



UK Research
and Innovation

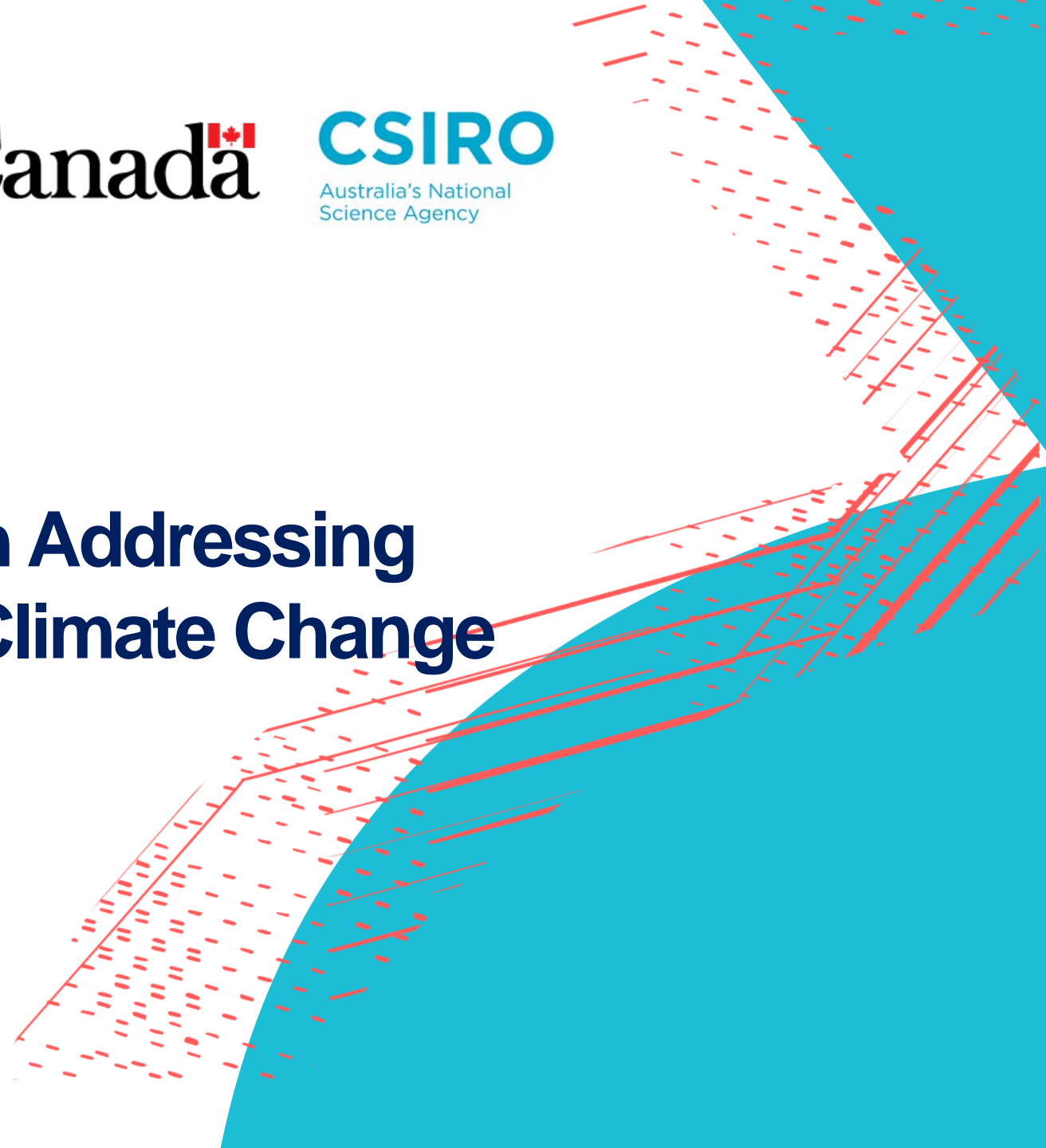


Canada

CSIRO
Australia's National
Science Agency

Global Centers Use-Inspired Research Addressing Global Challenges in Climate Change and Clean Energy

