



**Specification  
for  
UKRI-3797 AI Skills Hub**



<b>Title of Request:</b>	<b>UKRI-3797 AI Skills Hub</b>
<b>Duration of Engagement:</b>	October 2024 - 31 <sup>st</sup> March 2026
<b>Required Commencement Date:</b>	October 2024
<b>Contract Price</b>	Initial period £4,166,666.67 ex VAT plus an optional extension up to £ 833,333.33 ex VAT and extension period 12 months

## 1. Introduction

Innovate UK, a part of United Kingdom Research and Innovation (UKRI), are in the process of delivering a programme to stimulate the adoption of Artificial Intelligence (AI) & Machine Learning (ML) technologies in lower-AI-maturity sectors of the UK economy. The BridgeAI programme, [BridgeAI - Innovate UK Business Connect \(ktn-uk.org\)](https://ktn-uk.org), will achieve its objectives by building an innovation network to stimulate both demand and supply side engagement, develop end-user driven AI technologies and address systemic barriers limiting adoption. One of these barriers is a skills gaps affecting the supply side and lack of understanding of technology affecting the demand side, both of which affect the ability to map business challenges to the right AI & ML technologies to solve these problems. The overall aim of the programme is to support the transition to an AI-enabled economy, capturing the benefits of AI innovation in the UK, and ensuring AI technologies benefits all sectors.

An independently run, self-sustainable skills hub can act in coordinating the activities required to address the current skills gap faced by industry. The main activities to be delivered by the hub include a systematic archiving of AI and data skills training providers and training material, promoting a more diverse workforce as well as acting as a central point for industry to both identify skills training opportunities as well as feedback on exact training needs. This would comprise a UK based resource, providing open access to archived training material, delivering an inclusive service and allowing UK business to leverage the wealth of material already available in the space.

Innovate UK are looking to procure a national AI Skills Hub, this could either be delivered in the form of a single supplier or a consortium with a lead supplier.

## 2. Aims & Objectives

Innovate UK are looking for a supplier to deliver an AI Skills Hub to UK business beneficiaries as part of a larger programme of activities that seek to stimulate adoption and diffusion of AI & ML in the UK. The skills hub will stimulate adoption by addressing one of the major barriers in AI adoption, identified by both government and industry surveys, as the gap in data and AI skills in the industry. Achieving this objective will have a positive impact on underperforming sectors and on UK productivity, ensuring AI benefits all sectors of the UK economy.

An independently run, self-sustainable skills hub can act in coordinating the activities required to address the current skills gap faced by industry. The main activities to be delivered by the hub include a systematic archiving of AI and data skills training providers and training material. The AI Skills Hub will embed the values of the skills value chain<sup>1</sup> and will align with and interface with parallel and tangential activities (e.g. [Workforce Foresighting - Innovate UK Business Connect \(ktn-uk.org\)](#)) outlined by the relevant authority in the setup phase of the project. The data skills training archive and gap analysis will be aligned to the AI skills for business competency framework<sup>2</sup> and the Skills Hub will act as a central point for industry to identify skills training opportunities, feedback on exact training needs and promote a more diverse workforce.

There are a number of key stakeholders in the UK, including government departments, Innovation Centres and Catapults that serve to shape the direction and adoption of AI in alignment with the National AI strategy. Representatives of such bodies sit on the BridgeAI Advisory Group providing governance over ongoing activities. The AI skills for business competency framework will be reviewed by the supplier throughout the lifetime of the Skills Hub and updated subject to review by the BridgeAI Advisory Group during the lifetime of the BridgeAI programme and by the national custodians of the document, The Alan Turing Institute, on programme cessation. This will place the UK at the forefront of international best practice for AI and data skills provision and delivery.

### Specific outputs and expectations

In delivery of the Skills Hub the supplier will:

