because you need to have a clear path how to implement AI within your company otherwise, you're going to end up in a mess."

Oscar Pais
Founder, Relo AI

"BSI's consultancy support helped to make me realise that ISO 42001 is really important and it's the right path for us to take. Implementing ISO 42001 and working towards certification will give us confidence and show that we are competent in managing AI solutions."

Dr Niazy Kioufi
CEO, EYYA

"It was incredibly valuable to step away from day-to-day work and collaborate with the BSI consultant and senior leadership team on how to embed more process and governance into existing systems in a way that drives real impact. For example, we explored how to manage software engineering processes – covering changes, versioning, approvals, and releases – so that AI-specific practices are integrated into current workflows rather than creating entirely new processes for AI-powered solutions."

Callum Cockburn
Technical Innovation Manager, Synoptix

Training and development courses

Training courses

The BridgeAI programme offered in-person and online courses, covering areas such as digital transformation, AI ethics, standards, and AI leadership, among many others.

With thousands of professionals engaging in courses delivered by BridgeAI's industry-leading consortium, the programme has worked to significantly strengthen AI literacy and confidence across the UK ecosystem, enabling better-informed decision-making around AI adoption, governance, and investment. This work was supported through activity within the **AI Skills Hub**, which has helped to sustain and expand access to high-quality AI upskilling.

Frameworks, toolkits and other resources

As part of this significant effort in upskilling the AI ecosystem, BridgeAI published thought leadership, guides and resources that provide best practice guidance for companies looking to adopt AI. By making practical insights and frameworks widely accessible, these foundational resources reduce uncertainty and support more confident AI adoption. Some examples can be found below:

AI Skills for Business Competency Framework – defines the core knowledge, skills, behaviours, and attitudes required for organisational AI adoption.

AI Adoption Toolkit – multiple online resources that help businesses benchmark their AI readiness and advance through their adoption journey.

AI Use Case Framework – provides examples of AI in action and information that organisations should consider before implementing AI.

Applied AI Suite – provides a comprehensive solution for transitioning AI/ML models into production, ensuring optimal performance and scalability.

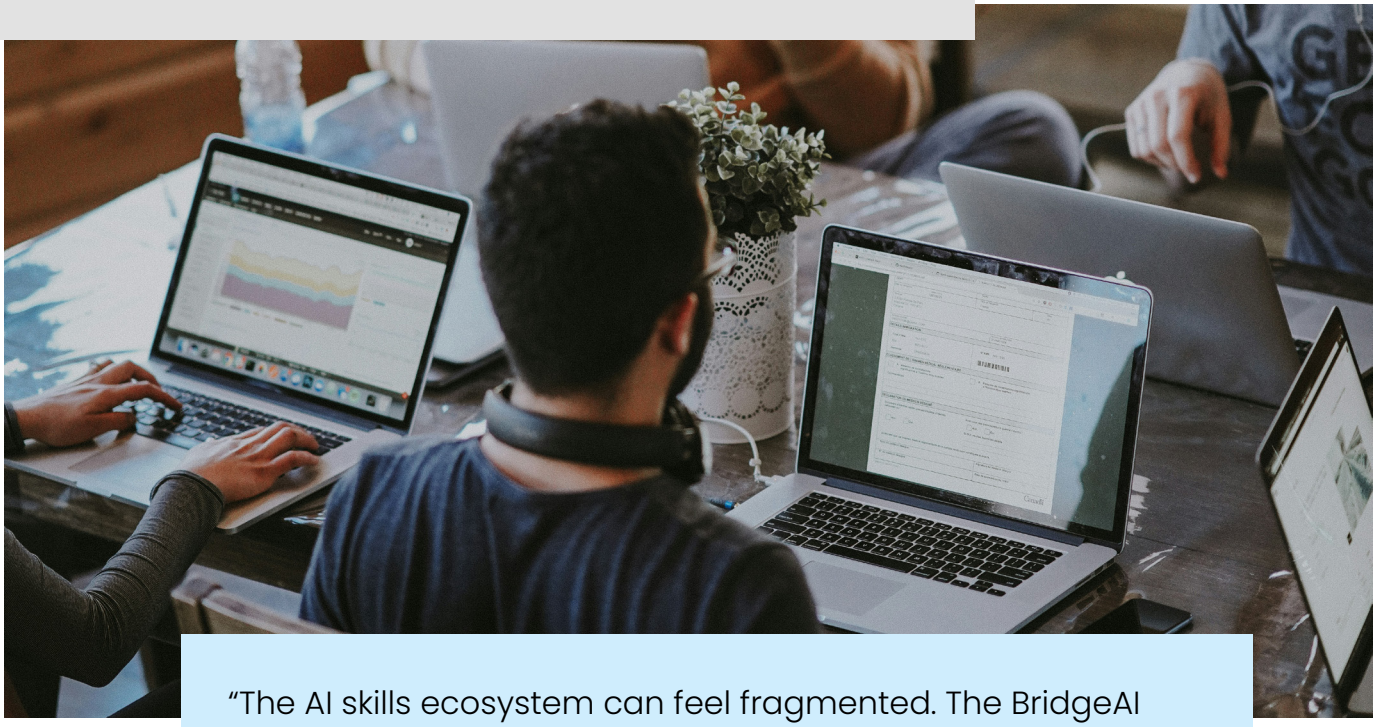
Capsules of AI knowledge – short videos to help businesses navigate AI adoption with actionable insights.

At the end of 2025

1 700+
skills courses completed

126
accreditations gained

10 000+
engagements with BridgeAI content (views, comments and downloads)



"The AI skills ecosystem can feel fragmented. The BridgeAI Skills for Business Competency Framework is in a great position to be the glue – a trusted, independent reference point."

Huw Davies
Duty Manager, BBC

AI KNOWLEDGE TRANSFER AND COLLABORATION

Peer-to-peer learning and facilitated collaboration

BridgeAI delivered a series of targeted events and workshops designed to convene the UK's AI ecosystem and enable meaningful peer-to-peer learning and collaboration. By bringing together adopters, developers, researchers and policymakers, these forums created space to share practical experience, explore emerging standards, and build relationships across the AI value chain, while also promoting UK capability internationally.

In several cases, participants were connected directly with real-world datasets and challenge owners, enabling innovators to test solutions and explore future partnerships at home and abroad.

Events and webinars

BridgeAI events and webinars were delivered across the UK to ensure regional reach and deliver knowledge transfer across the whole economy. Events promoted BridgeAI success stories and case studies, and shared key insights with attendees on important aspects of AI adoption, including standards, the use of LLMs and investment.

At the end of 2025

890

attendees at peer-to-peer learning and collaboration workshops

7 000+

attendees at BridgeAI events and webinars

"BridgeAI's **Standards Community** has been pivotal for us. The expert clinics and peer exchange helped us tighten our responsible-AI and data-governance approach, sharpen the evaluation plans for Extending Nature, and shape a realistic adoption roadmap for MEMORIES by EcoGPX®. The introductions we've made have already unlocked collaborations and pilots we wouldn't have reached as quickly alone."

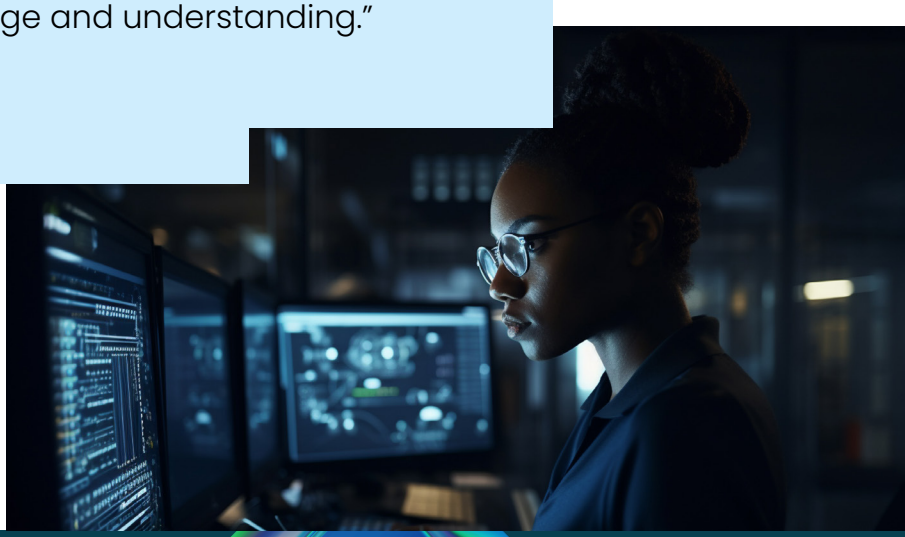
Dr Alex Boyd
Founder/CEO, Intercultural Roots for Public Health, Founding Director, EcoGPX

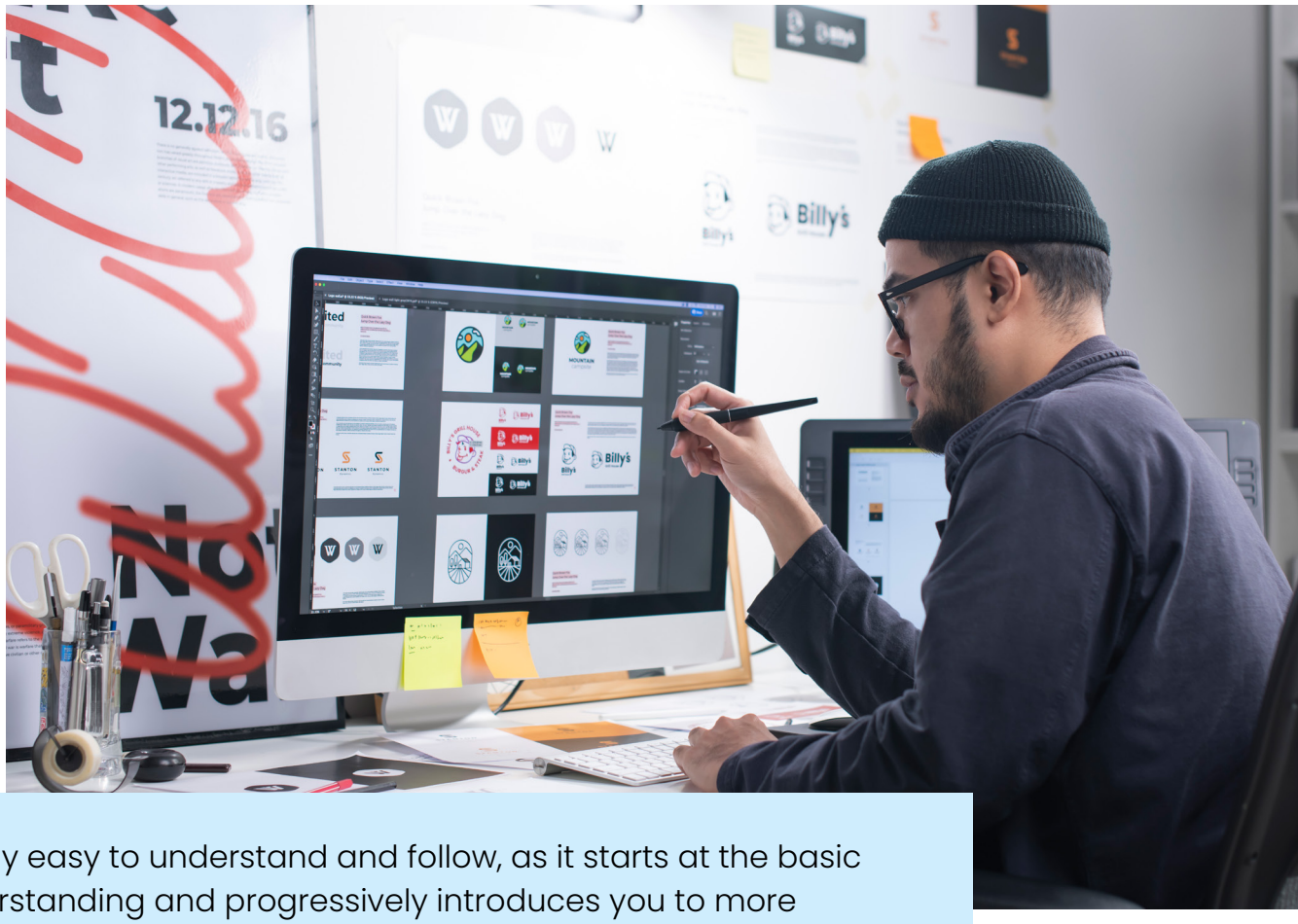
"As a small company, taking part in the **Turing Way Practitioners** Hub suddenly entered us into conversations with government bodies and much larger organisations. It really opened our eyes to what others are doing in AI, and particularly around ethics. One of the big takeaways from the Practitioners Hub for me was the importance of being intentional about how you deploy AI – having a roadmap, thinking through the risks, and not just rushing into it."

