



UK Research
and Innovation

OPP1305: Transformative Sustainable AI Technologies

Webinar

16 September 2026 | 12:30pm to 1:30pm UK time

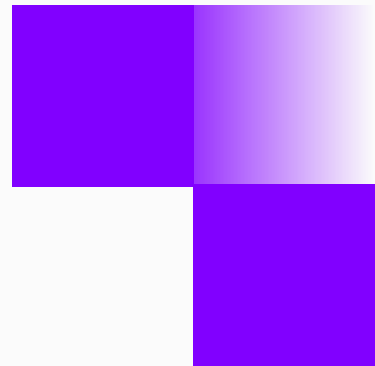
What we will cover

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|----|----------------------------------|--|
| 01 | Purpose and scope | Why the opportunity exists, the ambition sought and what is in scope. |
| 02 | Eligibility and funding | Who can apply, team rules, award parameters and eligible costs. |
| 03 | Building the application | The Funding Service sections, word limits and evidence assessors need. |
| 04 | Assessment and next steps | Distributed Peer Review, decision making, key dates and support. |

Introducing the UKRI IS8 Programmes

- The IS8 Priority Programmes are a new cross-UKRI mechanism intended to strengthen strategic coordination, prioritisation and delivery across areas of national importance. They are being established to support more coordinated, mission-oriented working across UKRI.
- Delivery will continue to rely on distributed expertise and capability across UKRI rather than large centralised delivery teams.

The IS8 Programmes are not intended to replace councils or existing expertise. They are intended to strengthen coordination, alignment and strategic impact across a complex and increasingly interconnected landscape.



The IS8 AI Programme

Our role – To build UK AI capability, accelerate adoption, deliver growth.

The overall vision for the AI IS8 Programme is to:

- 1. Support the UK being a global leader in AI**
- 2. Contribute to UK growth by growing the AI sector**
- 3. Create a coherent Programme across Research and Innovation**

The Programme's role in the AI ecosystem is to intervene in:

- Long-horizon or market missing technology development,
- Shared compute and data infrastructure,
- Areas of strategic UK advantage to support novel markets e.g. AI for Science,
- Priority market areas; AI-Enabled Health & Life Sciences, Advanced Materials with AI and Secure AI for Defence & Autonomy and
- Talent pipelines.

UKRI's AI landscape

- AI-related activity exists across councils, Innovate UK, institutes, infrastructure and strategic partnerships.
- The six pillars below - provide a strategic framing for UKRI AI activity and areas of long-term capability development.

Technology development



AI for Research



Skills and talent



Innovation and adoption



Responsible AI



Data and infrastructure



The Opportunity

Artificial intelligence is transforming research, industry and public services at an unprecedented pace. Yet the rapid growth in the computational requirements of AI is increasing energy demand, resource consumption and environmental impacts. There is an urgent need to develop sustainable AI systems that minimise these costs while maintaining performance and societal benefit.

Inherently more sustainable hardware, algorithms, software and system design, could all be examples of routes to improved efficiency. Such advances in sustainable AI could strengthen national resilience, reduce costs and unlock new economic opportunities for the UK.

We will fund research that fundamentally improves the efficiency, robustness, reliability and long-term maintainability of AI systems, ensuring future AI is sustainable by design with reduced environmental impacts.

£12,050,000

Total fund

£602,500

Maximum full economic cost per award

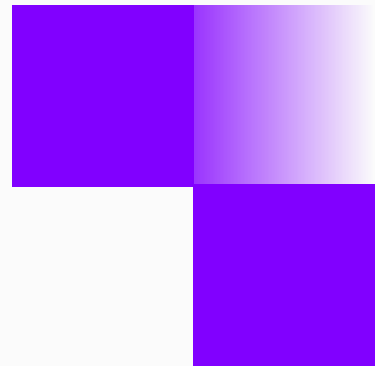
UKRI funds 80%: up to £482,000.

24 months

Maximum project duration

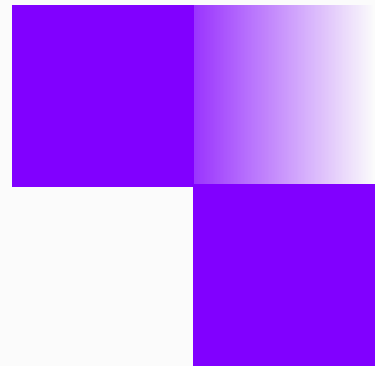
10 Nov

Application deadline



The opportunity aims to

- support potentially transformative, highly novel technologies and tools with the potential to deliver a step change in the sustainability of future AI systems
- develop the foundations of sustainable technologies for the future societal, economic and technological benefits, including new market opportunities for the UK
- strengthen the UK's capability to design and deploy bold, ambitious sustainable AI technologies, ensuring AI contributes positively to both economic growth and environmental sustainability
- enable small-scale, rapid projects that generate foundational insights which can be built on in the future
- deliver a faster process compared to current standard funding routes, while maintaining robust decision making that is proportionate to the level of risk - **Distributed Peer Review will be used for assessment**



