Guide for Applicants

Building AI Capability and Datasets for Science and Engineering Research in Heritage Science and Archaeology

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Version control

The latest changes made to this guide will be recorded here. Please ensure you have the latest version of the Guide for Applicants.

Version	Date	Changes
1.0	15.10.26	-

Contact details

If you have any questions relating to this guidance or the Building AI Capability Grants Programme, please contact the Programme Administrator.

Heritage Science Data Service, The Guildhall, York, YO1 6GA
Email: ai-applications@hsds.ac.uk

Section 1: About the Funding

The UK's heritage digital datasets are the richest in the world, but their potential for AI-enabled scientific research has yet to be unlocked. With generous funding from the EPSRC under their *Building AI Capability and Datasets for Science and Engineering Research* programme, we are addressing the DSIT AI for Science strategy by opening up this data landscape. We are able to offer 12 grants of up to £50,000 (HSDS will pay 80% FEC) and to provide access to compute resources and datasets at scale, facilitating research teams to undertake transformational AI research.

The competition is managed by the Heritage Science Data Service (HSDS), part of the digital research services for UKRI's Research Infrastructure for Conservation and Heritage Science (RICHeS) programme. It is run in collaboration with the Archaeology Data Service (ADS), the world's leading digital repository for archaeological research data, founded in 1996. Together, the HSDS and ADS curate ~2.5m records for the archaeology and heritage of the British Isles, over 100,000 digital text reports, over 50,000 open access journal articles and over 5,500 full project data archives.

As HSDS we work in partnership with the Science and Technology Facilities Council (STFC) Hartree Centre, a high-performance computing, data analytics and AI research facility. This collaboration now allows us to offer high impact AI capacity to the heritage sector for the first time through the HSDS Virtual Research Environment (VRE), a service which combines a full replica of the ADS and HSDS data catalogues with a dedicated GPU accelerated Windows VM VRE service for accelerated archaeology and heritage science related workloads including graphical and interactive use-cases. Access to Hartree's Mary Coombs HPC will also be made available for HPC and AI related workloads such as model training with a proportion of the overall budget reserved for node-hours. Mary Coombs delivers exceptional performance with 157 compute nodes each powered by 4 NVIDIA H100 GPUs, providing 10 times the speed of the previous STFC system

whilst using 75% less energy. This state-of-the-art infrastructure accelerates AI applications, data analytics and high performance computing workloads. We have assigned a provisional allocation of 2080 node-hours per awardee.

What can I apply for funding to do?

There are many potential advantages to the managed application of AI to the UK's archaeology and heritage science datasets, from creating predictive models of site location to the identification of artefacts. This funding call invites your ideas for how AI could be applied to archaeology or heritage science data. In proposing ideas, we will not constrain the range of AI approaches, which could range from traditional Named Entity Recognition (NER) to Large Language Model (LLM) refining and customisation, to image recognition and small model training. Nor will we constrain the scope of research questions, working across terrestrial and marine archaeology, cultural heritage management, conservation and management of buildings and landscapes, ancient DNA, digital twins, past environmental modelling and predictive modelling of site location amongst other areas.

Successful applicants will need to identify the data they wish to use. This may be data held internally or data published by other organisations, including data published in either the ADS Data Catalogue or HSDS Data Catalogue. The scope of ADS and HSDS data is very wide ranging, from text and numeric data through hundreds of thousands of digital images through GIS, to full 3-D models.

Applicants must ensure that they have permission of the copyright holder to work with the proposed data. All data disseminated by the HSDS and ADS is available to access openly and free from charge. Conditions under which data can be reused depends upon the licence attached to a particular data

collection by the data depositor. The access licence of a dataset is clearly identified in the left hand menu of each data collection page.

For applicants who need to undertake bulk downloads of ADS or HSDS datasets which cannot easily be accessed via our data catalogues our staff will be available to facilitate access.

It is a condition of funding that secondary datasets generated through the research, or existing datasets that are not already maintained by a trusted digital repository, should be offered to ADS and HSDS for long term preservation, in line with UKRI research data policy.