Ingrid Folland
CEO, Japeto AI

"[The LLM webinar was] really easy to understand and follow as its starts at the basic understanding and progressively introduces you to more considered and valuable applications and models by building knowledge and understanding."

SME Developer
Digital Catapult, **LLM webinar** attendee



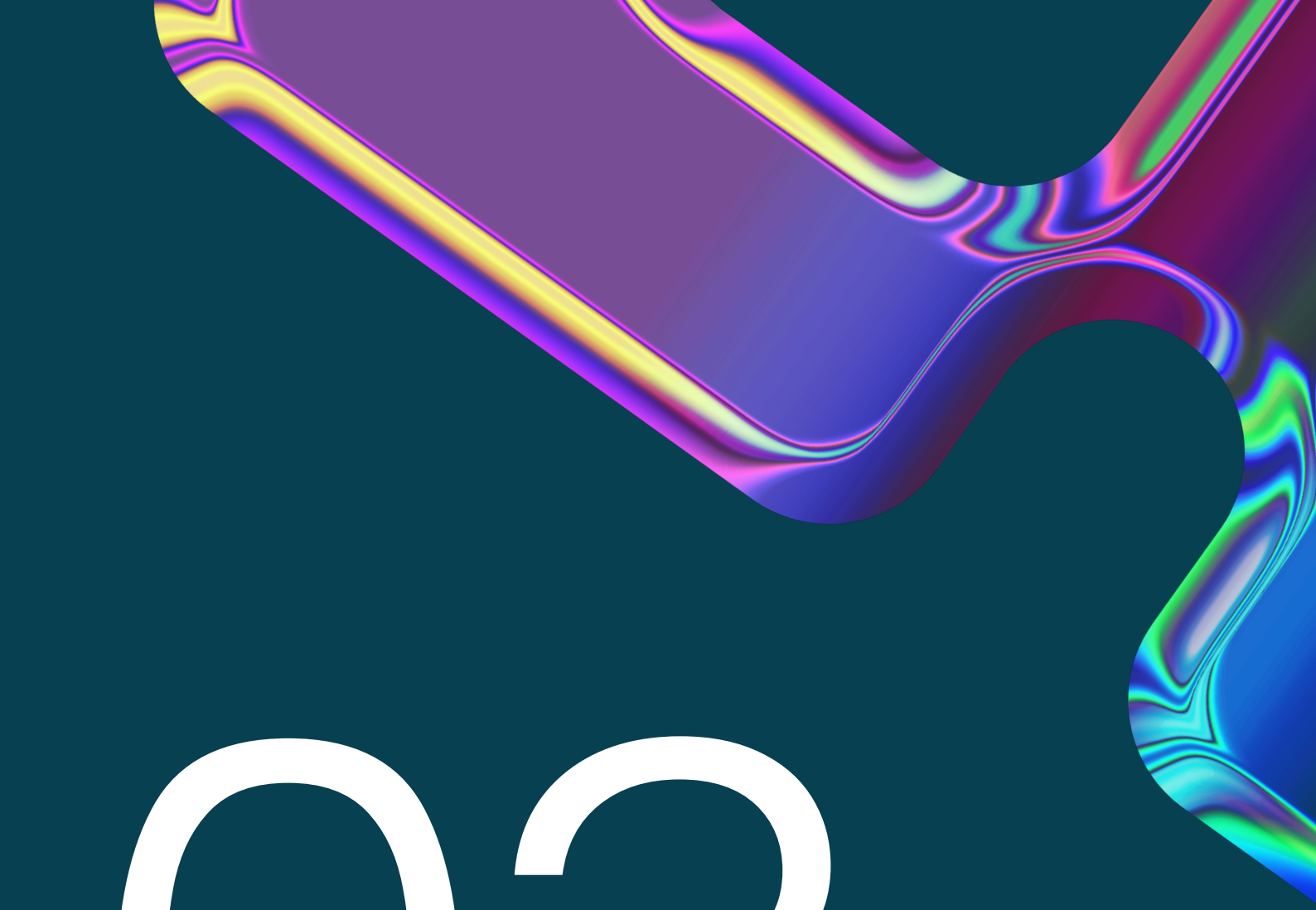


"Really easy to understand and follow, as it starts at the basic understanding and progressively introduces you to more considered and valuable applications and models by building knowledge and understanding."

SME Developer
Digital Catapult LLM webinar attendee

"I plan to apply the insights on AI innovation and compliance to guide responsible AI adoption in my business, streamline operations, and ensure alignment with evolving regulatory and ethical standards. This standard will also help people I work with consider their jobs as creative and that they too can produce innovative ideas that they can develop into products and projects."

Construction SME
BSI webinar attendee

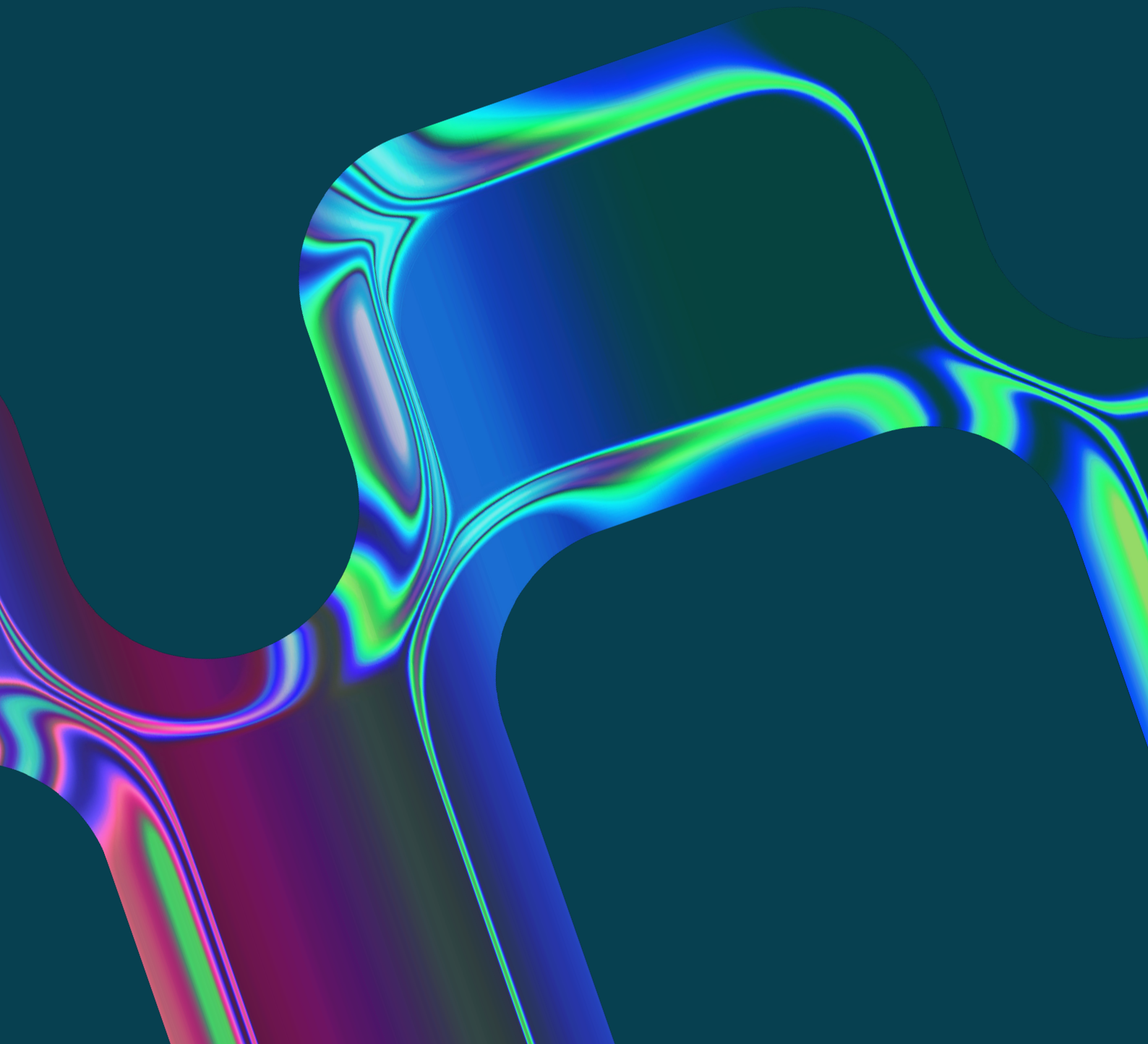


03

AI adoption journeys with BridgeAI

BridgeAI has helped hundreds of businesses across the UK on their AI adoption journey, from building initial AI strategies to deploying and scaling models internally, with customers, and into new markets.

The case studies in this section highlight how access to BridgeAI's innovative, cutting-edge activities – delivered by a world-leading consortium – has given UK businesses the vital support needed to effectively harness AI.



CASE STUDY

E-Nano

Autonomous assessment of sport surfaces

From elite football pitches to golf courses and horse racing tracks, turf quality is critical for performance and safety. Assessing its health and identifying early signs of defects has traditionally relied on subjective visual inspection, which is time-consuming, inconsistent and hard to scale.

Startup **E-Nano** combines hardware and AI to improve turf management. Its Lightbox system captures high-quality, multispectral images of turf under controlled lighting conditions, then uses computer vision to assess quality and spot potential issues. As well as improving efficiency, this automated assessment provides reliable, standardised results every time, ensuring each field can consistently meet set standards.

Working with a BridgeAI ISA

To strengthen the AI component of its solution, BridgeAI matched E-Nano with Independent Scientific Advisor Dr Spyridon (Spyros) Samothrakis, a researcher at The Alan Turing Institute and the University of Essex. Spyros would help them navigate the challenges of building robust ML tools – particularly with small, hard-to-collect datasets.

Working with Spyros, the team moved from an early AI model with limited real-world accuracy to a hybrid approach combining image segmentation with interpretable, feature-based scoring. This allowed them to isolate relevant turf areas more precisely and extract meaningful visual features (such as colour, density and weed presence) to support transparent, trustworthy assessments of quality. Building on this foundation, the team refined a turf-scoring algorithm designed to replicate expert human grading on a 1-10 scale and began developing classifiers to detect turf defects with greater accuracy.

E-Nano has also developed a prototype AI agronomic assistant that generates natural-language summaries of turf conditions and maintenance suggestions, with potential to evolve into a conversational interface for groundskeepers.

"Because we're working in quite a niche industry, there are no public datasets – every image has to be collected manually using our own hardware. Spyros helped us develop a more strategic approach, advising on how to guide our users to collect more useful training data, and how to make the most of it using analysis techniques suited to small sample sizes...

For a small business like ours, any additional resource – whether it's expert advice, an innovation voucher or an intern – can make a huge impact. The ISA offer helped us push forward AI ideas we weren't sure we could deliver. Our interactions with Spyros gave us direction and confidence. We're now exploring more ambitious ideas, validating them with expert input and building them into our roadmap."

Erwann Lompech-Leneveu
COO and co-founder of E-Nano

Initially developed as part of an autonomous robotic platform, E-Nano has recently launched a portable, handheld version – making the technology more accessible to a wider range of customers. Since launching the portable Lightbox, E-Nano has sold over 30 units in just six months and credits the growing maturity of its AI tools as a key driver of that uptake. The ISA relationship has proved so valuable that E-Nano is now exploring ways to retain Spyros as a long-term advisor to the company.

"My research focuses on working with small or broken datasets, which made E-Nano a great match – collecting data in the field with physical robots is never easy. What stood out was their ability to absorb and act on technical advice. They had strong engineering skills and a real openness to collaboration.

