

Transformative Sustainable AI Technologies FAQ

How is 'Sustainable AI' being defined? Does this just encompass issues of environmental sustainability, or does it broaden to questions of safety and ethics? Does it cover the impact on societal inequalities?

- Sustainable AI is the design, development, deployment and governance of AI systems in ways that maximise long-term economic and societal value while minimising environmental harm, ensuring ethical and inclusive outcomes, and aligning with national strategic priorities such as productivity growth, net zero commitments and responsible innovation. In short, sustainable AI is the practice of developing and using AI to achieve positive environmental, social and governance outcomes while mitigating harm.
- For more detail, please see the “Scope” section under “what we’re looking for”, on the Calls funding opportunity page, where the definition of Sustainable AI is described in more detail.

There appears to be some overlap between the two AI calls: Transformative Sustainable AI Technologies and Explainable AI Technologies. Can you clarify what you see as the priorities and division between these calls?

- The Transformative Sustainable AI Technologies opportunity focuses on developing more sustainable AI technologies, including reducing the environmental and resource costs associated with AI systems.
- The Explainable AI opportunity focuses on fundamental research that could deliver a step change in our ability to understand, interpret and explain the behaviour of future AI systems.
- Applicants are expected to submit to the call that best matches the primary focus of the proposed work.
- The two calls are being assessed and managed separately and there will be no sharing of review pools.
- There is an application limit on the Explainable AI and Transformative Sustainable AI Technologies calls which states that you may be involved in no more than two applications submitted to this funding opportunity and only one of these can be as Project Lead.

Scope

What types of AI infrastructure are eligible?

- The opportunity takes a broad view of AI infrastructure, encompassing the hardware and software that support AI systems. Projects may consider technological innovations across the AI stack, provided they meet the wider aims and requirements of the opportunity and demonstrate the potential for a step change in AI sustainability.

How important is it to specifically quantify the sustainability of the new approach during the project?

- The emphasis must be on transformative improvements to AI sustainability. Detailed measuring and/or quantification of sustainability improvements are welcome and not necessarily needed in the outcome. A credible, even if loosely defined, demonstration of substantial i.e. transformative sustainability gains from a project can be sufficient.

For this Opportunity, does the research on the power delivery hardware feeding AI accelerators, specifically its lifetime under AI workloads and its design for reuse, fall within the IT infrastructure component of the AI value chain?

- Research into novel hardware that supports AI systems can fall within the scope of this opportunity, provided it meets the wider aims and requirements of the opportunity.

Does this funding opportunity encompass efficient operation / task allocation of data and computation centres?

- The emphasis must be on transformative improvements to AI sustainability. Approaches to the efficient allocation and operation of AI computational workloads may be within scope, provided the research is driven by the challenge of making AI more sustainable. Proposals addressing the AI stack can be in scope, but must focus on novel technologies, computational approaches, methods, tools, architectures or techniques that could significantly improve the sustainability of future AI systems. Improvements to wider infrastructure or resource efficiency alone would not be sufficient unless there is a clear and demonstrable contribution to AI sustainability.

Does the Opportunity cover the full processing continuum, including IoT/Edge/HPC systems, or only high-capacity infrastructure such as HPC/AI Factories?

- The Opportunity isn't limited to HPC or AI Factories etc. We are interested in technological innovation across the AI stack, so research involving IoT, edge computing, distributed systems or HPC could potentially be in scope. The key consideration is whether the research has the potential to deliver a transformative, step-change improvement in the sustainability of future AI systems.

Eligibility

For an early-career researcher, if they submit this proposal as a project lead or a co-lead, would it affect their eligibility for the New Investigator Award?

- If ECRs are applying as project led, the Transformative Sustainable AI Technologies call will make them ineligible for the NIA.
- However, including an early-career colleague as a Project Co-Lead on the Transformative Sustainable AI Technologies application will not automatically affect their future NIA eligibility. If the application is unsuccessful, they remain fully eligible. If it is successful, they can remain eligible as long as their share of the funding and supervised PDRA time stays below the relevant research independence thresholds as listed under NIA eligibility.

Can a UK SME receive funding directly under this Opportunity for substantive R&D and technical staff costs, or can companies only participate as project partners?

- We encourage you to check your organisation's eligibility criteria. Generally, SMEs are ineligible to receive this type of funding. SMEs may participate as project partners and contribute to the project as such.