UKRI Webinar
01 March 2023, 15:00



Welcome from UKRI

Global Centers: Use-Inspired Research Addressing Global Challenges in Climate Change and Clean Energy

- UKRI Webinar
- 01 March 2023, 15:00

- The webinar will start at approximately 15:05
- Technical difficulties: email energy@epsrc.ukri.org
- Make connections with those on the webinar by introducing yourself, your organisation and your area of interest via the chat function
- Submit questions through the Zoom Q&A function
- Individual specific questions: better to email us at energy@epsrc.ukri.org
- Webinar is being recorded
- Answers to submitted questions will be published on the funding opportunity page after the third webinar
- Full details of the call are on the NSF funding opportunity page with UKRI specifics on the UKRI funding opportunity page

The Partners and The Programme

- The Global Centers programme is an NSF-led effort, implemented in partnership with like-minded international funders.
- The programme encourages and supports large-scale collaborative research on **use-inspired themes in clean energy and climate change** which foster solutions to address the global climate crisis.
- For this opportunity, NSF have partnered with:
 - Australia: CSIRO
 - Canada: NSERC and SSHRC
 - UK: UKRI

NSF page:

<https://beta.nsf.gov/funding/opportunities/global-centers-gc>

UKRI page: <https://www.ukri.org/opportunity/global-centers-in-clean-energy-and-climate-change/>



Canada



Global Centers: Overview

- Climate change is a **critical global emergency**
- Severe impacts have included:
 - Antarctica sea-ice levels reaching a critical state
 - Cataclysmic disruptive changes in regional weather patterns
 - Food supply chain disruption and food shortages
 - Increasing loss of biodiversity which alters the structure and function of ecosystems
 - Water scarcity
- Developing solutions to overcome, adapt and mitigate against climate change will rely on:
 - Decarbonization efforts through switching to novel clean energy solutions
 - Deploying technologies that directly remove CO₂ from the atmosphere
 - Mitigating the impacts of climate change by biodiversity conservation and protection
 - Improving the resilience and sustainability of our natural and physical environment and society
- International collaboration to develop globally applicable solutions is **essential**.



Global Centers: Characteristics

- **Agility**
 - Research and activities may evolve due to focus.
- **Interdisciplinary**
 - Tackling challenges that are larger in scale than can be accomplished by a single institution or a single discipline
- **Use-inspired research**
 - Directed by an **ambitious research agenda** to address a societal challenge of regional or global importance related to clean energy and climate change that requires international collaboration and **multi-stakeholder engagement**
- **Vision and focus**
 - Driven by a bold vision for high-impact, use-inspired research
 - Clear defined research focus
 - Demonstrates how international collaboration will produce innovative use-inspired outcomes in research



Global Centers: Scope

- Proposals are accepted in any field or combination of fields supported by NSF.
- The NSF solicitation outlines areas that may be included in the themes of clean energy and climate change.
- This is not an exhaustive list.
- UKRI has set out clear interests under each of these themes.



Track 1: Global Center implementation

- This route will support interdisciplinary proposals to advance use-inspired research in clean energy and climate change that involve US teams supported by NSF, in collaboration with research teams supported by funding agencies based in Australia, Canada, or the UK.
- UKRI budget: up to £18 million
- Project duration: up to 5 years
- Project value: £5,000,000 (80% full economic cost) for UK researchers