It was a full end-to-end engagement, from early conversations about what was possible with AI to supporting the design and deployment of the final prototype, which has now gone to market with paying customers."

Dr Spyridon (Spyros) Samothrakis
Researcher, The Alan Turing Institute and University of Essex

CASE STUDY

Novel Engineering Consultants

Reducing aircraft system certification timescales with AI

Safety is a priority in the aviation industry, and analyses like functional hazard assessments (FHA) are performed throughout the aircraft development lifecycle. FHAs are typically produced by expert safety engineers who analyse system designs to identify and classify functional hazards – such as the loss of braking force control – according to industry standards.

Novel Engineering Consultants sought to accelerate the generation of FHAs through automation and the use of AI. However, AI models can produce inaccurate outputs, for instance when they lack relevant, up-to-date input data. Consequently, they could misclassify functional hazards, therefore requiring more work from an expert safety engineer to correct the outputs.

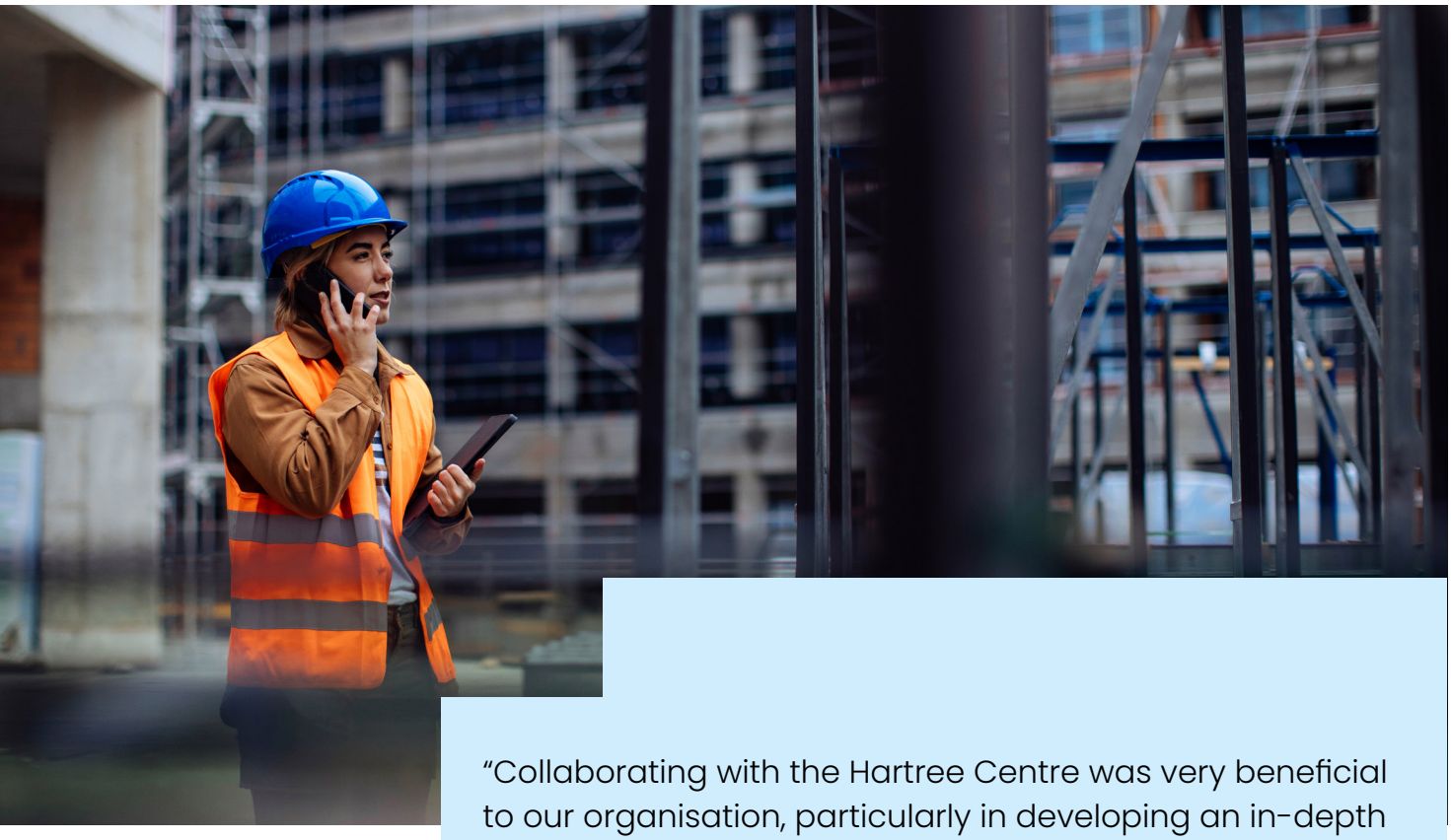
Enabling creation of a proof of concept

Through BridgeAI, **Novel Engineering Consultants** received a £15 000 Innovation Voucher. They tapped into the Hartree Centre's AI expertise to advance their FHA automation in a reliable and efficient way.

They collaborated directly with the Hartree Centre's AI scientists to develop a proof-of-concept pipeline. This involved integrating key aircraft system data into their database and defining clear data access boundaries, which provided the AI tool with richer context to generate more accurate and actionable outputs.

They also applied prompt engineering to enhance the factual accuracy and structural quality of the AI-generated results, and implemented rigorous evaluation processes to ensure system robustness and reliability.

These efforts resulted in a proof-of-concept pipeline for FHA automation.



"Collaborating with the Hartree Centre was very beneficial to our organisation, particularly in developing an in-depth understanding of AI technologies and our ability to deploy them effectively."

Alex Penny
Novel Engineering Consultants

By delivering the pipeline, the Hartree Centre's AI researchers laid the groundwork that enabled Novel Engineering Consultants to develop their proof-of-concept into a functional tool for automating FHAs. This tool has increased the efficiency of their aircraft safety analysis processes, resulting in cost and time savings on aerospace projects, while maintaining the high safety standards that are critical in the aviation industry.

Novel Engineering Consultants has also received mentorship from the Hartree Centre's AI researchers, helping to enhance in-house AI capabilities and validate other AI approaches developed alongside the FHA automation work.

CASE STUDY

Placemaking AI

PLACEMAKING AI

Embedding AI-driven insights into strategic operations

Commercial property operators, owners, developers and planners are still navigating the changes that began in 2020, with reduced footfall, the advent of hybrid working, and increases in operating costs.

Large sites such as retail centres and leisure parks typically rely on fragmented systems for operational insights: performance KPIs, visitor behaviour and preferences, trend tracking, sentiment and feedback, leasing, marketing, pricing, and revenue. This means that decisions are often stitched together from spreadsheets, BI dashboards, and periodic consultancy reports – this is slow, inconsistent across sites, and hard to scale portfolio-wide. As a result, leaders struggle to see what's working, what isn't, and which interventions to make.

Placemaking AI is a decision co-pilot that blends audience, sentiment, and operational signals to surface opportunities asset by asset, and roll them up portfolio-wide. Instead of analysing in hindsight, operations and insights teams can ask targeted questions, compare sites consistently, and act faster on emerging patterns. By 2024, the platform had matured in retail destinations and was being adapted for adjacent asset types (leisure, airports, campuses, offices).

Collaborating with Merlin Entertainments

Placemaking AI entered the BridgeAI High Growth AI Accelerator and partnered with Merlin Entertainments to co-design features specifically for high-throughput visitor attractions.

Working directly with Merlin's insights and operations teams, they were able to turn everyday pain points into product capabilities. This partnership led to the pilot and launch of a new leisure module for the Placemaking AI solution, using real-world attraction data and integrating audience and sentiment signals with operational KPIs across multiple countries.

"BridgeAI accelerated us at a pivotal moment. It helped us strengthen our foundations to scale confidently and unlock our next stage of impact. The programme also opened a new vertical for us through a collaboration with Merlin Entertainments, validating our platform beyond retail and into the leisure sector. And as global AI policy evolves, BridgeAI helped us stay ahead, build responsibly, and lead with trust. It gave us momentum, industry insight, and the conviction to shape the future of AI in real estate."

Burak Capli
Founder, Placemaking AI

Further expansion into new areas

With the leisure module proven under high-volume conditions, Placemaking AI is now charting a path into airports and mixed-use destinations where similar operational challenges exist.

Placemaking AI will continue co-designing with operators, while reinforcing BridgeAI's commitment to responsible and explainable AI. The aim is to move from reactive operations to proactive, AI-assisted action, turning uncertainty into measurable performance gains. AI is not a one-off rollout but a daily discipline, and Placemaking AI is investing further in R&D to help large organisations maximise their efficiency and performance.

CASE STUDY

LinearWorks

Enhancing industrial quality control with AI and hyperspectral imaging

Founded by pioneers in artificial intelligence, earth observation, and supply chain management, **LinearWorks** utilises hyperspectral imaging (HSI) and artificial intelligence to address complex challenges across various industries. Its technology assists agricultural stakeholders in crop monitoring and management and allows verification of the safety and durability of building materials. Although the company's initial focus was on agriculture, it has expanded into sectors such as construction by adapting HSI-based technology to detect subtle material defects that conventional inspection methods often overlook.

ISA support has helped lead to patent filing

To support this strategic shift, LinearWorks participated in the Independent Scientific Advisor (ISA) programme under Innovate UK's BridgeAI initiative. Through this programme, the company worked with Dr Kit Windows-Yule, an artificial intelligence expert from the University of Birmingham and The Alan Turing Institute, who provided valuable feedback on strategic direction.

One such opportunity involved working with a concrete manufacturer. LinearWorks installed HSI cameras on the production line to assess quality and detect irregularities in prefabricated concrete using bespoke algorithms. The goals were to enhance quality control during curing and to create a digital audit trail, allowing manufacturers to demonstrate compliance with required standards.

> "Kit's support has been instrumental in shaping how we communicate our ideas to academic and government funders. Coming from an industry background, it is a different way of thinking. Kit helped translate our vision into something that academic reviewers would understand. The company has filed a UK patent for its HSI technology and continues to grow and lead the way in HSI technology."
>
> **Chris Felder**
> CEO of LinearWorks

LinearWorks' participation in BridgeAI also brought the opportunity to lead one of the Turing's Mini Data Study Groups, where they posed a challenge to early-career AI and data science researchers focused on using HSI to detect defects in materials under changeable environmental conditions.

"We were able to work with a group of PhD students who brought fresh energy and ideas. They came at the challenge from all sorts of different angles, both technical and practical. We talked about protecting our HSI cameras from dust in a live production environment, compensating for lighting changes, and improving the system's overall robustness. It really made us think differently about how we could deploy the technology."

Insights from the Mini Data Study Group – particularly around the diverse applications of the company's HSI technology – helped LinearWorks recognise the need to separate its business streams. This led to the creation of LinearLabs, a dedicated company arm focused on global supply chain solutions, including the tracking and monitoring of temperature-controlled assets.

"LinearLabs is where experimentation meets execution. We're a research-driven innovation lab focused on designing intelligent systems that respond to the real world in real time. Our work blends AI, remote sensing, simulation and systems thinking to help industries adapt faster, operate smarter, and unlock new frontiers of value."

CASE STUDY

Eluxevo

Decarbonising homes with AI-powered heating system software

Currently, emissions from residential buildings continue to come mainly from fuel combustion (the burning of oil and gas by boilers for heating and hot water) and electricity use (for lighting and domestic appliances). However, the pace of energy efficiency upgrades to homes is slow, and heat pumps are more expensive to install and operate than traditional gas boilers.

Eluxevo is a UK-based start-up that is developing an AI-enabled home heating and lighting system, using both hardware and software to optimise energy use and decarbonisation. Its sensors collect and analyse data from different areas of the home to provide heat and light only where they are needed, reducing energy consumption and costs. The solution is compatible with existing systems (where users are not able to change them or would prefer not to), and costs less than a heat pump to install.

Funding and training

Eluxevo received Innovation Vouchers from the Hartree Centre, enabling it to build a team of AI and software developers and develop and test its cloud-based software design with existing hardware (sensors, actuators, heating systems) currently available on the market.