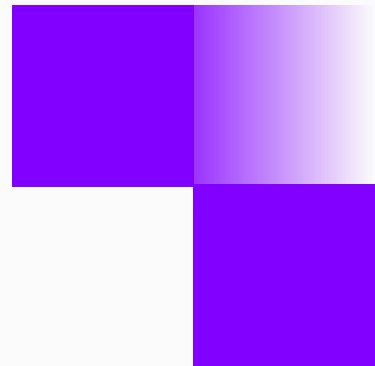
Fit to scheme

STRONG FIT

- aim to disrupt existing areas of sustainable AI research or create new ones
- deliver research with the potential to lead to radically new and disruptive technologies and a step change in the sustainability of future AI systems
- adopt a risk tolerant approach utilising ways of working that encourage and enable transformative outcomes rather than incremental advances
- support an ambitious and capable project team with appropriate breadth and depth of expertise required to achieve the research objectives

WEAK FIT

- produce tangible outcomes (for example, new AI models or spinouts) within two years
- succeed in all their research goals, especially the most risky and ambitious
- avoid failure. Approaches that do not work as intended can still generate important learning and valuable knowledge for the wider research community



Scope

Applications may come from mathematics, computer science, AI and other relevant disciplines.

Sustainable AI goes beyond improving energy efficiency of systems or minimising the consumption of natural or critical resources. Instead, it addresses a variety of factors including:

- environmental impact: minimising carbon footprints, water usage and critical material consumption of AI systems and data centres
- social and ethical impact: ensuring AI systems are developed and deployed responsibly and do not negatively impact quality of life or affected communities
- economic impact: fostering sustainable economic models for societies, rather than exploiting labour or resources in the production and development of systems

The primary focus of the projects should be the development and demonstration of the proposed technology, rather than solely assessing or benchmarking its sustainability performance.

This funding opportunity will focus exclusively on the development of novel AI technologies, computational approaches, methods, tools, architectures and techniques that could significantly improve the sustainability of future AI systems.

Applicants are encouraged to pursue ambitious, high-risk, high-reward research that challenges current approaches and has potential to establish new paradigms of sustainable AI.

Scope

Projects should be driven by novelty aiming to create the next generation of technology, tools or techniques that are sustainable by design.

Examples of topics may include, but are not limited to:

- creation of novel, energy efficient algorithms, architecture, systems or software
- creation of smaller task specific models that benefit the performance of AI systems
- AI systems optimised for resource-constrained environments
- novel hardware and software co-design
- utilising emerging technologies or approaches to develop efficient processors
- hardware that is repairable, easier to disassemble for critical materials recovery or to update the system

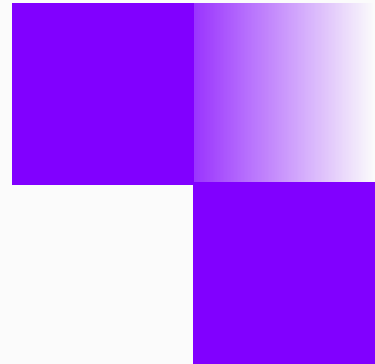
Eligibility

Standard UKRI eligibility applies

Organisations must meet the standard eligibility requirements for UKRI.

Researcher co-leads are encouraged where they made a substantial intellectual contribution and will be engaged in the research.

Joint leadership is allowed, with one administrative project lead at an eligible UK organisation.



Eligibility

INTERNATIONAL RESEARCHERS

- An international researcher may only be a project co-lead (international) through the UKRI-RCN Money Follows Cooperation agreement or the UKRI-IIASA agreement.
- Other international collaborators should be included as project partners.
- UK collaborators outside approved organisations should also be project partners.

PARTNERS AND RESUBMISSIONS

- Project partners may be from industry, academia, government or the third sector, in the UK or overseas.
- Direct and in-kind contributions from partners are encouraged, but are not a condition of eligibility.
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Eligibility

ELIGIBLE COSTS

- Salary contribution for project leads and co-leads
- Research, technical and project management staff
- Research consumables, including compute
- Travel, subsistence and cohort activity costs
- Data preservation, sharing and dissemination
- Estates and indirect costs

NON-ELIGIBLE COSTS

- PhD studentship costs
- Equipment valued above £25,000 per item, including VAT
- Unjustified or disproportionate costs
- Equipment below £25,000 should be entered under Directly incurred - other costs

Application

Assessed area	Required format or limit	Core question
Vision and Approach	PDF: 3 A4 pages + optional 1-page workplan	What will you achieve and how?
Applicant and team capability	1,500 words	Why can this team deliver?
Ethics and RRI	Funding Service response	What issues and implications will be managed?
Resources and cost justification	1,000 words	What is needed and why?
Risk and reward	1,000 words	Why is this speculative and potentially transformative?