#### Convene

- Build connections, nationally and internationally, both with and between AI & ML developers, industry, education, training providers and government. The Skills Hub will act as the focal point to:
  - Engage with industry and monitor and report to key stakeholders of industry skills gaps.
    - Industry engaged with should comprise an equal balance of micro, SMEs, and large organisations from all regions of the UK, covering the BridgeAI key sectors and cross cutting business functions. It would be expected that at least 500 organisations are engaged with to provide a granular report.
  - Articulate future skills needs, standards and qualifications associated with existing and emerging AI and ML technologies aligning outputs with the Workforce Foresighting Hub. The work should define complete pathways through the higher education sector and transition to business skills requirements. Articulate broad business skills needs, standards and qualifications associated with adoption and exploitation of AI and ML technologies for improved business productivity and identify gaps in qualifications/accreditation.
  - Engage with training providers including the Higher Education providers within the UK to inform about industry skill gaps and align future training programs with identified gaps aligned to the AI Skills for Business Competency Framework.
- Foster an ecosystem of technology partners to provide adopters
  - Access to readily available AI and ML tools
  - Access to a network of developers to support the development of new tools
  - Access to an AI talent pool to support recruitment requirements

#### Curate

- Curate an impartial national resource of AI & ML knowledge and training:
  - Research, curate and organise AI & ML knowledge and training courses that have been created in forms suitable for a range of learner groups.
  - Leverage opportunities from existing bodies, e.g. CDTs, RTOs
  - Support relevant assurance and accreditation organizations

- Curate an impartial national resource of knowledge and training designed to support AI & ML adoption for business:
  - Research, curate and organise AI & ML adoption for business knowledge and training courses that have been created in forms suitable for a range of learner groups.
  - Support relevant assurance and accreditation organizations

**Deliver**

- Create an online platform that provides:
  - systematic archiving of AI and data skills training providers and training material using a UK sourced resource to provide open access to material where possible.
  - information about AI & Data training courses. The platform will ensure all regions of the UK are supported and links to local and regional upskilling activities are identified and amplified.
  - Information about business and soft skills training courses that support the adoption of AI & ML. The platform will ensure all regions of the UK are supported and links to local and regional upskilling activities are identified
  - information for career development opportunities relating to AI & ML.
  - a framework for engagement for example an interactive online tool, allowing businesses to assess their training needs and partner appropriately to progress their AI and ML adoption.
  - An AI/ML talent map providing an accessible way of viewing the potential partnering opportunities
  - An AI/ML technology infographic which is regularly updated (6 months) and provides an accessible first point of engagement for industry to understand available technologies
  - Share good practice and lessons learned with other Innovate UK skills focussed investments through engagement with Innovate UK Talent & Skills Connect.
- Engage in outreach and other activities such as:
  - Allowing for hands on experience of implementation of AI & ML techniques in business relevant environments, e.g. hackathons or sector focussed workshops.
  - promoting AI & ML up-skilling and re-skilling opportunities.
  - Raising awareness of AI & ML.
  - Running small competitions to enable development of training against the gap analysis.
- Technical reports summarising:
  - Skills landscape review, gap analysis and roadmap
  - Training landscape review, gap analysis and roadmap

**3. Background to the Requirement**

Innovate UK is in the process of running a programme to stimulate the adoption of AI & ML technologies in lower-AI-maturity sectors of the UK economy. These sectors have been identified as; construction, transport and logistics, the creative industries and agriculture and food processing. It will achieve its objectives by building an innovation network to stimulate both demand and supply side engagement, develop end-user driven AI technologies and address systemic barriers limiting adoption, namely skills gap affecting the supply side and lack of understanding of technology affecting the demand side, both of which affect the ability to map business challenges to the right AI & ML technologies to solve these problems. By stimulating knowledge exchange between adopting sectors and AI developers and support R&D for the development of AI & ML solutions to address challenges and capture opportunities in these sectors the

<sup>1</sup> [The Skills Value Chain - HVMC \(catapult.org.uk\)](https://catapult.org.uk)

<sup>2</sup> AI Skills for Business: Draft Framework [Final\\_BridgeAI\\_Framework.pdf \(ktn-uk.org\)](#)

programme aims to increase adoption and diffusion of adoption laggards. Achieving these objectives will have a positive impact on underperforming sectors and on UK productivity, ensuring AI benefits all sectors of the UK economy.

Innovate UK, is seeking an *AI Skills Hub* to support UK companies access appropriate and relevant of AI & ML training, technologies and talent. This activity is part of a larger programme that supports adoption and diffusion of AI & ML technologies across a few target UK sectors.

The services that we are looking to procure fall under a single lot and the initial delivery period of the services will be from 2024 Q3 to 2026 Q1 calendar year. There is an opportunity to extend the initial contract period with a follow on period of 12 months. This will be decided at the end of the initial contract period.

