National Edge AI Hub Pump Priming 2027

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1 Introduction

National Edge AI Hub

The EPSRC National Edge Artificial Intelligence Hub aims to deliver world class fundamental research, co-created with stakeholders from other disciplines and regions, to protect the quality of data and quality of learning associated with Artificial Intelligence algorithms when they are subjected to cyber-attacks in the Edge Computing environments.

The Hub is designed to integrate expertise in artificial intelligence and edge computing across academia, industry, and the public sector. Its purpose is to build strong research foundations while creating a collaborative platform that encourages joint contributions and amplifies the impact of research. By leveraging existing investments and fostering new partnerships, the Hub aims to advance EdgeAI technologies and ensure high-quality data processing near its source for improved performance and scalability.

Fo more information visit: https://edgeaihub.co.uk

What is Edge AI?

Edge AI is the practice of running artificial intelligence models directly on local devices such as smartphones, IoT sensors, and embedded systems rather than relying on remote cloud servers. This approach processes data where it is generated, reducing latency and improving real-time responsiveness. It enhances privacy and security by keeping data on the device, lowers bandwidth usage by avoiding large data transfers, and allows offline functionality in areas with poor connectivity. Edge AI also supports scalability by distributing computational tasks across multiple devices. Typical uses include autonomous vehicles, smart home systems, predictive maintenance, wearable health monitors, and real-time video analytics.

2. Pump Priming Call

The National EdgeAI Hub has launched a pump priming call to encourage research into Edge AI applications from **non-technical perspectives**. This initiative seeks to engage disciplines such as social sciences (e.g. business and management, law, education, sociology, anthropology, human geography etc), health and medical sciences (social care, public health, epidemiology, nursing, biomedical sciences etc), and related fields to explore the societal, legal, ethical, and practical implications of deploying AI at the edge. By supporting such projects, the Hub aims to broaden the impact of Edge AI beyond technical innovation, fostering insights into human, organisational, and domain contexts where these technologies can deliver meaningful benefits.

We strongly encourage applicants to develop proposals that foster **interdisciplinary collaboration**, bringing together expertise from diverse fields. Interdisciplinary approaches are essential for addressing the technical, societal, and ethical dimensions of Edge AI adoption and impact. In addition, we actively promote **collaboration between academia and industry**, as well as partnerships with public sector and civil society organisations. These collaborations help ensure that research is both innovative and practically relevant supporting responsible development and deployment, real-world application, knowledge exchange, and pathways to impact.

We encourage applicants to submit projects that align with our primary focus areas of **smart transport, health, energy, manufacturing, and smart cities**. However, proposals are not limited to these domains. We welcome innovative ideas from other sectors where Edge AI can deliver meaningful impact, particularly those that demonstrate strong interdisciplinary collaboration and partnerships between academia and industry.

Indicative areas for Edge AI applications include:

- Agriculture and food systems: precision farming, crop monitoring, and supply chain optimisation
- Environmental monitoring: air quality, water management, and climate resilience solutions
- Public safety and emergency response: real-time analytics for disaster management and security
- Retail and logistics: inventory management, predictive demand, and autonomous delivery systems

- Education and training: adaptive learning platforms and immersive technologies in relation to Edge applications
- Healthcare and wellbeing: remote patient monitoring, diagnostics, and personalised care
- Energy and utilities: smart grids, predictive maintenance, and energy efficiency optimisation
- Industrial automation: robotics, autonomous vehicles, predictive maintenance, and process optimisation

This call invites proposals to three stands discussed below. We envisage offering approximately 5 awards per strand, subject to requests and budget availability.

Strand 1: Technology adoption and acceptance

This strand investigates how Edge AI can be effectively introduced and normalised within diverse organisational and societal contexts. It considers user experience, organisational capacity, governance readiness, and ecosystem maturity required for successful implementation. It also examines pathways from pilots to scaled deployment, highlighting barriers, enablers, and change management strategies that shape adoption trajectories.