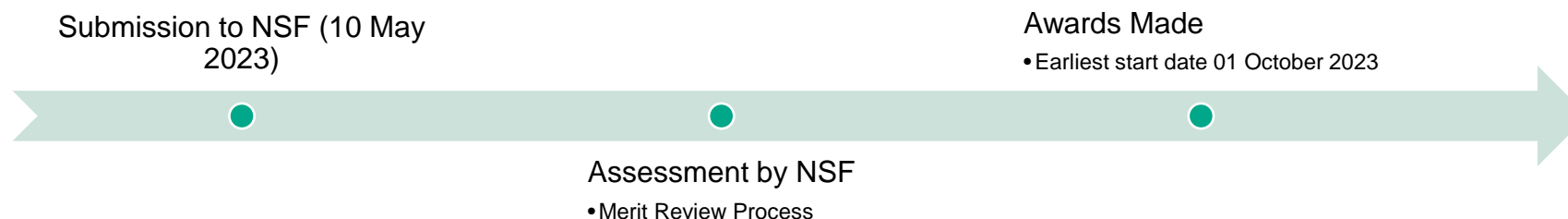
Eligibility

- UK researchers must collaborate with at least one NSF-eligible US researcher.
- UK researchers must meet UKRI eligibility requirements.
- NSF intends to return, without review, proposals that do not meet the eligibility requirements of any of the involved funding agencies. Only applications deemed eligible will proceed to merit assessment.



Global Centers: Timeline

Timeline	Date
Opening date	07 February 2023
Webinar	01 March 2023, 15:00 UK time
Closing date – NSF led submission	10 May 2023, at local time of submitting US PI
Closing date – UKRI specific documentation	11 May 2023, 16:00 UK time
Earliest start date	01 October 2023

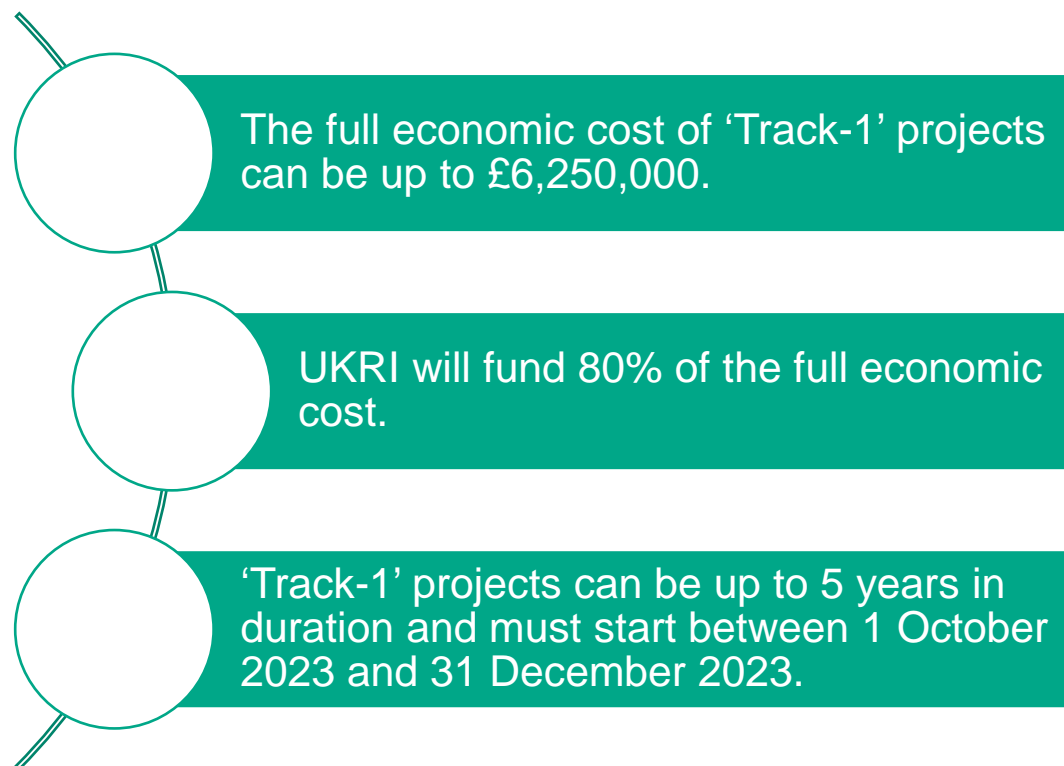


Merit Review Process led by NSF

- Proposals will be assessed using the following criteria:
 - **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge.
 - **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.
- In addition to the above, the following specific criteria will be used to assess Global Centre proposals:
 - Interdisciplinarity
 - Use-inspired nature
 - International partnership
 - Roles of stakeholders
 - Fostering diversity, equity, inclusion and accessibility (DEIA)
 - Vision for growth