Evidence for the requested activity:

One of the key barriers in unlocking the potential of AI & ML technologies to improve productivity across all sectors in the UK economy has been identified by a Department for Digital, Culture, Media and Sport (DCMS) funded research<sup>3</sup>, (as well as in a number of other surveys<sup>4,5,6</sup>), to be the lack of data and digital skills. In response to the need to understand this skills gap, DCMS funded and published research<sup>7</sup> to define, measure and investigate the drivers behind this.

The report estimates there are approximately 178,000 to 234,000 data roles to be filled, with 48% of businesses recruiting for such roles and 46% of businesses struggling to recruit roles that require data skills. The top 5 skills, businesses self-identify as having insufficient skills in, are *machine learning 28%, programming 24%, knowledge of emerging technologies and solutions 24%, advanced statistics 24%, data visualization 23%*. These hard data skills map directly to the AI skills gap identified in other reports<sup>4,5,6</sup> and are therefore a key barrier that needs to be addressed.

Employers highlighted “cost as one of the biggest barriers to data skills training” at 29%, as well as difficulties in finding relevant training with practical relevance to employees’ day-to-day job. Interestingly, universities were not identified as significant source of training, with only 7-14% of businesses surveyed utilizing university training courses.

The current estimated supply of data scientists from UK Universities is approximately 10,000 per year and as the report estimates that 80% of the 2030 workforce is currently employed, fulfilling the current and future gap could only be realistically addressed through up/re-skilling efforts.

There is evidence that some of the current skill gaps including programming, database management and data ethics, with importance to employers, will continue to be hard to address, as students continue to rate themselves as having poor performance in those skills.

Employers believe they are good in identifying skill gaps among their employees, and feel confident in sourcing training to address their gap. Large companies being more confident in delivering both above actions, as well as a preference in up-skilling their own workforce, compared to smaller companies who prefer to seek external support (outsourcing). Despite the importance of the gap in hard skills, employer’s priority is in addressing soft data skills, as it appears that training for soft skills is harder to find. In any case, the most difficult data skills to find training for are critical thinking (13%), leadership (12%), machine learning (10%), curiosity (10%), problem solving(9%), advanced statistics (9%), programming (9%), data processing (9%), data visualization (9%) and adaptability (8%). It is evident that what is left from the above list when one removes the soft skills, are core skills required for adoption and diffusion of AI & ML and this is a strong evidence for the need to provide support in helping employers who seek to train employees to address their needs. Apart from the high cost for accessing training, relevance to organization is another barrier to data-related training.

<sup>3</sup> [AI Activity in UK Business \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)

<sup>4</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1010745/EY\\_DCMS\\_Data\\_foundations\\_and\\_AI\\_adoption\\_in\\_the\\_UK\\_private\\_and\\_third\\_sectors.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1010745/EY_DCMS_Data_foundations_and_AI_adoption_in_the_UK_private_and_third_sectors.pdf)

<sup>5</sup> Business insights and impact on the UK economy: 9 September 2021,ONS

<sup>6</sup> [https://www.turing.ac.uk/sites/default/files/2021-09/ai-strategy-survey\\_results\\_020921.pdf](https://www.turing.ac.uk/sites/default/files/2021-09/ai-strategy-survey_results_020921.pdf)

<sup>7</sup> [Quantifying the UK Data Skills Gap - Full report - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

#### **4. Scope**

##### **In Scope**

The supplier will be expected to:

- Provide expertise in the delivery of the services required for successful implementation of a Skills Hub framework.
- Develop and provide a stakeholder map.
- Provide methodology to capture impact of services delivered to beneficiary organizations following completion of service via questionnaire or equivalent.
- Provide access to data and reporting relating to industry skills gap monitoring and training gap monitoring alongside a 6 monthly white paper to key stakeholders articulating industry skills gap and training gaps.
- Provide quarterly mandatory project reporting back to IUK including impact of services which must include the performance metrics outlined in the Annex A.
- Provide an EDI policy, a plan and a strategy for implementation relating to the service provision.
- Provide a resource plan giving detail of the personnel skills to be utilised in delivering the services.
- Provide and select appropriately accessible venues, ensuring coverage across all UK geographical regions covered by the NUTS1/ITL 1 definitions<sup>8</sup>, for delivery of any outreach activities for industry and training partner engagement.
- Provide access to any software licences if these are required for delivery of this service.
- Deliver a series of webinars and, if possible face to face roadshow events, outlining the services, benefits and anticipated impacts of the service.
- Make provision for pre engagement with beneficiary companies and training providers for preparation as required for successful delivery and uptake of the services.
- Provide and deliver a content and marketing plan; comprising for example of thought pieces, blog posts and info graphics to highlight relevant skills features to the community.
- Liaise with and ensure alignment with other tangential programmes identified by the authority.
- Provide a business sustainability plan identifying a potential source of funding or revenue stream to allow operation of the Skills Hub out to March 2034, beyond current period of agreement to March 2026

##### **Out of Scope**

Costs for capital infrastructure will not be covered.