Indicative areas to consider:

- Trust, reliability, and perceived usefulness of Edge AI in frontline settings
- User experience design for edge interfaces and decision support
- Organisational readiness, capabilities, and reskilling for edge-enabled workflows
- Stakeholder engagement, co creation, and participatory design approaches
- Procurement models, vendor lock in risks, and interoperability requirements
- Policy, regulatory, and standards landscape for edge deployments
- Change management, incentives, and adoption roadmaps from pilots to scale

Strand 2: Benefits realisation and technology assessment and impact

This strand focuses on how value from Edge AI is measured, evidenced, and sustained over time. It encompasses frameworks for evaluating outcomes across economic, social, and environmental dimensions, with attention to system wide impacts. It seeks methods for robust evaluation, continuous improvement, and the translation of evidence into practice and policy.

Indicative areas to consider:

- Outcome measurement frameworks spanning efficiency, safety, and quality
- Cost benefit analysis, total cost of ownership, and return on investment
- Impact on service delivery, workforce productivity, and user satisfaction
- Clinical and public health outcomes for medical applications and care pathways
- Education, social care, and public services performance indicators
- Environmental sustainability, energy use at the edge, and carbon accounting
- Comparative assessments versus cloud-based AI and hybrid models
- Longitudinal studies, real world evidence, and post deployment monitoring
- Data quality, bias detection, and performance drift management
- Translating evaluation findings into commissioning, policy, and scaling decisions

Stand 3: Responsible innovation

This strand ensures Edge AI is designed, governed, and deployed in ways that are ethical, inclusive, and aligned with societal values. It foregrounds accountability, transparency, and meaningful oversight across the lifecycle, from data collection to model updates in edge environments. It also addresses resilience against cyber threats and safeguards for vulnerable populations.

Indicative areas to consider:

- Ethical principles operationalised in edge system design and governance
- Privacy preservation, data minimisation, and on device data stewardship
- Security by design, adversarial robustness, and cyber resilience at the edge
- Environmental sustainability and energy-efficient edge AI design
- Fairness, accessibility, and inclusive design for diverse user groups
- Human in the loop oversight, auditability, and explainability of decisions
- Safety cases, assurance processes, and certification pathways for edge AI
- Legal and regulatory compliance including accountability and liability models
- Anticipating unintended consequences and societal risks
- Community engagement, public deliberation, and responsible data sharing
- Lifecycle governance for updates, model drift, and end of life decommissioning
- Equity of access and digital inclusion across regions and communities

3. Eligibility Criteria

Core National Edge AI participants including Principal Investigator, Co-Investigators, PDRAs, Engineers and Professional Support Staff, are not eligible to apply. This is because their posts and activities are already supported by the UKRI grant.

The lead applicant must be an academic researcher based at a UK academic institution that is eligible to receive UKRI funding throughout the duration of the award. Applicants must meet EPSRC's eligibility requirements for Principal Investigators. For full details, please refer to: Check if you're eligible for funding – EPSRC – UKRI.

Organisations that do not meet these criteria (e.g. certain companies, charities, or public bodies) are encouraged to partner with an eligible UKRI organisation to support their application. This ensures broader participation while maintaining compliance with UKRI funding rules and helping to foster collaboration across sectors.

Applicants must:

- Be based in the UK
- Be employed by, or formally affiliated with, a UK stakeholder organisation (e.g. academic, industry, policy, public sector, or third sector).
- Demonstrate a clear connection to the call aims
- Have permission from their employer or line manager to lead and deliver the proposed activity.

Lead organisations must:

- Be academic/research institutions.
- Be legally registered in the UK.
- Be able to meet UKRI financial compliance requirements if funding is awarded.
- Accept responsibility for the delivery and reporting of the proposed activity.

Trust Research Framework

Much of our research involves collaboration. Whilst this can be beneficial there are potential risks. Please can you refer to our published guidance on Trusted Research: https://www.ncl.ac.uk/research/researchgovernance/ethics/ethicstoolkit/trustedresearch/. If required, please complete the online due diligence form (following the link in the guidance). If the project falls under the Trusted Research umbrella please indicate it in your application.