The startup's team also took advantage of BSI's AI Management Practitioner course, increasing awareness and use of AI-specific terminology, establishing a baseline understanding of best practices to improve their software's credibility and trustworthiness, and understanding key considerations relating to stakeholder assessment, governance, and data security.

> "It opened my eyes and got me thinking about how we incrementally build our processes and methodologies. How we start to assess our stakeholders, the data, and risks... to ensure we are in a good place as we progress and that we build credibility and have done our due diligence when we want to interface with bigger companies and users in potentially different jurisdictions."
>
> **Maximillian Smith**
> Founder and Managing Director, Eluxevo

Support with ISO 27001

Eluxevo were keenly aware of the amount of information the firm deals with in the R&D of its AI-powered heating system software, and associated potential risks, and successfully applied for consultancy support on ISO 27001 from BSI's Digital Trust Consulting unit. This included a tailored one-day workshop and a high-level organisational gap analysis against ISO 27001's requirements.

For Eluxevo, this resulted in an increased awareness and understanding of the information security risks within its current R&D activities, and helped them to identify the actions and priorities for mitigation, as well as the policies and processes to build into their workflows.

> "The support and ISO 27001 itself helped us to focus on the here and now and draw our attention to current areas of exposure in the early stages of our R&D and information security risks that we weren't previously aware of or had thought about."

Outcomes and next steps

The Eluxevo team now reviews its practices weekly, resulting in the formal conceptualisation of the software proposition and its risks. They are reviewing information assets, access policies and asset registers, and putting in place new policies, practices, and frameworks to help reduce risk, in line with BSI's recommendations.

Eluxevo's goal is to be able to offer their own modular system for domestic users, and then for commercial buildings. They are looking to make their AI-enabled software available as a service (such as to heating system manufacturers) and are working towards their ISO 42001 and ISO 27001 accreditation.

CASE STUDY

Carbon Rewild

Providing deeper and more trusted biodiversity insights

According to **UK Government figures**, nearly nine out of ten British citizens say that protecting the environment is important to them. A key challenge for many farmers and landowners is in meeting **government-led expectations** (and in some cases a statutory requirement) to increase biodiversity on their land and improve the UK's natural environment. A key aspect of this important work is accurately measuring biodiversity and understanding where improvements are being achieved.

Solving the challenge of consistently monitoring biodiversity

Improvements in environment and biodiversity are notoriously difficult to measure. Unpredictable weather and large geographic areas make it difficult to collect the vast amount of data required for efficient and repeatable analysis.

Carbon Rewild was founded to improve the way in which wildlife is monitored and biodiversity is measured. After experimenting with several different technologies, the company launched their end-to-end bioacoustics monitoring service, which uses AI to identify bird and bat calls.

Their audio recorders are designed and produced in-house and shipped direct to customers. The devices are easy to set up, and after either a one-month or three-month monitoring period, the customer ships the recorder back to Carbon Rewild. The Carbon Rewild team then uses AI to analyse the recordings and produce a report. This report identifies the bird and bat species recorded and details the activity of each throughout the survey period.

This repeatable model, which always uses the same recorders, the same survey parameters, and the same AI analysis techniques, has enabled farmers and landowners to confidently demonstrate improvements in biodiversity over time.

Improving differentiation using AI

Carbon Rewild joined BridgeAI's High Growth AI Accelerator, enabling the team to build industry connections and further develop their proprietary AI models. These new models can differentiate between the different call types of a bird species, enabling analysis of its behaviour – particularly breeding behaviour – rather than simply just confirming its presence. This additional level of insight is a crucial link to understanding the ecological health of a landscape.

Through the BridgeAI programme, having access to industry professionals enabled the Carbon Rewild team to establish the customer need for new and improved AI models, giving them the confidence to accelerate development and release. Conversations with experts also helped the company to refine the product market fit for new and existing products, realising more benefits for farmers and landowners.

Just as importantly, BridgeAI's mentorship resources have played a valuable role in helping the Carbon Rewild team to develop their business model and chart the company's future course.

"The opportunity to join the BridgeAI High Growth Accelerator came at an important time in the growth of our business. Previously we had a stable product that was organically growing, and lots of new ideas of where to take the business.

The accelerator enabled us to get some of those new ideas out there and accelerated their route to market. In fact, we hope to release one of the new AI models in the new year. Further supporting farmers and landowners to make nature positive decisions and improving the natural environment for all of us."

Richard Howard
Director and Co-founder, Carbon Rewild

CASE STUDY

Turley

Using AI to streamlining environmental impact assessments in construction

Turley is a UK consultancy that provides expert guidance and management for all types of development projects in the UK, ensuring assessments are proportionate, robust, and reliable.

The process of preparing environmental impact assessments is labour-intensive, requiring the identification of relevant projects, collection of multiple technical reports, and analysis of their findings to assess the combined environmental impact. This process can be streamlined by automating data extraction and summarisation using AI – this would alleviate the need for Turley to manually retrieve vast amounts of information from multiple documents to prepare environmental impact assessments.

Creating a PoC for data gathering

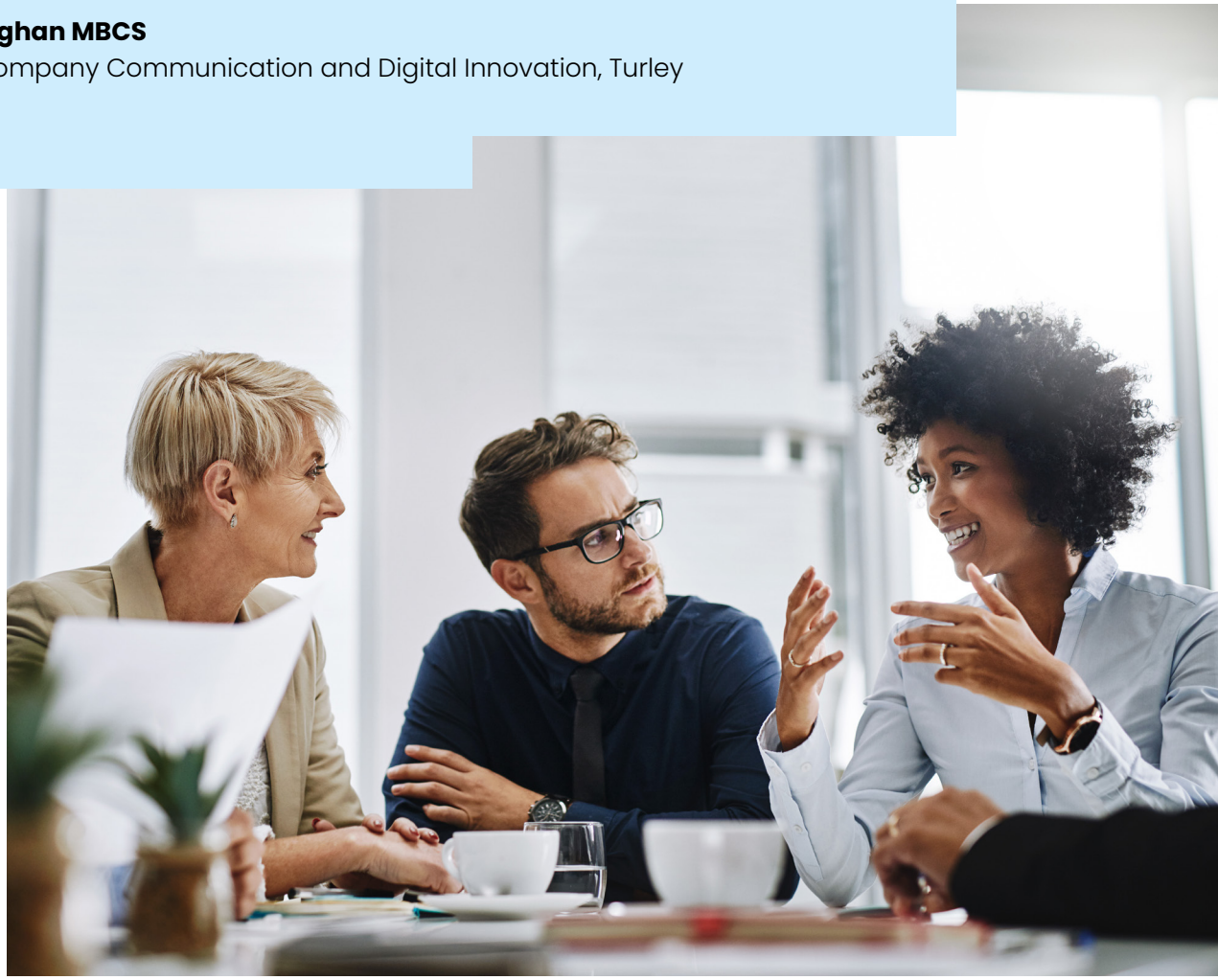
With support from a £15 000 Innovate UK BridgeAI Innovation Voucher, Turley was able to access the expertise of AI scientists at the Hartree Centre. Through this collaborative opportunity, they were able to develop a prototype chatbot interface that helps them extract data from text in PDF documents.

By combining various machine learning technologies and coding techniques, the Hartree Centre's AI scientists implemented data processing, storage and retrieval, and integrated large language models to build a chatbot interface. This combination of technologies led to the successful development of a proof of concept for effectively accessing data from PDF documents.

With this prototype, Turley can now quickly extract relevant information from lengthy PDF documents, allowing them to focus on preparing cumulative effects assessments and providing strategic advice to clients.

"AI isn't a magic wand. While powerful, it requires careful development to achieve meaningful results, as we've come to understand through our collaboration with the Hartree Centre."

Carol Maughan MBCS
Director, Company Communication and Digital Innovation, Turley



The collaboration has strengthened Turley's understanding of AI, benefitting both individual growth and organisational development.

Looking ahead, options for Turley include upgrading the prototype to process images and tables, further boosting productivity, enhancing consultancy services, and supporting compliance with environmental regulations in construction.

CASE STUDY

Low Carbon Impact

Using AI insights to reduce transport emissions

Transport produces around a quarter of the UK's greenhouse gas emissions. Operators in this sector face growing pressure from customers and regulators to measure, report and reduce their environmental impact. Yet for many, especially small and medium-sized businesses, knowing where to start and how to cut emissions in a commercially viable way, remains a major challenge.

Low Carbon Impact is dedicated to tackling this gap. Its AI platform highlights where emissions reductions can be made, and its network of experienced decarbonisation advisors turn these insights into clear, practical actions. The result is tailored, actionable plans that help operators cut their carbon footprint while staying competitive.

Through BridgeAI's Independent Scientific Advisor offer, Low Carbon Impact was matched with AI systems expert Professor Tom Jackson of Loughborough University, whose 20-year-plus research career has included pioneering work on digital decarbonisation.

> "The challenge was making sure their LLM produced meaningful results… For me, [Low Carbon Impact's] combination of strong technical ability, openness to new ideas, and a clear business focus made them a great company to support through the Independent Scientific Advisor offer."
>
> **Professor Tom Jackson**
> Loughborough University

Over a series of advisory sessions, Tom worked closely with the team at Low Carbon Impact to assess their technical approach and provide both strategic and hands-on guidance, and one of the most valuable interventions concerned Low Carbon Impact's use of large language models and generative AI.

"As a startup operating in such a fast-moving environment as AI, what matters is having your own *Turingista* to challenge you and keep you honest on your progress against the market and the evolving technology.

Working with an ISA has been invaluable for us. Tom helped us think differently about how we collect, process and present data so that it delivers real value to our customers. It's accelerated our technical progress, but more importantly it's given us the confidence that we're building something robust, scalable and fit for the market. For a young business like ours, that's a huge advantage.

A big takeaway from our sessions with Tom was learning that the quality of the inputs to our platform was a priority ahead of the intricacies of the perfect prompt. That really shifted our approach, and instead of chasing marginal prompt gains, we've focused on the embedded quality of our platform to help give us the most compelling outputs. That has probably saved us about 12 months of company time, which is hugely valuable for a small business like ours."

Nick Allen
Co-founder and CEO, Low Carbon Impact

Tom has also helped Low Carbon Impact to expand its AI network, and an introduction to the Hartree Centre led to an Innovation Voucher that gave the team access to advanced computational resources and technical support to help understand the parameters of a data quality strategy.