UKRI Specifics: Eligible Costs

- Normal costs associated in running a standard research grant may be applied for
- Expected to request the funding required to achieve the objectives and outcomes proposed
- This may include, but is not limited to, funding for:
 - PI and Co-I(s) time
 - research staff costs and associated consumables
 - travel and subsistence
 - supporting impact activities
 - supporting networking and community building activities, to enable multi-stakeholder engagement and collaboration
 - supporting governance, monitoring and evaluation activities



UKRI Specifics: Submission to UKRI

Case for support: full application package submitted by the consortium to NSF

Justification of resources (2 pages): resources requested from UKRI for the UK team only

CVs (up to 2 A4 sides each) for named: PDRA, researcher Co-Is, visiting researchers

Letters of support from all project partners included in the Je-S form (no page limit)

Technical assessments for facilities listed as requiring one in the Je-S guidance (no page limit)

Cover letter (optional attachment, no page limit)

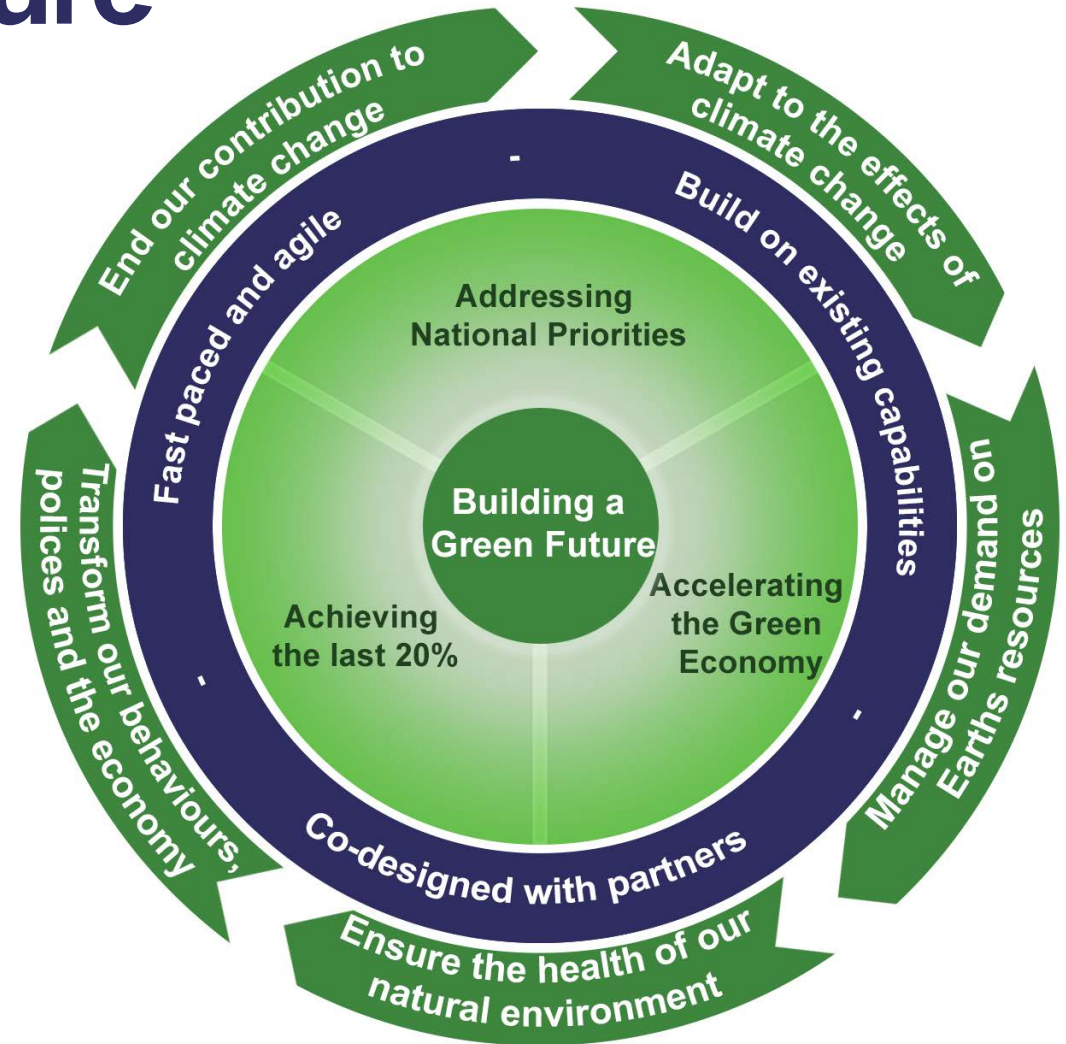
Deadlines

- 10th May 2023 – Submission to NSF at the local time of the US PI submitting
- **11th May 2023 – Submission to UKRI at 4pm UK time**

Building a Green Future

UKRI will harness the UK's research and innovation to address environmental challenges, overcoming technological, social and market barriers to deliver business growth, increased productivity and a prosperous green future for all of the UK

<https://www.ukri.org/what-we-offer/browse-our-areas-of-investment-and-support/building-a-green-future/>



Working in partnership



With Business - *Accelerate the Green Economy*

Develop, deploy and scale up market-ready solutions; creating conditions for inward private investment through clustering UKRI and Government funding in businesses, skills and expertise.



With Government - *Address National Priorities*

Partner with Government to co-create research and innovation programmes addressing strategic priorities for the nation.



Internationally - *Achieving the last 20%*

Build international capability to address fundamental problems of Net Zero, requiring long-term investment through best-with-best research collaborations.

UKRI Scope

- UKRI is particularly interested in supporting **interdisciplinary research and innovation** in the solutions which will be needed to **overcome the last 20% of emissions** we do not yet have a pathway to mitigate