Successful researchers or teams will be given access to the HSDS VRE desktop as a secure platform for their projects. The platform can host several different types of workload, from web-accessible Windows - (VMs) for GPU accelerated interactive desktops (Virtual Desktop Integration - VDI) to containerised SaaS services and Web applications. Linux VMs are also planned, but not yet confirmed, for the start of projects. A selection of 'best-of-breed' open-source AI tools and libraries are pre-installed on the Windows desktops e.g. JupyterHub, Python runtimes, PyTorch, and JAX. Different open-source or paid-for AI tools can be installed on a per request basis. Different VM flavours are possible such as long running single-tenancy nodes, and high-memory / multiple-CPU nodes (e.g. 256GB with 64 cores per node). The VRE provides per-project data storage for multi-user projects and a multi-petabyte object-store with an S3 compatible API (The Secure Data Facility - SDF). Access to Hartree's Mary Coombs HPC cluster for classical batch workloads is via the SLURM scheduler over SSH with potential for additional API access to enable digital application innovation so that tooling can be built on top of the HPC API.

Example: How Virtual Research Environments can apply Artificial intelligence (AI) to solve problems faced by archaeology and heritage professionals

The identification of cultural heritage features in airborne laser scanning data is a labour-intensive process, reliant on a small number of specialists. Artificial intelligence (AI) offers opportunities to accelerate this work and enhance the historic environment record, but adoption across the sector is currently limited. Previous outputs have rarely been shared, leading to duplication of effort, missed opportunities and a widening skills gap. This project aims to support the collaboration and training required to deliver public benefits from this new technology.

This project will develop a Virtual Research Environment to support the use of AI for automated feature detection of cultural heritage features within national ALS data. The proposed VRE will provide a user-friendly platform built with open-source tools and licensing, where researchers and heritage professionals can access national scale ALS data, run automated feature detection workflows and share models and outputs. This initiative will benefit a range of cultural heritage sector users, including remote-sensing specialists, local authorities, commercial archaeologists, academics and conservation bodies.

You can see further examples of VREs we've funded through previous grants awarded under this scheme.

Available funding

The total cost of projects may be up to £50,000. HSDS will apply UKRI's usual full economic costing (FEC) principles. This means that we'll fund 80% of the full economic cost of your project. When applying, you'll need to show 100% of the cost of your project. For example, if the total cost of your project is £50,000, we will pay you £40,000. The remaining £10,000 will need to be contributed by the applying organisation.

The total cost of your project only needs to include your time to contribute to the project. All the staff time and resources for the Hartree and for ADS/ HSDS teams will be met separately Please note, while platform and tooling support will be provided, projects will have to bring their own developers and AI specialists to develop their own AI innovations and workloads..

Duration of funding

Projects must start on or after 4 January 2027 and must conclude no later than 30 April 2027.

Who can apply?

We welcome applications from a broad range of organisations. Eligible organisation include, but are not limited to:

- Academic organisations and educational establishments (such as schools, colleges, and universities)
- UKRI Independent Research Organisations (IROs)
- Galleries, libraries, museums and archives
- Registered charitable bodies and social enterprises
- Commercial companies or freelance specialists working in collaboration with eligible partner organisations

All applicants must be based in the UK, and all funded work must be undertaken in the UK. There are no other restrictions on who may act as Main or Co-Applicant provided they have the support of the submitting organisation.

If you have any questions about your eligibility, please contact us at ai-applications@hsds.ac.uk.

Key dates for this call

Call opens: **2 November 2026**

Deadline for applications: **5pm GMT, 4 December 2026**

Panel and feasibility review with STFC: **7-16 December 2026**. Applicants must be available during this window to respond to questions that may arise during the feasibility assessment.

Communication of final results to Main Applicants: We aim to notify successful applicants by **18 December 2026**

Projects **must start** on or after 4 January 2027 and **must conclude** no later than 30 April 2027.

Eligible costs

The following costs are eligible:

- Staff salary costs for all staff involved in delivering the project (e.g. Project Main Applicant, Project Co-Applicant(s), archival, technical or other specialist staff necessary to complete the work). It is anticipated that this cost category will comprise the majority of the requested budget. These may be costs to buy-out the time of existing staff or to recruit and appoint new staff for the duration of the project.
- Reasonable essential and sustainable travel and subsistence costs necessary to deliver the project.
- Essential estates and indirects.