What organisations are eligible for this Opportunity? For example, would the NHS be eligible?

- Standard UKRI eligibility applies to this call. read more on our organisation eligibility for details here. [Organisation eligibility – UKRI](#)

Distributed Peer Review (DPR)

DPR will be a new approach for most applicant teams, and there will be a wide range of experience with all types of reviewing. Will there be training provided, beyond the guidance document?

- The use of distributed peer review (DPR) in this opportunity reflects UKRI's commitment to testing innovative approaches to funding and assessment that can support appropriate risk-taking, faster decision-making, and a more adaptive funding system.
- No additional training is planned beyond the published DPR rules and guidance documents. Applicants and nominated reviewers are therefore encouraged to familiarise themselves with the guidance provided as part of the funding opportunity.

Is there going to be a panel after the DPR process has taken place and/or an opportunity for applicants to respond to the reviews?

- No. For this funding opportunity there will be no Applicant Response stage, and no Expert/Prioritisation Panel stage. Funding decisions will be made by UKRI following the Distributed Peer Review stage. Applicants will receive the reviews of their application but will not be invited submit an applicant response.

How will assessors distinguish a genuinely transformative proposal from a strong but more incremental research project under this call?

- The key distinction is the potential for a step change. We're looking for ambitious, high-risk research that could significantly change what's possible in Sustainable AI, rather than simply making an existing technology or approach a little more efficient. Assessors will be considering this.

Does the minimum of one reviewer include the Project Lead?

- Teams must nominate either one or two individuals who will act as peer reviewers in the Distributed Peer Review process. This should be the Project Lead, optionally together with a Project Co-lead.
- The applicant team should only nominate individuals with the capacity, knowledge and confidence to provide constructive, comprehensive, quality reviews.

How will Distributed Peer Review accommodate unconventional interdisciplinary proposals, particularly where reviewers disagree strongly about their potential?

- An in-house program will be used to match reviewers with applications, and there is an expertise-matching component to this. The large number of reviews per application that Distributed Peer Review delivers should provide a breadth of views. Reviews will be written in isolation by the applicant-reviewers, so reviewers will not be collaborating when writing their reviews. Differing opinions are to be expected. We will apply checks and balances to ensure that review scoring is fair.

General

How many awards do you expect to make for this Opportunity? The total fund is stated at ~£12M which suggests 20 awards of ~£600K.

- We have budgeted up to £12,050,000M FEC, of which we will fund 80%. The maximum amount of funding that can be applied for is £602,500 FEC, but that is a limit, not a target. Applications can apply for less funding than that, but not more. Given the total fund available, we anticipate making approximately 20 awards.

Given the fixed 01 February 2027 start date, what flexibility is there if a PDRA hired on the project cannot actually start on that date?

- A PDRA does not need to start on 01 February 2027 and may begin later. However, applicants should explain how the project will still be delivered successfully within the project duration, as reviewers may consider the impact of any delayed recruitment. Your research team make up should be informed by the aims and objectives of your application

Can we have an interdisciplinary project team, and what is the acceptable level?

- Interdisciplinary approaches are welcome. However, we aim to support research that is working towards a demonstrable impact on AI technology and build the UK's capacity to design and deploy Transformative sustainable AI technologies. We will not fund applications that consist of majority non-technical research such as purely social science, legal, policy or ethical studies. It is important to justify the applicant team capability to deliver the proposed work within the application.

Do you consider applications from ECR/MCR PIs supported by more senior academics?

- Yes, this is welcome and all project roles should be clearly explained and justified within the application.

What level of validation or demonstration would you expect by the end of a two-year project?

- The intention is that projects can be high-risk, high-reward. Full success may not be realised within 24 months, and this would be considered an acceptable outcome. This is an opportunity to explore ideas that may not be within scope for funding through other opportunities or mechanisms. We will not pre-define the end level of validation or demonstration; what is appropriate will depend on the nature and starting point of the research, noting that, fundamentally, projects should be high risk, high reward and aiming to create a transformational step-change in Sustainable AI.

What level of preliminary evidence is expected at the application stage?

- There isn't a prescribed level of preliminary evidence expected at the application stage. Given the speculative and high-risk nature of the research we're looking to support, we're not expecting extensive validation at this stage. Applicants should provide sufficient evidence and rationale to demonstrate that the proposed research is credible and has the potential to significantly improve AI sustainability.

If you have any further questions, please contact AI.Robotics@epsrc.ukri.org