4. Funding

Eligible Costs

All costs must be directly related to the proposed activity and proportionate to the intended outcomes. Applicants can apply for funding of up to £10,000 for project duration of up to 12 months.

Awarded projects will be funded at 80% FEC**.** All costs must follow UKRI costing rules.

Research Assistance

- Research assistant support, where clearly and directly required to deliver the project.

Research Costs

- Data acquisition costs, including primary data collection, access to datasets or archives.
- Transcription and translation services for interviews or qualitative research.
- Participant recruitment and incentives for surveys or studies.
- Cost associated with experiments or fieldwork.
- Travel and accommodation for research fieldwork or data collection.
- Software licences and specialised tools for data processing or modelling.
- Open access related costs, where necessary and the applicants' institutions do not cover these.

Conferences, workshops and seminars for dissemination

- Attendance at conferences, workshops, or seminars to present findings from the project are eligible, but only up to 25% of the project's budget.

Stakeholder Engagement and Impact Costs

- Stakeholder engagement activities: e.g. workshops, roundtables, or focus groups.
- Travel and subsistence: for collaboration with external organisations, including public, private, and third-sector partners.
- Event-related costs: venue hire, catering, materials, or accessibility-related services.

- Knowledge exchange and dissemination: e.g. policy briefings, toolkits, digital outputs, blogs or public-facing reports.

Ineligible Costs

- Equipment, capital purchases, or infrastructure.
- Academic principal and co-investigator staff time is not eligible. Salary costs are not eligible, including for short contract extensions to facilitate placements. Individuals should remain employed by their home organisation, with funding intended to cover only supplementary expenses such as travel, accommodation, and training
- Overheads or indirect costs (e.g. administrative or institutional fees).
- Subscriptions, memberships, or retrospective costs (i.e. costs incurred before the funding decision).

In-kind Contributions

Applicants are encouraged to demonstrate partner commitment through in-kind contributions, which provide valuable support without direct financial cost. These contributions may include staff time, such as a company employee or policy officer dedicating specific days to assist with project delivery while their salary remains covered by their employer. In-kind support can also involve granting access to networks, specialist data, or resources that enhance the project's scope and impact. Additional examples include providing use of facilities or equipment, such as laboratories or meeting spaces, and offering technical expertise or mentoring from experienced professionals within partner organisations.

For reporting purposes, in-kind contributions should be described in the final report. In-kind contributions are not cash payments. They are resources or support provided by partners that strengthen the activity and show commitment. Such contributions can help strengthen collaboration, add expertise, and maximise the value of funded activities.

5. Responsible Innovation

The National EdgeAI Hub is committed to promoting responsible, inclusive, and sustainable research practices. All proposals should clearly demonstrate how the planned activities address the following principles:

Equality, Diversity and Inclusion (EDI): Applicants must outline how their activities will be inclusive and accessible to a wide range of stakeholders, including underrepresented or marginalised groups. Proposals should consider reasonable adjustments and flexible delivery formats to ensure broad participation.

Sustainability and Legacy: Activities should aim to create lasting impact beyond the funding period. This may include building long-term partnerships, developing reusable resources, or generating insights that inform future policy, practice, or collaborative research pathways.

Trusted Research and Innovation: Applicants should identify and manage any ethical, security, or reputational risks associated with their work, particularly where sensitive data, international collaborations, or external consultants are involved. Proposals should describe risk mitigation strategies and address intellectual property considerations. Where relevant, formal agreements between partners should be in place and communicated to the Hub.

Data Management and Open Access: All outputs, data, and resources generated should adhere to FAIR principles (Findable, Accessible, Interoperable, Reusable) and be made openly available where appropriate, in line with UKRI policy on open research.

6. Key Dates

Call Launch / October 2026
The funding call opens, and full guidance is published online.