Looking ahead, Low Carbon Impact aims to extend its platform into new markets and industries, helping accelerate the journey towards net zero in the UK and beyond.

CASE STUDY

Kaiasm and Avantra

Context-aware agentic AI for justifiable enterprise decisions

Agentic AI systems promise autonomous operation, advanced decision-making and adaptability. This allows them to tackle complex goals with minimal human supervision or intervention.

LLMs are widely used for creating popular solutions but often lack the institutional context necessary for effective enterprise deployment. Traditionally, creating this context is labour-intensive, demanding significant manual effort in data preparation and knowledge structuring. There is an urgent need for agentic AI decisions to be inherently justifiable, fully inspectable, and easily accessible to both experts and non-specialists.

Kaiasm, a UK-based AI company, has collaborated with **Avantra** to bridge the gap between enterprise data, AI, and human operators by integrating their technologies. Kaiasm's OntoKai, a sophisticated knowledge orchestration and visualisation platform, has been integrated with Avantra's AIR to harness agentic AI capabilities within enterprise resource planning (ERP) systems. This combined solution has demonstrated successful application across diverse sectors.

Throughout the collaboration, Kaiasm has benefited from sustained engagement with BridgeAI. They joined Innovate UK's Global Business Innovation Programme in Singapore, and the Turing Way Practitioner's Hub, as well as receiving support from an Independent Scientific Advisor to explore ethical considerations, new markets, and knowledge sharing.

> "The support from BridgeAI and The Alan Turing Institute has been invaluable, covering AI ethics, Diátaxis training, and introducing us to the wider AI ecosystem in the UK and Singapore. We have met academics, enterprises and AI practitioners.
>
> It gave us a framework within which we could demonstrate how giving AI systems the proper institutional context and knowledge structure can produce accurate, trustworthy partners in enterprise decision-making. Not replacing human expertise, but amplifying it. We're showing how we can all turn the promise of agentic AI into a practical reality for enterprises."
>
> **Liam McGee**
> Chief Scientist, Kaiasm

CASE STUDY

FarmSmarter

Bringing AI-power to small-scale farming in Africa

FarmSmarter addresses critical constraints facing smallholder farmers across the Global South – particularly in West Africa, where low digital literacy, limited extension support, climate stress, soil degradation and crop disease **significantly reduce yields**.

Globally there are more than **600 million smallholders** who depend on farming and lack access to consistent agronomic advice, finance or efficient market channels. Most rely on tradition, word of mouth, or infrequent contact with NGO extension workers for guidance. This limited access to agronomic knowledge leads to crop losses at every stage, from seed selection to harvest, while climate change intensifies vulnerabilities. Without reliable data, records or tools, smallholders also struggle to access farm finance or meet export standards, restricting both income and resilience.

Offline support on mobile devices

FarmSmarter's AI-enabled mobile platform transforms a low-cost smartphone into a practical agronomic support tool. With an offline-first design, visual navigation and on-device disease detection, the platform bridges literacy and connectivity gaps.

Through the platform's 'AI Crop Clinic', farmers can photograph crops and receive instant diagnosis and advice, helping prevent disease spread and improving yields. Farm activity logs and localised climate-smart recommendations democratise access to expert knowledge previously available only to commercial farms or extension officers.

Tackling wider issues for the sector

FarmSmarter's aggregated, anonymised farmer data generates real-time disease incidence maps to support government and commercial decision-making. Soil, crop and activity data improve insurance modelling and input optimisation, while fertiliser and pesticide application advice can reduce costs and emissions. The integrated marketplace links growers with suppliers and buyers, extending their reach beyond roadside markets and supporting more efficient, transparent value chains.

Long-term engagement with BridgeAI

FarmSmarter's engagement with BridgeAI has been central to its growth. Support began with tailored technical advice from the Alan Turing Institute, Independent Scientific Advice, and Innovation Vouchers that enabled collaboration with the Hartree Centre. FarmSmarter was able to explore new approaches to its Crop Clinic, including advanced image annotation pipelines and state-of-the-art annotation methods – this led to an Innovate UK feasibility grant to assess deep active learning (DAL) for future AI model development. The outputs of this work are now embedded into FarmSmarter's long-term AI roadmap, strengthening its competitive edge and underscoring the importance of high-quality in-house data.

FarmSmarter has also contributed to the BSI Bias in AI Standards research project, and through the BridgeAI High Growth Accelerator, FarmSmarter is collaborating with Nestlé to develop cocoa disease recognition models and a disease incidence tracker. A BridgeAI HPC voucher has accelerated model development and testing for this proof-of-concept work.

Participation in BridgeAI has significantly raised FarmSmarter's profile with industry and investors and validated the company – not only as a tool for smallholders but also as a valuable data partner for global supply chains. The team is now preparing for international commercial deployment, planning an investment round, and exploring future collaborations with major crop producers.

> "Overall, the BridgeAI programme of support has been invaluable to FarmSmarter. The combination of access to expertise, resources and public platforms has given us a real boost in preparing FarmSmarter for our international commercial launch, and we have built some great relationships with the various providers and advisors."
>
> **Paul Coker**
> CEO, FarmSmarter

CASE STUDY

EYYA

Enhancing train maintenance with AI-powered condition reporting

Keeping trains clean and in good condition is essential for safety, passenger satisfaction and efficient operation, yet inspections are still often manual, subjective and time-consuming. UK startup **EYYA** is using AI to change that.

With guidance from a BridgeAI Independent Scientific Advisor (ISA), the team is developing technology that can automatically detect dirt, scratches and graffiti on train exteriors. EYYA's TRACK system captures real-time images and video as trains pass through key inspection points, presenting the results through intuitive dashboards that give rail operators a clear, live overview of each train's condition.

TRACK is now being piloted at a major rail depot in London, capturing over 4 000 videos of passing trains per month. The team's AI and machine learning specialists are developing a series of deep-learning models that will process this footage to produce cleanliness scores and detect damage.

Early models showed promise but faced limitations – for example, graffiti detection performed well, while scratch detection was much weaker due to an imbalanced dataset.

ISA support improves performance

As EYYA's assigned ISA, Professor Diwei Zhou of Loughborough University was able to help.

> "Professor Zhou gave us really practical detailed advice. She suggested technical improvements such as artificially generating more scratch images – a process known as data augmentation – as well as refining our image labelling process, and splitting the graffiti and scratch models to avoid a phenomenon called overfitting, in which a model becomes too closely aligned to its training data. We have already implemented many of these suggestions, which has significantly improved the performance of our models."
>
> **Evelyn Wu**
> Machine Learning and Software Engineer, EYYA

"What stands out about EYYA is their readiness for AI adoption. They know exactly what they want from AI, and they have a team with the right mix of expertise and a strong willingness to put guidance into practice. Their work is not only commercially valuable – it also contributes positively to society."

Professor Diwei Zhou
Loughborough University

Diwei's support has helped EYYA move from feasibility to deployment and has strengthened the company's ability to engage new markets. The EYYA team is already exploring how their technology could be used to assess the condition of ambulances in NHS depots, potentially reducing downtime for critical emergency vehicles. And EYYA's long-term, international commercial partnership with the Orange Train Wash system means there is scope to roll out the system to hundreds of train depots in the UK and overseas.

Working to ISO 42001

EYYA has also received support from BSI's Digital Trust Consultancy unit, who undertook a review of the organisation's approach to the management of AI, including a high-level gap analysis of the start-up's approach to ISO 42001.

BSI's consultancy support has elevated EYYA's awareness and understanding of the standard, including in terms of its benefits, and provided the start-up with clarity on the steps it will need to take to become compliant.

"Using ISO 42001 and working towards certification will benefit us as an organisation by increasing our knowledge, confidence, and competence in how we manage our AI systems and ensure we do so in a more structured and professional way. It will also give us credibility with both existing and potential clients."

Dr Niazy Kioufy
CEO, EYYA

CASE STUDY

Planarific

Using AI to accelerate sustainable home improvement

The UK has set a target of reaching net zero carbon emissions by 2050, which requires a major reduction in energy use and emissions from buildings. Upgrading existing housing stock to become more energy efficient is a significant challenge, **with over half of UK homes currently scoring D or lower in EPC ratings**.

Currently, retrofitting is a slow and expensive process, with inspections and assessments requiring multiple site visits and bespoke designs. AI technologies have the potential to transform this process and accelerate the UK's path to net zero.

Planarific is a university spin-out founded in 2022 which is developing a spatial intelligence platform that makes retrofit planning faster and more energy efficient by using drones and user-collected imagery to capture property data. This information is then processed using computer vision and AI, converting point clouds into high-fidelity, semantically enriched 3D models of buildings.

The building models provide quantities and geometry up-front, so that site conditions and property layouts can be clearly understood before work begins. Using this data, retrofit systems can be manufactured in kit form off-site, at volume and scale. This reduces costs and enables faster on-site assembly compared to traditional retrofit methods.

Planarific also clusters houses according to their shared characteristics, so that retrofit solutions can be designed once and applied across multiple homes, instead of a new bespoke design being created each time. By identifying hundreds of houses within the same area that share similar requirements, the company enables economies of scale in both design and manufacturing.

BridgeAI support enables scaling

Planarific participated in the BridgeAI High Growth Accelerator programme, working with industry experts from Buro Happold in the retrofit sector and taking part in expert-led workshops on responsible AI, business and innovation.

Collaboration with these experts provided open-minded advice, industry validation, responsible AI knowledge, and networking opportunities that supported the advancement of Planarific's retrofit solution. Introductions made by Buro Happold led to Planarific finding partners for future opportunities.

After BridgeAI's support, Planarific is now applying its platform to large scale social housing retrofit projects, including Thames Freeport, and developing proposals with Cambridge City Council for the private rented sector.

Future plans include expanding into maintenance, home improvements, and providing data services for financial institutions and insurers.

CASE STUDY

NASH Maritime

Improving river traffic control using data science and machine learning

The United Kingdom's waterways are vital transport routes for both commercial and leisure vessels, supporting local economies and playing a key role in national infrastructure. With increasing river traffic, ensuring safe navigation is critical to preventing collisions and protecting lives.

NASH Maritime, part of APEM Group, is a consultancy specialising in shipping, navigation and maritime risk. The company monitors vessel movements using CCTV, distinguishing between a wide range of watercraft, from canoes to cruise liners. To further enhance river safety, NASH Maritime sought to improve the accuracy of vessel speed measurements, enabling better identification of unsafe or non-compliant behaviour on the water.