Budgets **do not** need to include costs for STFC Hartree Centre or ADS / HSDS staff time as this will be covered separately. Please note, this does not cover Hartree Centre software engineering / AI specialists time - projects will need to bring their own technical staff to support their own projects.

Ineligible costs

- Student fees are not eligible (e.g. PhD, DBA, EdD, LLD, etc)

How applications will be assessed

Applications received by the published deadline will be checked for eligibility. Applicants whose submissions are rejected at this stage will be notified by email.

Applications meeting the eligibility criteria set out in this guidance will be assessed by an expert panel against the evaluation criteria, and each will be graded and ranked alongside other applications. At this stage applicants may be contacted by STFC Hartree Centre colleagues to ascertain feasibility. **Applicants must be available between 7 and 15 December 2026 to respond to questions**. On completion of all reviews, the panel will make a funding recommendation.

Our panel of experts has been carefully chosen to ensure diverse representation and we provide clear guidance to members of the panel in advance of assessment being carried out. As part of this, we take steps to manage conflicts of interest. Members of the panel with an actual or perceived conflict of interest are instructed to declare the potential conflict of interest. In considering whether a conflict of interest exists, we ask panellists to adhere to the UKRI Declaration of Interest Policy.

In accordance with UKRI rules, panellists are not permitted to use generative AI tools in their assessment as using these tools can potentially compromise the confidentiality of the ideas that applicants have entrusted to us to safeguard.

Evaluation criteria

The following are the criteria our panel of reviewers will use to evaluate proposals.

Excellence & Impact Weighting: 40%	The project's expected contribution to the advancement, understanding, preservation, and management of archaeology and/or tangible heritage. In particular, reviewers will be looking for evidence that the proposed project: ● Will enable high quality and important research. ● Will have a measurable impact beyond the immediate team. ● Will enhance and complement the existing landscape and does not duplicate existing services. ● Will help drive the development and wider adoption of AI capabilities. ● Will increase the use of, access to, and awareness of datasets for AI that are well-governed, secure, free of bias, accurate and of high quality to support frontier AI progress and greater use of AI in science. ● Will build critical collaborations needed to enable cutting edge research at the forefront of science and AI. ● Will speed up the embedding of AI as a research tool in the arts and humanities in a fair and inclusive way.
Feasibility Weighting: 40%	Reviewers will be looking for evidence that the proposed project is feasible within the proposed duration of the grant and with the expertise and resources available. In particular, reviewers will be looking for evidence that: ● The project team: ○ have the necessary experience and expertise to bring the project to a successful conclusion. ○ have access to the datasets and tools needed to undertake their project. ● The project includes workflows which may include but are not limited to: ○ Hosting on the VRE platform for re-use and wider

	adoption. ○ Developing end-user tools installed on Windows or Linux desktops, or tools hosted as dedicated online services. ○ Tedious workflows that could be automated. ○ Highly graphical and interactive desktop workloads that would benefit from GPU acceleration. ○ Workloads that require parallelisation or optimisation (e.g. High Performance Computing AI/ML model training workloads).
Value for money Weighting: 20%	Reviewers will be looking for evidence that the project represents good value for money. In particular, reviewers will be looking for evidence that the proposed budget and justification: ● Provides a breakdown of staff time, explaining how much time will be dedicated by each member of staff involved in the project. ● Explains what each member of staff contributes to the project (e.g. project oversight, technical input etc). ● Where travel and subsistence costs are requested, explains clearly who will travel, where they will go, how they will travel, how long for and why the trip is essential to the project.

Notification of outcomes and arrangements for successful awards

We will notify the Main Applicant with the final outcome of their application by email. Successful awardees will receive a grant agreement, which will set out the terms and conditions of the funding. Given the short turnaround between notification and the funding start date, it may not be possible for the grant agreement to be fully signed before the grant starts. Please highlight in your application if this will cause a problem and we will do our best to respond accordingly.

Reporting requirements

A short monitoring report will be required within 30 days of the grant end date.