Course content development.

##### **Potential demand over the initial period of agreement**

Innovate UK is seeking to invest up to a total of £4,166,666.67 (ex VAT) for the creation of a National AI & ML Skills Hub, with up to £1,470,000.00 (ex VAT) to support setup and operations during the 2024/2025 financial year and a further £2,696,666.00 (ex VAT) in financial year 2025/2026 to scale up delivery of services.

With an optional additional 12 month extension up to £ 833,333.33 ex VAT

##### **Period of agreement**

The initial contract period will be in place up to but not after March 2026 with the opportunity to extend for a further 12 months to be decided at the end of the initial contract period.

<sup>8</sup> [https://en.wikipedia.org/wiki/ITL\\_1\\_statistical\\_regions\\_of\\_England](https://en.wikipedia.org/wiki/ITL_1_statistical_regions_of_England)

## 5. Requirement

### Pre-award requirement

- Delivery methodology to achieve key objectives and if any additional benefits can be achieved
- Benefit capture methodology.
- Resource plan.
- Scaling capacity and cost efficiency.
- Risk log.
- Methodology to instil confidence to non-technical employees.
- Engagement plan to engage with and facilitate upskilling/reskilling of 500 organisations in the key focus sectors of construction, transport and logistics, the creative industries and agriculture and food processing in the first 6 months, in the following 12 months this would be expanded to 2000 organisations.

### Award requirement

- Framework setup and engagement with Innovate UK.
  - Estimated 3 days for pre-delivery planning meetings.
  - Estimated 1 day for agreement of delivery methodology.
  - Bi-weekly progress meetings during setup phase.
  - Following setup phase monthly progress meetings plus formal quarterly reporting meetings with presentation to support written report outlined below.
- Estimated 2 days for integration with Innovate UK and Innovate UK Business Connect programme delivery operations.
- Workshops/engagement activities for required number of beneficiaries and partner organisations
  - Estimated 1/2 day per workshop for pre-event meeting.
  - Feedback to Innovate UK captured benefits of beneficiaries post workshop completion.
- Estimated 1 day for close out meeting.

### Reporting Requirements

Mandatory project reporting will happen on a monthly basis via the Bridge AI project team with a formal written Quarterly Report covering:

- Technical progress
- Project management and timelines of delivery
- Impact and Performance Metrics outlined in Annex A
- Risk Register update
- Finances and forecast

Quarterly reporting on industry skills gaps and training gaps in the form of a white paper will be disseminated to the key stakeholder list.

**6. Timetable – Assuming start of provision date is October 2024**

Quarterly Review Meetings	16/12/2024
	17/03/2025
	17/06/2025
	17/09/2025
	17/12/2025
	17/03/2026

**Annex A**

**Minimal standard collection of metrics for reporting AI Skills Hub**

This document outlines the minimum set of metrics to be collected to facilitate reporting against project outcomes for the **AI Skills Hub** contract. The document is split into three sections a) Feedforward survey completed on registration to the Hub, b) Post intervention feedback survey and c) Outcomes mapped to anonymized metrics to be reported back to the contracting authority.

a. Pre intervention feed forward survey

The following data relevant to the programme should be collected as a minimum at registration to the Skills Hub alongside appropriate EDI metrics.