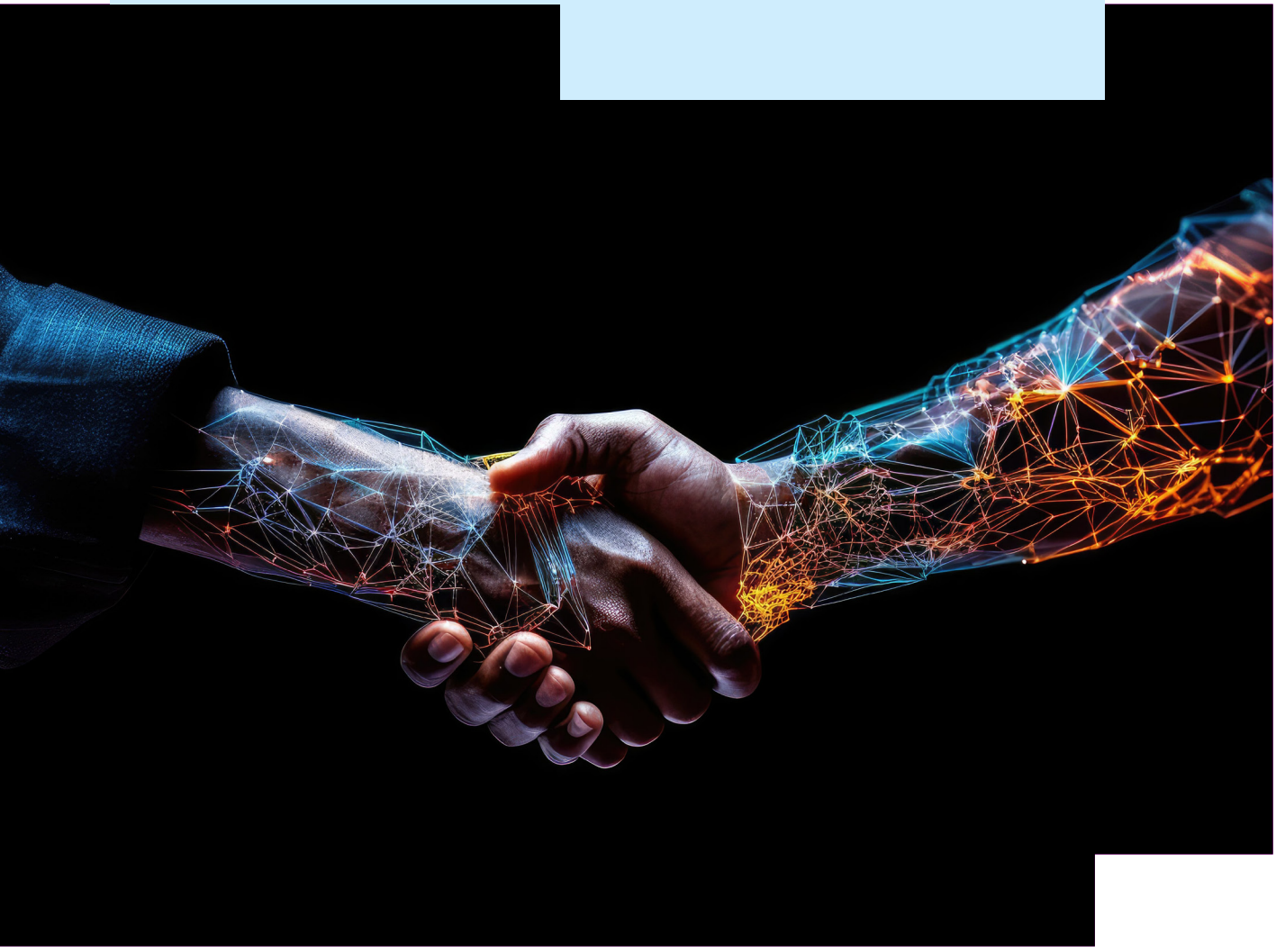
Through Innovate UK's £15 000 BridgeAI Innovation Voucher, NASH Maritime accessed the Hartree Centre's expertise in data science and machine learning to explore how artificial intelligence could be used to track vessel speeds more accurately.

Working collaboratively, Hartree Centre scientists applied advanced clustering algorithms to Light Detection and Ranging (LiDAR) data to map and analyse object movement. LiDAR technology uses pulsed light to capture precise 3D positioning information. By aligning LiDAR data with CCTV footage, the team developed methods to accurately locate and track moving objects, a process that can be adapted to monitor waterborne vessels and determine their speeds with greater precision.

This collaboration resulted in a proof of concept that provides the foundation for method development specific to NASH Maritime's river monitoring systems. The approach has accelerated the company's progress towards accurate vessel speed measurement, a capability that will significantly improve river traffic control and safety management.

"It has been a pleasure to collaborate with the Hartree Centre to deepen our AI knowledge and to accelerate our product and service development."

Chris Hutchings
Associate Director, Commercial and Innovation, NASH Maritime



By building this proof of concept, the Hartree Centre's data scientists have helped NASH Maritime advance its ability to apply AI and data science to real-world maritime challenges. The work has strengthened NASH Maritime's technical capabilities and will enable safer and more efficient management of the United Kingdom's busy waterways.

CASE STUDY

Mozaic Earth

AI-powered above-ground biomass monitoring for cocoa agroforestry

Measuring above-ground biomass in cocoa plantations is essential for regenerative agriculture, yet it remains technically demanding. Cocoa agroforestry systems are highly heterogeneous: trees vary in spacing, structure and management, and farms are **typically small, dispersed and difficult to survey consistently**.

Traditional ecological assessments require specialists on the ground, while generic remote-sensing approaches struggle to provide an accurate picture. These challenges create a gap between what the monitoring needs are for the local farmers' and everyone downstream in the supply chain, and what conventional methods can deliver today.

Mozaic Earth provides a practical, farm-level approach to above-ground biomass estimation that works reliably and at scale in the fragmented, real-world landscapes of cocoa agroforestry.

Using their mobile app, farmers, field staff or local community members capture images around areas of interest following a scientifically robust sampling strategy. Each image is geolocated, timestamped and tagged, forming a transparent and auditable record that flows directly into the Mozaic Earth platform. This allows above-ground biomass to be estimated using an AI-powered adaptation of angle-count sampling – a method long used by field ecologists but now achievable with a standard smartphone. The same imagery can be used to derive additional habitat indicators, such as condition and structural health, facilitating a broader understanding of risks and opportunities across thousands of sites.

The project with Nestlé, delivered through the BridgeAI High Growth AI Accelerator, focused on extending the suite of Mozaic Earth's AI capabilities into cocoa agroforestry. The collaboration allowed their existing tree detection models to be adapted and tested in a new habitat with very different structural characteristics. Alongside this, they began trialling photogrammetric digital twins, to better characterise stand structure and support more nuanced biomass assessment.

BridgeAI played an important role in enabling this work. The programme, in collaboration with Nestle's teams, facilitated direct connections with field teams in Côte d'Ivoire, helping Mozaic Earth onboard local data collectors, refine protocols and test the workflow under genuine operational constraints. This real-world grounding accelerated model refinement and demonstrated that farmer-led image collection can provide the consistency and coverage needed for credible biomass reporting across dispersed supply chains.

The collaboration now sets the foundation for scalable, cost-effective ecological monitoring within cocoa production systems. It has strengthened Mozaic Earth's capabilities into tropical agroforestry, deepened relationships with supply-chain partners and created pathways to extend this approach to other crops and regions. As the company moves towards delivering an integrated, audit-grade nature intelligence platform, the work completed through BridgeAI is helping unlock new opportunities to support regenerative agriculture and transparent audit-grade carbon reporting at scale.

> "It was a hugely valuable experience and an important step in Mozaic Earth's development. Through BridgeAI, we were able to work closely with the right partners and environments to strengthen our technology, build meaningful industry relationships and accelerate our progress towards delivering AI-powered, farmer-led ecological monitoring at scale."
>
> **James Hirst**
> Founding Engineer, Mozaic Earth

CASE STUDY

Imminent-XR

Making musicals in the metaverse: building AI-assisted live performances in VR

With the use of GenAI becoming more prevalent, the creative industries are finding ways to adapt to the emerging toolsets and ethical implications that come with using them – such as copyright and ownership. **Imminent-XR,** founded as the COVID-19 pandemic was closing theatres, combines GenAI tools with existing VR and gaming technology to produce virtual theatre for the audience of the future.

Contributing to the Practitioner's Hub

Operating at the cutting edge of performance technology, Imminent-XR has brought curiosity and expertise to the Turing Way Practitioner's Hub – a space for exploring how Gen AI, VR, ethics, and performance come together – and how Imminent-XR might approach both the challenges and opportunities presented by this confluence.

Not only did Imminent-XR contribute to the Practitioner's Hub, but they also spent 6 months delving deep into ethical considerations arising from the growing use of GenAI in creative spaces, and how these intersect with existing challenges around copyright and ownership in the arts.

Combining practical workshops on systems thinking, stakeholder management, and roadmapping alongside knowledge exchange sessions with peers helped Imminent-XR to develop their own approaches to tackling these challenges with their performers and producers.

"Participating in The Alan Turing Institute's 2025 SME cohort of Experts in Residence has been a transformative experience for Imminent-XR....

Through the cohort, we gained invaluable insights into the ethical implications of the use of Generative AI for making digital twins of human performers and were able to address issues of establishing digital provenance for our creative output, and uses of LLMs in the design and construction of our Virtual Music Theatre Productions.

The Alan Turing Institute's emphasis on transparency, open-source principles, and ethical precepts has informed every aspect of our work, from the initial design stages to the final production. Their comprehensive approach to the ethical use of AI will encourage us and other companies in the Creative Sector to ensure that our virtual productions are not only innovative but also responsible and inclusive.

Companies are having to embrace the benefits and drawbacks of Generative AI at speed, and the support and resources provided by the Turing have enabled us to lay the foundations of an ethical framework for the uses of AI in all our creative practices."

Mary Stewart-David
Creative Producer, Imminent-XR

Since participating in the second Practitioner's Hub cohort in 2025, Imminent-XR has contributed to responses to the government consultation on text and data mining around copyright and uses of Gen AI for performance, and has joined an Innovate UK Ethics Advisory Group. This has enabled them to influence policies that will impact the future trajectory of AI in the creative sector.

Imminent-XR is currently focused on implementing technological solutions for protection against unauthorised data-scraping, and on developing their proof-of-concept virtual theatre space by integrating 'chatbot performers' in VR. They are also evaluating a new AI-powered system for converting 2D video to glasses-free 3D video for home entertainment systems of the future.

CASE STUDY

Foods Connected

Enabling data-driven productivity and efficiency

As a high-volume, low-margin sector, agri-food depends on supply chain efficiency to maintain competitiveness. In recent years, businesses have accelerated the digitisation of traditionally paper-based processes, streamlining operations and improving data capture. AI is now becoming a key enabler, unlocking new efficiencies, optimising resource use, and strengthening long-term performance.

Foods Connected provides one of the sector's leading digital platforms, replacing manual record-keeping with an integrated suite of tools to manage quality, safety, compliance, workflows, procurement, trading, and planning. Through BridgeAI funding, they collaborated with **Finnebrogue** to develop a generative AI chatbot that allows its platform users to query complex documentation in natural language and receive immediate accurate answers. This dramatically reduces the time spent searching multiple specifications, boosting productivity and resilience across the supply chain.

Building on baseline data collected by **Queen's University Belfast** (QUB), Finnebrogue also collaborated with **Bia Analytical** to pilot a complementary AI-driven model for rapid determination of soybean origin, using spectroscopy, chemometrics, and machine-learning techniques. Combining digitisation with AI-enabled querying and verification, the solution tackles long-standing challenges of data fragmentation, regulatory compliance, and manual workload, providing agri-food businesses with tools to operate more efficiently and sustainably in an increasingly regulated market. The project has successfully demonstrated AI's role in efficiency, environmental accountability and data validation.

The PoC has reduced data-retrieval times from hours to seconds, with early users reporting faster compliance checks, higher productivity, and improved decision confidence. The collaboration also showcased how AI can support EU Deforestation Regulation (EUDR) compliance by verifying soybean origin, reinforcing sustainability credentials across the sector.

Foods Connected has joined the BSI BridgeAI Standards Community, engaging with more than 500 SMEs to explore AI governance, data standards, and innovation management tailored to SME needs.

The value of BridgeAI

Participation in the BridgeAI programme was pivotal to Foods Connected's AI journey. The funding provided by Innovate UK, and expert guidance, and training from BSI enabled the company to embed advanced AI capabilities far earlier than planned, while de-risking experimentation for all partners. Through BridgeAI, Bia Analytical and QUB were also able to refine the soybean origin verification models, expanding datasets and validating portable and benchtop tests that will deliver greater supply chain transparency and informed decision-making.

> "BridgeAI has been transformational for Foods Connected. The funding and expert guidance gave us the confidence and resources to embed cutting-edge AI into our platform far earlier than we anticipated.
>
> The result is a proof of concept that demonstrates tangible benefits for our customers – faster insights, stronger compliance, and smarter decision-making. This experience has accelerated our AI strategy and positioned us to deliver even greater innovation for the agri-food sector globally."
>
> **Stephanie Brooks**
> Head of Research and Innovation, Foods Connected

Foods Connected continues to advance its AI integration, including extending chatbot capabilities to additional platform modules and developing predictive analytics for supply-chain insights and automated risk alerts.

Together, these developments mark a significant step in transforming agri-food operations demonstrating how secure data, digitisation, and AI can work in concert to deliver efficiency, compliance, and sustainability at scale.

CASE STUDY

Tellme

Bringing stories to life – enhancing visitor attractions with AI

In 2024, the UK's leading attractions welcomed **157.2 million visitors**, but numbers continue to lag behind pre-COVID levels.

While many sectors have undergone rapid digital transformation, driven first by the pandemic and more recently by the boom in generative AI, visitor experiences have remained largely unchanged. Younger and more tech-savvy audiences expect to be digitally engaged, and are increasingly turning to tools such as ChatGPT to add another layer of information during their visits. However, these interactions lack the contextual nuance and storytelling that attractions work hard to deliver.