Online Webinar / November 2026
Online Q&A session for prospective applicants to clarify eligibility, scope, and application process.

Call Closure / 8th of February 2027
Deadline for submission of proposals. Applicants will have approximately 8 weeks to prepare and submit applications.

Eligibility and Completeness Check
Hub team reviews applications for eligibility and completeness.

Reviews and Panel Meeting / March-April 2027
Proposals are anonymised and assessed against published criteria.

Outcome Notification / April-May 2027
Funding decisions communicated via email, with formal offer letters issued to successful applicants.

Project Start / by 1st June 2027
Kick-off meeting and commencement of funded projects. Delivery within 12 months.

7. Application Process

The application process begins when the call is officially launched.

Applicants are required to complete both the application form and the Equality, Diversity and Inclusion (EDI) form. For any queries, please contact the Hub team.

Applications must be submitted via email. Upon submission, applicants will receive an email confirmation acknowledging receipt. If you do not receive the confirmation, please contact us.

8. Guidance on Completing the Application Form and Making the Case for Support

Proposal Details

Provide the following information:

- Lead applicant details: name, position, department, and contact information
- Host organisation and partner details (if applicable), including any collaborating external stakeholders or delivery partners

Project information:

- Project title
- Summary of proposed activity
- Proposed start date
- Project duration (in months)
- Total cost of the project, including a full breakdown

The case for support should clearly describe the proposed engagement activity, its relevance to the Hub's aims, and the anticipated outcomes and impact. It should demonstrate a clear delivery plan, appropriate use of resources, and alignment with stakeholder collaboration goals.

Project Summary (250 words): This summary will be published if the project is funded. Provide a concise overview of the proposed activity, its objectives, and the stakeholders involved. Highlight intended outcomes and how the activity contributes to the Hub's mission.

Challenge, Aims and Objectives (1000 words)

Explain the purpose of the activity and its alignment with the Hub's aims and workstreams as well as the targeted strand. Include relevant background or context, previous engagement work, and collaborations. Clearly state intended outcomes, anticipated stakeholder benefits, routes to impact, and added value to the Hub.

Proposals should:

- Address a significant challenge relevant to Edge AI adoption or impact and demonstrate potential for meaningful outcomes
- Represent novel and innovative work beyond the Hub's core programme
- Employ an appropriate interdisciplinary approach or methodology
- Include anticipated outputs and success measures
- Outline a clear pathway for further development, such as future funding or sustained engagement

Methods/Approach & Outputs (500 words)

Describe the method or approach the project will adopt, the rationale for using the chosen method/approach, and the project's outputs.

Knowledge Exchange and Expected Impact (500 words)

Describe how the project will be delivered and how it adds value beyond existing Hub research and engagement.

Proposals should:

- Detail planned activities and delivery approach
- Explain stakeholder engagement and knowledge exchange strategies
- Describe anticipated benefits and impacts for stakeholders and organisations

- Show how the project will generate lasting impact aligned with the Hub's mission
- Address key risks and mitigation strategies
- Demonstrate how the activity enhances engagement, collaboration, or knowledge exchange, including collaboration with at least one non-academic partner
- Demonstrate how Equality, Diversity and Inclusion (EDI) principles are embedded in design and delivery

Project Plan

Outline tasks, milestones, and deliverables. Include:

- A clear Gantt chart in any readable format
- Proposed milestones and deliverables
- Roles and responsibilities for each task
- Risk mitigation strategy

Project Partner Details (optional / 250 words)

Provide details of confirmed partners and outline their contributions and in-kind support.

Finances

Please enter the financial information requested for each category and explain in the justification of resources what its item is and how much will it cost. Enter the 80% FEC in the boxes. This is the money request from us.

Justification of Resources Required (250 words)

Include the total budget requested and a breakdown of requested costs and justify each item in relation to planned research, engagement and intended outcomes (separate file). All costs must follow UKRI guidelines and be calculated using Full Economic Costing (80%) where appropriate.