Also required: 550-word summary, core team, reviewer nominations, partner information, facilities and relevant declarations

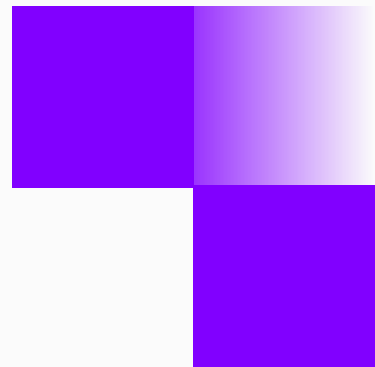
Application

SUMMARY | 550 WORDS

- Write in plain English for policymakers, opinion-formers, the public and the wider research community.
- Cover context, the challenge, aims and objectives, potential applications and benefits.
- Do not include confidential or sensitive information because the summary is normally published.

CORE TEAM

- List one project lead and assign the correct UKRI roles to other members.
- Roles include UK and international co-leads, specialists, enabling staff, associates, technicians and researcher co-leads.
- Public contributors, including people with lived experience, can be added using the Specialist role.
- Describe joint leadership in the capability section, not by naming multiple project leads.



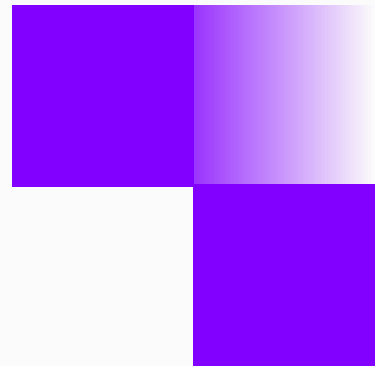
Application

VISION

- Quality and importance within or beyond the field
- Potential to advance understanding or generate new knowledge
- Timeliness in the current context
- Potential impact on research, society, the economy or the environment
- A clear advance in future AI sustainability

APPROACH

- An effective, appropriate and feasible design
- Transparent methods and a reasoned choice of framework
- Risks to delivery and how they will be managed
- Milestones, timelines and an optional diagrammatic workplan
- Routes from outputs to outcomes, supported by the research environment



Assessment: Distributed Peer Review (DPR)

All proposals for the 'Transformative sustainable AI technologies' funding opportunity will undergo DPR.

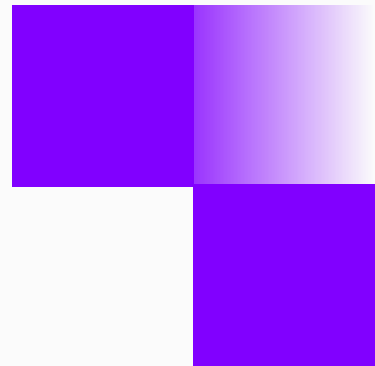
In DPR, **applicants are also assessors** and review other proposals submitted to the same funding opportunity to decide who gets funding.

Please note that by submitting a proposal, you accept the following terms and conditions:

- **all applicant teams will receive around 8 to 10 proposals to review**
- the reviewer team is expected to carefully read all the assigned proposals, score them and provide feedback to the applicants following the rules and guidelines
- failing to provide the reviews by the deadline will lead to the automatic rejection of the proposal submitted by the given applicant. Exceptions may only be permitted in extenuating circumstances.

By applying for this scheme, you are consenting to take part in DPR.

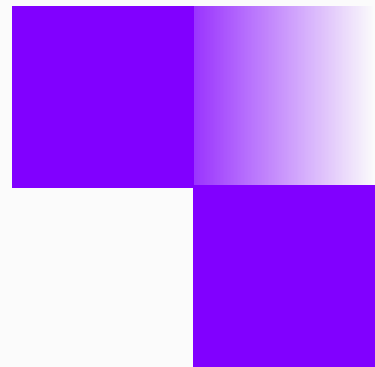
Please do not apply for this opportunity if you would prefer not to take part in the DPR process.



Assessment areas

- vision and approach
- applicant and team capability to deliver
- ethics and responsible research and innovation (RRI)
- resources and cost justification
- risk and reward

Find details of assessment questions and criteria under the 'Application questions' heading in the 'How to apply' section.



Application

Manage responsible research throughout the project

DATA

Address consent, confidentiality, anonymisation, security, reuse and relevant information standards.