Tellme is a UK startup offering visitor attractions a new way to connect with their audiences by delivering AI-powered experiences. Visitors can use the Tellme web app to engage in conversational, personalised interactions that are shaped around their own interests. The app uses computer vision to quickly identify exhibits without any need for manual lookup, and acts as a virtual assistant that answers questions about them in any language.

Tellme provides a cost-effective way for venues to modernise their visitor offering and attract broader audiences. Alongside the visitor app, Tellme equips attractions with an AI content management tool that enables them to oversee and shape AI responses, ensuring accuracy and alignment with the organisation's brand and values.

Testing at Madame Tussaud's

Through the BridgeAI High Growth AI Accelerator for the Creative Industries, the Tellme team was able to work with project sponsor Merlin Entertainments, testing their prototype with visitors at world-famous Madame Tussaud's in London. These trials demonstrated how AI could enhance the visitor journey and provided early evidence of strong engagement levels, enabling the team to refine their product and accelerate its path to market.

"The accelerator came at a pivotal moment for Tellme. We were able to validate our ideas and gain the kind of feedback you can only get by testing directly with real visitors.

The mentorship and industry access provided by Digital Catapult gave us clarity on our strategy and the confidence to move forward faster than expected."

Eamon Byrne
Founder and CEO, Tellme

In trials, Tellme found that up to 89% of users engaged with the app throughout their entire visit. Since then, Tellme has raised pre-seed funding and secured a Creative Catalyst grant from Innovate UK. This funding is now enabling development of the full platform, which will soon be commercialised with partner attractions.

As AI technology advances, Tellme is well placed to lead the next wave of digital transformation in the attractions sector, helping venues remain vibrant, inclusive and relevant for all audiences.

CASE STUDY

Klimatise

Tackling buildings' energy waste with AI-driven comfort control

Non-domestic buildings account for more than 10% of global CO^2 emissions. In the UK, around **70% of the UK built environment's carbon footprint** comes from operational processes such as heating and cooling.

UK-based **Klimatise** was created to tackle this problem. The company is developing an AI-powered system to optimise heating, ventilation, and air conditioning (HVAC) in commercial buildings, with the aim of reducing carbon emissions while keeping occupants comfortable.

The software integrates with existing building management systems, automatically adjusting temperature controls to balance comfort and efficiency. Early pilots have shown savings of up to 30% in heating and cooling loads, even in new, supposedly efficient buildings.

From the outset, Klimatise planned to adopt AI into its climate-control platform. The approach would combine sensor data with feedback from building occupants, who could report how they were feeling using a simple web app. Machine learning models would then analyse this data to identify problem zones – for example, a meeting room that consistently feels too cold – and then recommend targeted temperature adjustments.

Like many early-stage companies, Klimatise lacked the in-house expertise to capitalise on the potential of AI. Through BridgeAI's Independent Scientific Advisor (ISA), they were matched with ISA Dr Ogerta Elezaj, Turing Fellow at The Alan Turing Institute and Associate Professor in Applied AI at Birmingham City University. Ogerta provided both strategic guidance and hands-on technical support, and involved Madiba Okolo, one of her MSc AI students in the project. Madiba contributed a major component of the product as part of their dissertation.

Together, they built a prototype multi-modal AI framework that combines building layouts, sensor readings and occupant feedback to optimise zone-specific temperatures.

Before this project, the Klimatise system was already good at adjusting overall temperature settings, but it could not make the most of data to pinpoint problem areas. Now it can identify and fix specific hot and cold spots within a building in a more sophisticated way, which makes the solution far more powerful.

"The company had a clear vision but needed help to implement it. By guiding their AI adoption work and bringing an enthusiastic master's student into the project, we were able to deliver a working prototype, not just concepts. That gives Klimatise something tangible to show potential clients, while also offering a talented student valuable real-world experience."

Ogerta Elezaj, Professor in Applied AI
Birmingham City University

Klimatise has several customers for full deployment of its software in large office buildings. With a functioning prototype in place, the team is now integrating the new AI features, scaling its solution, and onboarding more clients.

"Working with Ogerta and Madiba has been a huge boost. They've helped us solve problems we simply couldn't tackle on our own at the moment, and given us a whole new feature to take to market. Just as importantly, they've been a trusted sounding board as we make decisions about our product and our business. The BridgeAI ISA offer has made a massive difference."

Vic Tink
Co-founder and Chief Technology Officer, Klimatise

CASE STUDY

Papermill

Using AI to automate branding for white-label digital products and services

The need for brand implementation for white-label products and services is widespread. For SaaS platforms and creative teams, turning a client's website or guidelines into consistent UI themes and marketing assets typically requires manual extraction of colours, typefaces and layout rules – this work can be repetitive, error-prone and time-consuming.

Through discussions with users and potential customers, **Papermill** has identified an opportunity for automating the design extension and adaptation process using AI.

Their AI system, DesignAI, takes an organisation's homepage URL as input and – assisted by the latest technical advances in AI – conducts an analysis of elements such as colours, logos, fonts, white space, and overall style, as well as the content and sentiment of the website for the context of the business. The AI system then automatically generates a description of the company's visual identity. Templates for documents and other visual assets can then be created from this description using generative AI.

DesignAI can also automatically arrange design elements on a page, using generative modelling to produce well-structured layouts that reflect graphic design principles. It has a wide range of applications in sectors where automated design may be useful.

BridgeAI funding enables expansion

Through a BridgeAI competition, AI Solutions to Improve Productivity in Key Sectors, Papermill received a grant for £142 000, enabling it to expand capacity.

The company brought in an AI researcher and software engineer to accelerate model development and to collaborate with the Glasgow Innovation Hub, creating a working application of DesignAI that would automate brand extraction and white labelling for SaaS provider VeryConnect. The application is expected to reduce platform setup time from around two hours to under five minutes.

The Papermill team has also commercially licensed DesignAI components and released their BrandPop browser extension via the Chrome Web Store. They are continuing to develop agentic AI applications that build on DesignAI's core models, alongside broader commercial licences and partnerships to embed automated brand inference into design and SaaS workflows.

CASE STUDY

MapMortar

Accelerating retrofit planning

As the built environment is responsible for around 40% of global carbon emissions, retrofit projects are essential to meeting net zero targets. However, large-scale retrofitting is held back by the slow, manual process of building audits, where surveyors must classify facades and input data into energy modelling tools. This creates bottlenecks, particularly for landlords and local authorities with thousands of properties.

AI has the potential to revolutionise the audit process by automating classification and integrating data directly with urban building energy modelling (UBEM), enabling more accurate and scalable retrofit planning.

MapMortar has developed an AI-enabled workflow that automates facade classification using advanced computer vision techniques and integrates directly with UBEM. This allows building audit data to be rapidly collected and automatically processed, improving both efficiency and accuracy. Its seamless integration of AI with UBEM simulation reduces the manual burden of data entry and increases modelling capability.

Early pilots have indicated up to 40% productivity gains and significant cost savings in the audit process. This proof of concept has already been integrated into MapMortar's app, creating a tangible solution for customers seeking to scale retrofit planning across large portfolios.

Financial support from BridgeAI

With a feasibility study grant from BridgeAI, MapMortar developed and validated its proof-of-concept workflow and strengthened an industry–academia partnership with UCL to advance technical development. The grant also enabled the company to refine its commercialisation strategy, laying the foundation for future adoption.

The workflow has already shown strong results: a pilot with a major landlord expanded into a full portfolio rollout, while feedback from a local authority managing around 13 000 properties highlighted its value for social housing retrofits.

Early trials of MapMortar's solution have demonstrated productivity gains of up to 40%, as well as significant cost savings. New collaborations with local authorities and financial institutions underlined the technology's cross-sector potential.

CASE STUDY

Hoppa

Strengthening information security and client trust

Manual documentation management can be labour-intensive, time-consuming, and error-prone. It's often difficult for businesses to extract meaningful data, categorise it effectively, or maintain structured records, which can increase operational costs and slow down decision-making.

Hoppa provides data engineering and integration services for the built environment, helping clients to manage large volumes of information more effectively, gain deeper insights from their data, and improve compliance and operational efficiency.

Using AI and natural language processing (NLP) techniques, Hoppa's information management platform automates document processing and information management, generating structured catalogues and registers with minimal human intervention. This makes information management more efficient and cost-effective – one client company reported that information management was 100 times faster than using an offshore team.

The Hoppa team had been considering ISO 27001 certification but was unsure how to proceed. Through BridgeAI, BSI's consultancy support provided them with a rigorous, top-down framework for understanding and applying ISO 27001. This expert guidance provided the structure and insight Hoppa needed to establish a foundation for ensuring that future implementation of its requirements would be proactive and add value, rather than retrospective or procedural.

Making rigorous risk management consistent and scalable

Hoppa already had a number of robust information security measures in place. Following an audit, the BSI consultant provided the team with clear guidance on how to further improve these measures by conducting risk identification and mitigation more systematically and efficiently. These practical recommendations have enabled Hoppa to establish a structured and scalable approach to risk management, enabling it to consistently and rigorously identify, assess, and manage information security risks.

Providing external validation

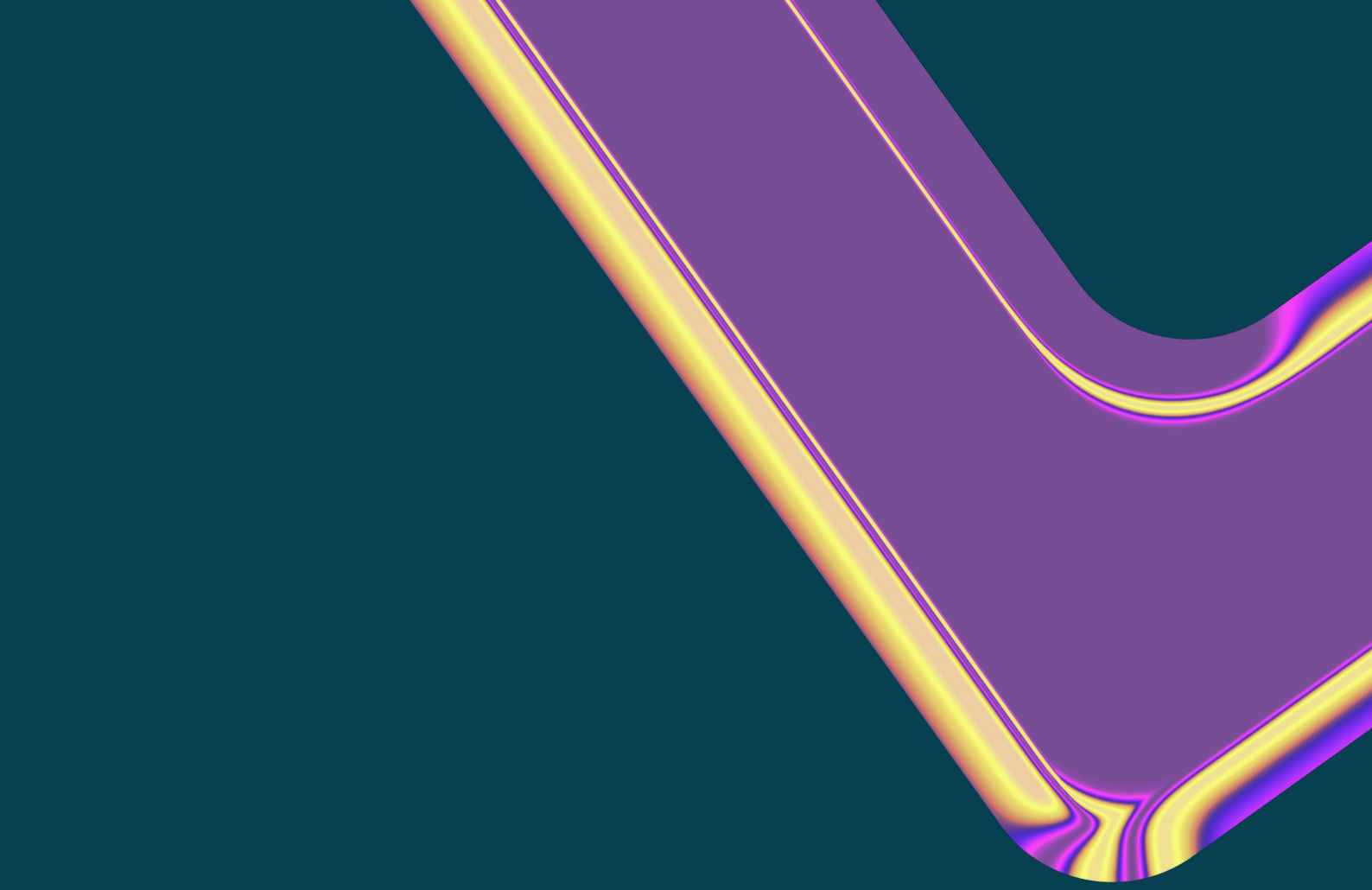
In addition to internal improvements, BSI's consultancy support provided Hoppa with external validation of its controls, substantiating the company's commitment to information security and continuous improvement. This helps to foster client trust in Hoppa's ability to securely manage sensitive information.