9. Assessment Process

Initial Eligibility Check: All applications reviewed by the Hub Support Team. This step ensures proposals meet the published eligibility criteria before progressing to formal assessment. Applications not relevant to Edge AI will be rejected at this stage.

Eligible applications will then be forwarded for peer-review.

Peer-review Assessment: Each application will be reviewed by at least 2 independent reviewers. Applications will be evaluated on the following:

Alignment with Hub Aims

- Contribution to advancing Edge AI research and applications
- Potential for stakeholder collaboration and cross-sector engagement

Quality and Feasibility

- Novelty and innovation
- Clear objectives, activity plan, and realistic timeline
- Appropriate scale and ambition for the funding level
- Value for money with justified costs

Stakeholder Engagement

- Clear rationale for stakeholder involvement
- Evidence of stakeholder interest or support
- Plans for sustained engagement or future collaboration

Inclusion and Accessibility

- EDI considerations embedded in planning and delivery
- Inclusive approach to participation

Impact and Legacy

- Clearly articulated outcomes and intended impact
- Contribution to Hub visibility and influence
- Potential for long-term value or reuse of outputs and resources

Panel Review: Reviews will be passed on to the Decision Panel and will be coordinated by the Hub Management Team. The Director of the Hub, the Research Impact Director, the EDI and Responsible Innovation directors, and 2 Co-Is as well as an external representative from industry to provide insight on practical relevance and collaborative value. Panel members will participate in a final review meeting to discuss all applications, agree combined scores, and select successful proposals.

Outcome Notification: Following the panel meeting, applicants will be informed of the outcome. Successful applicants will proceed to the award stage. Unsuccessful

applicants may request feedback, which will be provided as a summary of the panel's combined comments.

10. Award Process

Offer Letters and Acceptance: Successful applicants will receive a formal offer letter detailing the terms of the award, including reporting requirements and any specific conditions. The lead applicant, and where applicable a supervisor or budget holder, must review and sign the offer letter to confirm acceptance. Signed documents should be returned within two weeks of receipt.

Project Initiation: Project leads will be invited to an induction meeting with the Hub Support Team. This session will outline expectations, key timelines, reporting requirements, and the support available throughout the project. Funded activities may begin from the agreed start date stated in the application, provided all required documentation has been submitted.

Processing Funding Claims: Funding will be reimbursed in two stages upon completion of agreed tasks. The project lead should submit a claim form, along with supporting receipts, to the Hub Management Team. Claims will be reviewed to ensure expenditure aligns with the approved budget and eligibility criteria before payment is processed.

11. Post-Award Reporting Requirements

At the conclusion of each activity, the lead applicant must submit the suggested deliverables and a final report to the Hub.

This report should include:

- How the activity delivered the key objectives outlined in the application
- Any risks encountered and how they were managed
- Outcomes, outputs, and impact achieved through stakeholder engagement
- Contribution to the Hub's aims, particularly in advancing Edge AI research and applications
- Evidence of wider benefits for the applicant, collaborators, and stakeholders

- Plans for sustained engagement, follow-on activities, or knowledge exchange
- How EDI and inclusive practices were embedded in the activity
- Data and outputs produced, and how these are being shared or preserved

Deliverables should include:

- at least one research peer-reviewed paper
- a policy brief
- a practice brief or a framework that supports adoption or responsible innovation

Dissemination activities should also include content suitable for online sharing, such as blog posts, digital toolkits, or short videos, to maximise visibility and engagement with wider audiences.

We will also request a short evaluation from any partner or stakeholder organisation involved in the activity. This should be completed by the primary point of contact and should reflect the value of the engagement to their organisation, as well as any potential for future collaboration or knowledge exchange.

12. Contact Information

Applicants are strongly encouraged to make contact early in the application process if they have any questions or uncertainties, particularly regarding eligibility criteria, budget planning, or partnership arrangements.

If you have any questions, please contact: funding@edgeaihub.co.uk.