1. First name
2. Last name
3. Email address
4. Job Title
5. Organisation Name and company registration number (optional)
6. Company Postcode
7. Organisation size:
  - i. Micro (0-9 employees)
  - ii. Small (10-49 employees)
  - iii. Medium (50–249 employees)
  - iv. Large (>249 employees)
8. Which sector(s) does your organisation primarily operate in?
  - i. Agriculture and Food Processing
  - ii. Construction
  - iii. Creative Industries
  - iv. Transport including logistics and warehousing
  - v. Software/technology development AI/ML
9. Which statement best describes your organisation?
  - i. We are a UK SME with the potential to exploit AI technologies and systems
  - ii. We are an entity developing AI techniques and systems
  - iii. My organisation does both
10. What is the level of AI maturity of your organisation?
  - i. Aware (Interested in AI)

- ii.Active (AI in experimentation)
- iii.Operational (AI in production)
- iv.Systemic (AI is pervasively used for digital process)
- v.Transformational (AI is a big part of the business DNA)

b. Long Term feedback survey

The following data should be collected as a minimum following 6-12 months of interaction with the AI Skills Hub. The questions depict the scope of what should be collected with flexibility in the wording to aid implementation for different interventions / systems.

1. Number of training offerings engaged with as a result of AI Skills Hub
2. Type of training offers engaged with as a result of AI Skills Hub
  - a. Self paced e-learning,
  - b. Facilitated e-learning,
  - c. In person training
3. Self-reported engagement with internal and external offerings in DS/AI field
4. Self-reported new collaborations
5. Self-reported metric of actively using the skills acquired
6. Number of individuals reporting a change in work-based behaviours or business practice following the skills learned
7. Have you trained others?
8. Free text

c. Outcomes and reporting

The supplier is expected to provide anonymized reporting to the contracting authority around training uptake based on the responses to the surveys outlined above. Quarterly reporting is expected against the outcomes and metrics outlined in the table below.

Outcome	Metrics to measure
Engagement	<ul style="list-style-type: none"> <li>• Number of users of the AI skills Hub as a function of time.</li> <li>• Broken down by sector, place, organisation size, AI maturity and job role</li> </ul>
Training Uptake	<ul style="list-style-type: none"> <li>• Number of individuals attending training courses as a result of interacting with the AI Skills Hub</li> </ul>
Training Uptake Organisations	<ul style="list-style-type: none"> <li>• Number of organisations receiving training as a result of interacting with the AI Skills Hub</li> </ul>
Sector Balance	<ul style="list-style-type: none"> <li>• Number of individuals per sector using the AI Skills Hub</li> </ul>
Place	<ul style="list-style-type: none"> <li>• Regional distribution of users of the AI Skills Hub</li> </ul>
EDI	<ul style="list-style-type: none"> <li>• Number of under represented groups using AI Skills Hub</li> </ul>
Increased knowledge	<ul style="list-style-type: none"> <li>• Number of individuals reporting increased knowledge following a skills/training event supplied by the AI Skills Hub</li> </ul>
Increased feeling of confidence & engagement (individuals)	<ul style="list-style-type: none"> <li>• Number of individuals reporting increased confidence in their ability to use AI as a result of interactions</li> </ul>

	with AI Skills Hub events/community activities
Increased familiarity with landscape	<ul style="list-style-type: none"> <li>• Self-reported engagement with external offerings in DS/AI field</li> </ul>
Establishment and/or growth of networks and connections	<ul style="list-style-type: none"> <li>• Self-reported new collaborations</li> <li>• Self-reported new membership of professional body/community of practice</li> <li>• Number of spin out groups or networks</li> </ul>
Participants apply knowledge gained	<ul style="list-style-type: none"> <li>• Self-reported metric of actively using the skills acquired</li> <li>• Number of individuals reporting a change in work-based behaviours following the skills learned</li> <li>• Number of documented/ reported changes in role for individuals within the organisation based on skills acquired</li> <li>• Self-reported changes in business practice</li> </ul>
Continued/repeated engagement with further training	<ul style="list-style-type: none"> <li>• Number of individuals attending more than one course/workshop/seminar</li> <li>• Number of training initiatives sponsored for employees</li> </ul>
Adoption of AI solutions	<ul style="list-style-type: none"> <li>• New AI products/projects being introduced in organisation</li> </ul>
Increased investment in skills	<ul style="list-style-type: none"> <li>• Number of companies offering AI/ML up/side skilling opportunities as part of CPD</li> </ul>
Using new understanding of landscape to take advantage of opportunities	<ul style="list-style-type: none"> <li>• Number of applications for IUK/related funding opportunities</li> <li>• Self-reporting of other applications submitted</li> </ul>
Strengthen and demonstrate leadership among networks / connections	<ul style="list-style-type: none"> <li>• Number of documented changes to JDs to reflect new understanding of landscape</li> <li>• Number of new hires in AI related roles</li> </ul>