We'll also ask you to deposit with ADS or HSDS or one of our approved alternative repositories before the project end date:

- any existing dataset which you use in your research and which is not already hosted in a trusted digital repository;
- any derived dataset arising from the research.

Any dataset deposited with ADS or HSDS will be shared under an agreed open licence (see below).

Licensing requirements

The ADS and HSDS are open access archives and our intention is to share data openly wherever possible, but access can be restricted where necessary. Creative Commons CC-BY is our preferred licence option which enables your data to be re-used in most circumstances, provided attribution is given to the original data creator. If this doesn't work for you, we can offer alternative licences, such as CC-BY-NC, which restricts data usage to only non-commercial ventures.

We'll discuss all of this with you before your data is released and we'll ask you to confirm your choice by signing an agreement confirming that you either own the copyright to the data or have the copyright holder's permission to make them available with us. You can find out more about our Deposit Agreements on the ADS or HSDS website but please get in touch if you have any questions (ai-applications@hsds.ac.uk).

- ADS Deposit Agreement
- HSDS Deposit Agreement

Privacy notice

For further information on how we collect, manage and safeguard personal information as part of this grant scheme, please see HSDS's Privacy Policy.

Section 2: How to apply

Applications must be submitted via our submission system. The proposal must be submitted in English and the application form must be completed in full with all required information provided in the relevant sections. The proposal must be submitted before the specified call deadline. Late applications cannot be considered.

To begin your application, please visit our Building AI Capability Grants Call Information web-page to access the submission system.

You can navigate away from your application at any point and return to it later. We have also provided a Word version of the application form should you wish to prepare your application offline but please note that **only applications submitted via our online submission system will be accepted**. If you submit broadly the same application multiple times, we will consider only the latest version submitted.

Use of generative AI

In line with current sector good practice, applicants and applications are expected to be transparent where they have used generative AI tools in the development of an application. You will be asked to declare this in your application form but please note that this information will not affect the assessment process.

How to complete the online application

This section provides a step-by-step guide to the application form, telling you what reviewers will be looking for from each section.

Equality, diversity and inclusion monitoring

As part of your application you will be asked to provide answers to a number of equality, diversity and monitoring questions. We are asking for this information because to do so is a condition of our funding. In every instance there is an opportunity to select 'prefer not to say'. Please be assured that these data are for monitoring purposes only and will be treated as strictly confidential. They will not be used in any way that allows individuals to be identified and will not be linked to funding applications nor will they be seen by anyone involved in the review processes, funding decision-making, or by any other third parties. All personal information will be stored in a Google Drive that is accessible only to core members of the HSDS and saved in one of Google's globally spread data centres as agreed with the University of York contract undertaken with Google. You can request that your information be removed from our database at any time. If you have any questions please contact us by emailing the team at help@hsds.ac.uk.

Applicant details

Here we ask you to tell us the name of the Main and up to two Co-Applicants. The Main Applicant and Co-Applicant(s) may be from the same organisation or from different organisations. See above for "Who can apply?"

Main Applicant: Please complete the application form with the requested information (title, first name, surname, organisation name and department, where relevant, job title and email address). The Main Applicant takes overall responsibility for the project and will be the person with whom we will communicate.

Co-Applicant(s): You may add up to two Co-Applicants. Co-Applicants share the responsibility to deliver the project.

Basic project details

Project title: Please provide a short project title. The title does not need to be snappy and does not require an acronym. It should just reflect the project's purpose.

Project start date: Please tell us the proposed start date for your project. This must be on or after 4 January 2027.

Project end date: Please tell us the proposed end date for your project. This must be no later than 30 April 2027.

Project summary: Please provide a brief summary of the proposed project, suitable for a lay audience. Project summaries are most helpful when they describe the challenge the project addresses, the aims and objectives and the potential applications and benefits.

Please note that if your application is successful, the project summary, or an edited version thereof, will be published on the ADS/HSDS website and may be used by ADS/HSDS in other promotional contexts.
Max 1,650 characters.

Full project description

Excellence and impact: Please tell us *what* you want to do and *why* this project is important. What is the problem you seek to address?
Why should your project be funded? Will it have an impact beyond the immediate team? Will it help other users and what evidence is there to demonstrate the need? How does the proposed project fit in the wider landscape?
Max 5,000 characters including any necessary references but please note that references are not essential or expected.