> "With the work that we do, strong information security practices are our license to operate. The consultancy support was a positive validation of our existing information security controls and demonstrates our customer commitment to learning and improving as an organisation."
>
> **Tom Goldsmith**
> CTO and Co-founder, Hoppa

Integrating ISO 27001

As Hoppa continued to grow the team plans to integrate ISO 27001 requirements and responsibilities into future job roles. BSI's support has led to a shift in the perceptions of ISO 27001. Once seen as no more than a compliance tool, the standard is now recognised as a strategic framework that drives operational excellence, resilience, and client confidence.

> "It was useful to have had the consultancy support, and we have learned a lot from it. We're very grateful, and we think it has been helpful.
>
> BSI's consultancy support validated that a lot of the controls around information security that we've got in place are strong and probably quite advanced for an organisation of our size. It also gave us some good strategies to start to reassess in a few months when we come to do another periodic review of this."
>
> **Tom Goldsmith**
> CTO and Co-founder, Hoppa

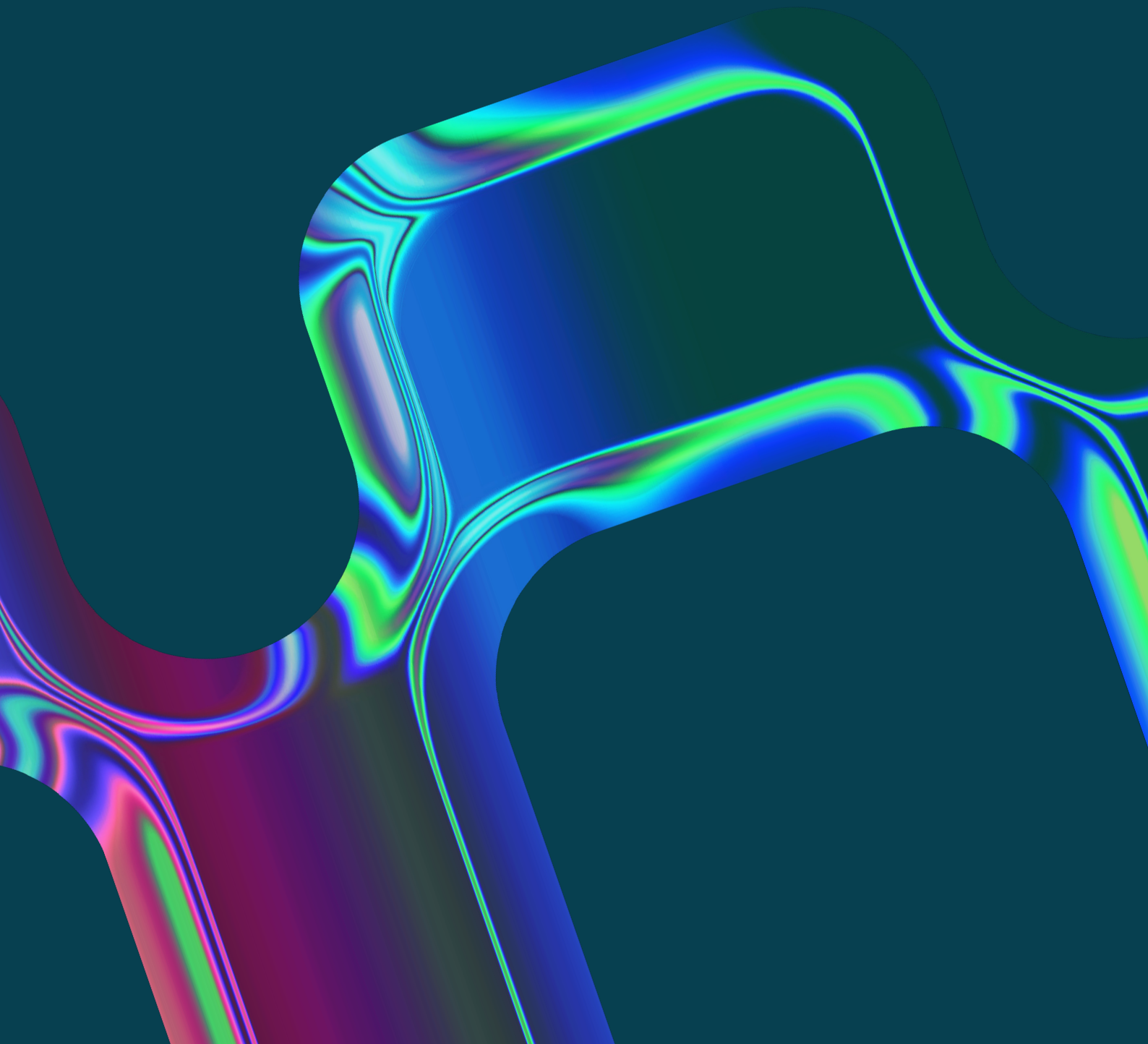


04

Conclusions and considerations

This report on BridgeAI's third year of delivery clearly evidences the programme's value in accelerating responsible AI adoption.

Over the past three years BridgeAI has helped SMEs and businesses to overcome systemic barriers to innovation, supporting them with funding, expertise, infrastructure, and skills development.



Overcoming systemic barriers to innovation

BridgeAI's achievements align closely with the ambitions set out in the UK Government's AI Opportunities Action Plan, which seeks to unlock the transformative potential of AI across the economy. The programme has contributed directly to this agenda by:

- Enabling businesses to experiment with and implement AI solutions tailored to sector-specific challenges
- Supporting the development of AI skills and competencies across technical and non-technical roles
- Promoting responsible innovation through standards, governance tools, and expert guidance
- Facilitating collaboration between industry, academia, and government to drive inclusive growth

Informing future policy

As the UK continues to build its leadership in AI, the cumulative insights from BridgeAI offer valuable lessons for future policy by identifying not only what has worked well, but also where further progress is needed. Key areas for consideration include:

Scaling beyond early adopters

While BridgeAI has reached thousands of organisations, many businesses remain at the margins of AI adoption. Future efforts could focus on deepening regional engagement and tailoring support to different levels of readiness.

Sustainability and commercialisation

Several funded innovations show strong potential but will require longer-term support to reach the market and deliver impact at scale.

Skills and leadership

There is growing demand for AI-related skills across all levels of business, including strategic leadership, operational delivery, and ethical oversight. This needs follow-through with relevant development pathways and curriculums, facilitated by collaboration across all levels of education.

Integration with wider policy

Stronger alignment with sectoral strategies, procurement pathways, and regulatory frameworks could help accelerate adoption and reduce friction for businesses. Stakeholder feedback also points to the value of more flexible funding mechanisms, clearer guidance on standards, and continued investment in shared infrastructure such as compute and data access.

Looking ahead

The BridgeAI programme is a strong foundation for future initiatives. It has shown that targeted, collaborative interventions can unlock innovation, drive productivity, and support the UK's broader ambitions for inclusive and responsible AI adoption.

As BridgeAI moves forward, it will aim to help AI companies scale by reducing the risks of first-of-a-kind deployments and co-developing applications that can be adopted across multiple customers and sectors. This will support buyers to adopt AI with confidence and enable companies to move beyond isolated pilots.

The insights gained through BridgeAI's first phase will inform a wider suite of future UKRI and Innovate UK programmes, helping to maximise impact for the UK AI landscape.

Acknowledgements

Digital Catapult

Jimmy Jarvis Lead for Policy and Strategic Engagement – AI

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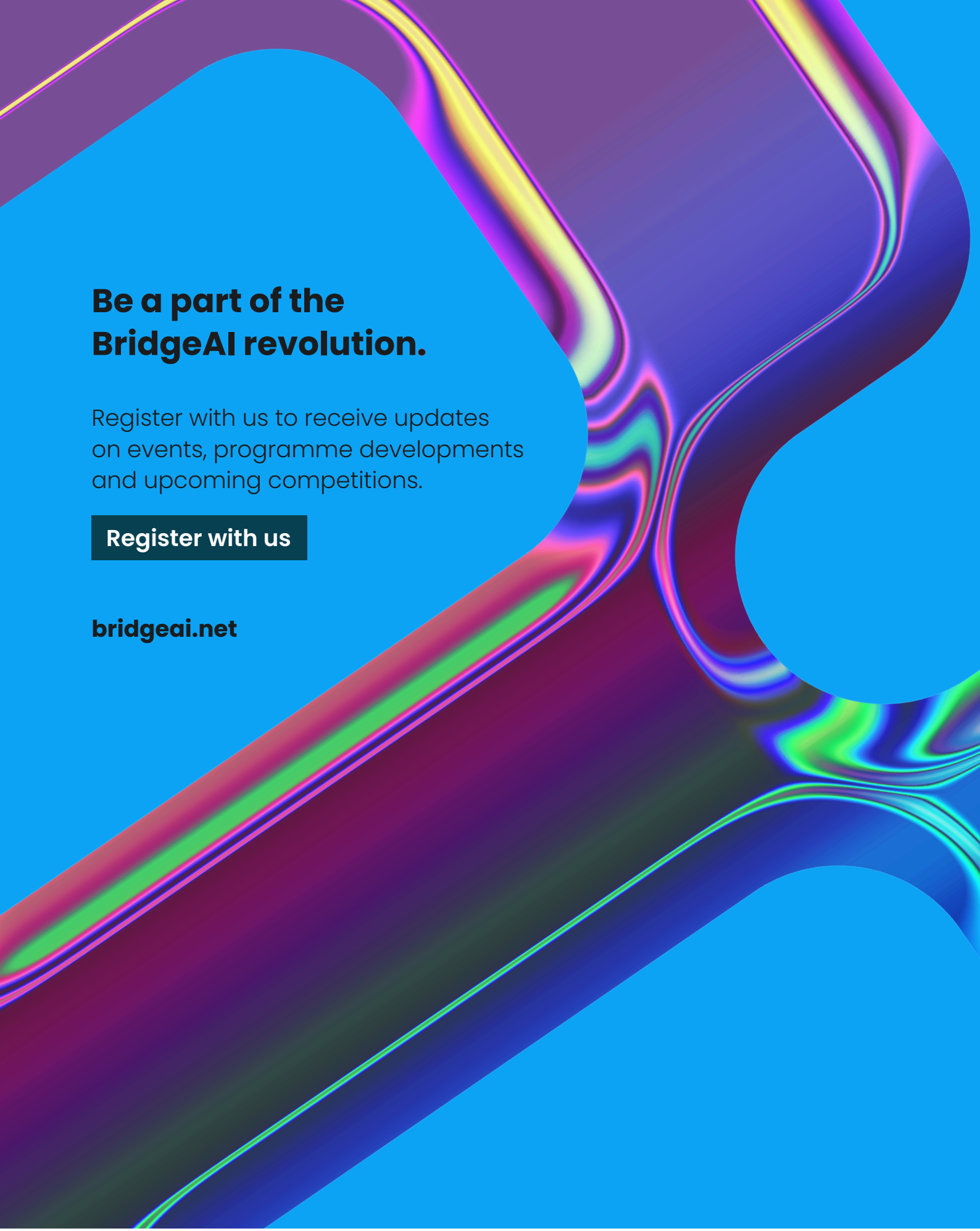

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