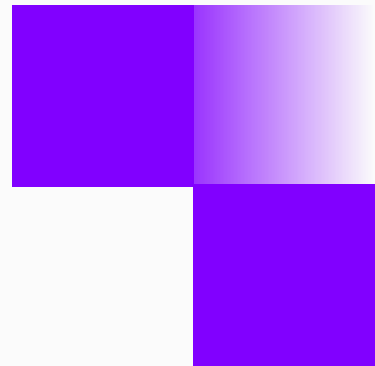
MANDATORY DECLARATIONS

Confirm whether the work involves or affects animals, genetic technologies or GMOs, and human participants in health-related research.

WIDER IMPLICATIONS

Explain how positive societal, environmental and economic benefits will be maximised while negative impacts are reduced.

If you judge that no ethical or RRI issue arises, explain why.



Application

Resources and cost justification | 1,000 words

- Project staff and their contribution
- Significant fieldwork or collaboration travel, excluding routine travel between organisations or conferences
- Any equipment above £25,000
- Unusually large or exceptional consumables
- Facilities and infrastructure costs
- Resources costed as Exceptions

Assessors want to see that the resource request is:

- Comprehensive
- Appropriate and justified
- Optimal for the intended outcomes
- Designed to maximise outcomes and impact

Reasonable adjustment costs can be requested where they arise directly from working on the project.

Application

Risk and reward | 1,000 words

Show how the work could:

- Revolutionise an existing field or create a new one
- Test unproven tools or techniques
- Cause a paradigm shift in thought or knowledge
- Lead to radically new and disruptive technologies
- Otherwise create a step change in sustainable AI

Explain why success could generate significant long-term rewards and contribute to ambitions in the AI Opportunities Action Plan and Industrial Strategy.

Also explain why the idea is too speculative for existing funding routes.

Application

Nominate reviewers | 200 words

Please identify up to two members of the team involved who will participate in the distributed peer review process

For each reviewer, you must provide:

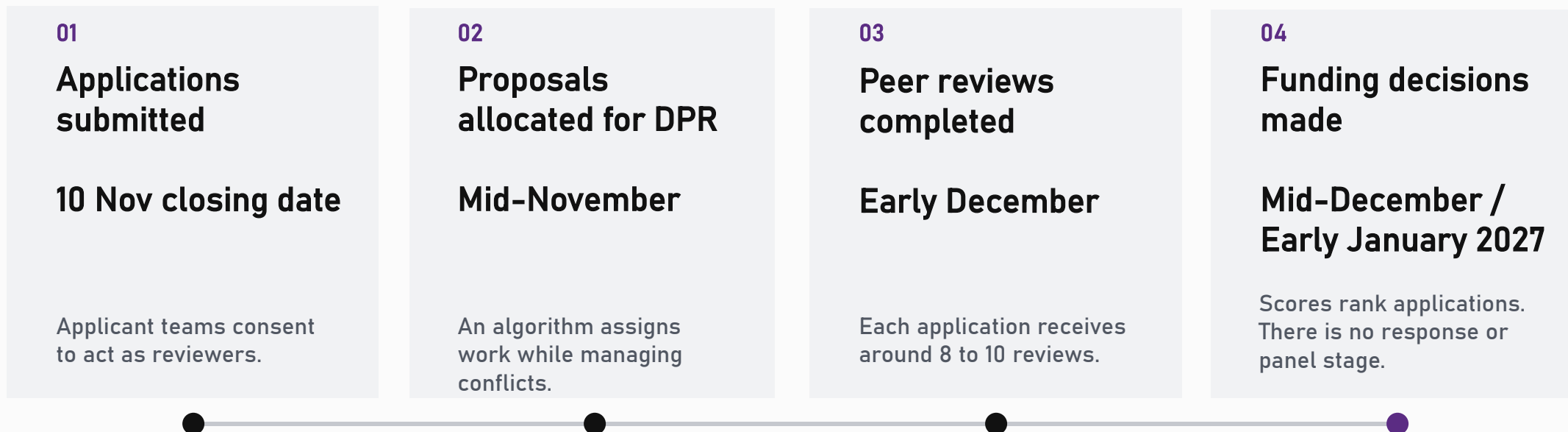
- their name
- their institution
- their email address.
- which UKRI research council their expertise broadly falls within (that is EPSRC, ESRC, AHRC, MRC, BBSRC, NERC or STFC)

The applicant team should only nominate individuals with the capacity, knowledge and confidence to provide constructive, comprehensive, quality reviews.

Note : Failure to provide at least one reviewer (maximum two) will result in your proposal being rejected.

Assessment

Participation in distributed peer review is a condition of applying.



Projects must start on 1 February 2027 and last for up to 24 months.



UK Research
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Questions

Opportunity enquiries

ai.robotics@epsrc.ukri.org

Funding Service support

support@funding-service.ukri.org

01793 547490

Helpdesk hours

Mon-Thu 8:30am-5:00pm

Fri 8:30am-4:30pm

Include the council, opportunity name and application reference in your query. Contact one mailbox at a time.