Feasibility: How might the problem be tackled? Will this be a completely new tool, or will it re-use or build on existing tools and workflows? What data types will you use, and what scale/size of data will it need to work with? (All datasets deposited with the ADS/HSDS will need to be made available under an open licence so it's important that you tell us if there are any restrictions on sharing the resulting dataset). What compute power might you need? (Where possible applicants are requested to provide an indication of the required HPC capacity). We also need to know a bit about you and your team. Why are you the right people to tackle this project? What experience do you have in AI-aided and in archaeological and heritage science-related research? If you will involve any other team members apart from the Main Applicant and any Co-Applicant(s) identified above, please tell us who they are and what they will do.
Max. 5,000 characters including any necessary references.

Ethics

This section should explain any ethical or responsible research implications or issues relating to the proposed work. If you're unsure of any potential implications, please just tell us and if your project is successful we'll work with you to ensure anything relevant is considered.
Max. 1,500 characters.

The budget

Funding requested: Please tell us what you will need to deliver your proposed work and how much it will cost.

If you are requesting **costs for staff time**, you should say whose time this covers, how much of their time you are asking to pay for and what they will do as part of the project (e.g. project management, technical input etc).

E.g. £X,XXX is requested to pay for 2 hours per week of project Main Applicant to undertake overall project management, supervise all team members and liaise with the team at STFC's Hartree Centre.

If you are requesting **travel costs**, please tell us who is travelling, where they are going and how they will travel (e.g. train, bus), for how long and why the travel is essential for the project.
E.g. £XXX is requested to pay for 2 day-return rail tickets from York to Daresbury for the project Main Applicant and Co-Applicant to meet with STFC Hartree Centre colleagues in person.

You do not need to justify the inclusion of estates or indirect costs provided these are calculated in accordance with your normal organisational policy.

Max. 2,500 characters.

Will any organisation provide additional in-kind or cash contributions?
Please tell us if any other organisation will provide any in-kind or cash contributions to help you to deliver your project. This might include, for example, help you might receive from volunteers, or any cost-sharing to be provided by your own organisation.

Please explain the in-kind or cash contributions from other sources: If any other organisation will provide any in-kind or cash contributions to help to deliver your project, please tell us how much will be provided, whether this is in-kind or cash, or a combination, and which organisations will provide these additional contributions.

Funding table

Please provide the totals you are requesting for each of the budget lines provided. Please ensure that these match the costs you have included above. Please do not include any in kind contributions or funding you will receive from other sources, **only include the budget you are requesting under this grant call**. The budget lines we ask you to use are:

Project Applicant/Co-Applicant costs: all costs for the salaries of the Main Applicant and any Co-Applicant(s). These should reflect the real cost to the organisation of paying those salaries, including any organisational on-costs, such as employer's pension and National Insurance contributions.

Other staff costs: all costs for the salaries of any other team members who will work on the project, excluding the Main Applicant and any Co-Applicant(s). These should reflect the real cost to the organisation of paying those salaries, including any organisational on-costs, such as employer's pension and National Insurance contributions.

Travel costs: all costs associated with travel and subsistence, e.g. rail fares and costs of lunches/drinks necessary to be purchased if the member of staff is away from the office for an extended period.

Estates costs: may include building and premises costs, basic services and utilities and equipment maintenance not already included under other cost headings.

Indirect costs: include non-specific costs charged across all projects based on estimates that are not otherwise included under other cost headings. They may include the costs of the organisation's administration such as personnel, finance, or IT services.

Generative AI

In line with current sector good practice, applicants and applications are expected to be transparent where they have used generative AI tools in the development of an application. Answers to this question will not affect the assessment process.

Submitting your application

Once you have completed your form in our online submission system you will be able to submit your application. Once submitted, you will have an opportunity to download a copy of your completed application for your records.

You will receive an email acknowledgement of your submission. If you do not receive an email acknowledgement, your application may not have been received so please contact us at ai-applications@hsds.ac.uk to check.

Help applying

If you have any questions about your application or require any further assistance, please don't hesitate to contact us at ai-applications@hsds.ac.uk.