- The UK component of the global centres proposal must be at **least 65% focused on delivering clean energy solutions**
- UK proposals can either focus on **clean energy** or **clean energy and climate change solutions**



UKRI Scope



Clean Energy – The Last 20%

Negative emission technologies

Systems approaches to tackling the ‘final 20%’

Targeting the difficult to decarbonise

Removing the barriers to uptake of solutions

Discovery and development of new negative emissions technologies (NETs) which are able to remove harmful pollutants from our atmosphere at low concentrations

Adoption of a systems approach, whereby technologies, behaviours and interactions are at the forefront of achieving the final 20% of emission reduction

Hardest to abate areas and securing decarbonisation and emissions reduction in the critical industries

Green choices and green behaviours, to technological and scientific solutions to barriers to current approaches

UKRI Scope

These ‘use inspired’ challenges recognise that our environment is both a source and a sink of GHG and our ecosystems are highly vulnerable to climate change and extreme weather events, leading to land degradation and loss in biodiversity and ecosystem services.

UKRI is particularly interested in international interdisciplinary collaborations to improve the resilience and sustainability of our **natural and physical environment and the societal benefits to address climate change.**

UKRI are keen to encourage UK participation in the areas listed in the NSF solicitation some examples here such on the right.



Climate Change

circular bioeconomy for food, feed, energy, and products

biodiversity conservation and protection

climate ready, resilient agriculture, aquaculture, fisheries

climate-ready resilient cities and infrastructures

economics, policy, social sciences for climate-resilience solutions

interplay of engineered solutions to nature based solutions

UKRI Scope – cross cutting

- These themes include cross cutting considerations:
 - the sustainability and circularity of the solutions proposed
 - solutions need to be able to be implemented in a warmer climate with more extreme weather patterns
 - energy demand reduction opportunities as energy efficiency and usage behaviours (green choices and green behaviours) will change as we decarbonise
 - systems considerations
 - solutions that also secure co-benefits such as enhanced biodiversity, resilient ecosystem services, improved air quality, health, and supply chain resilience for example

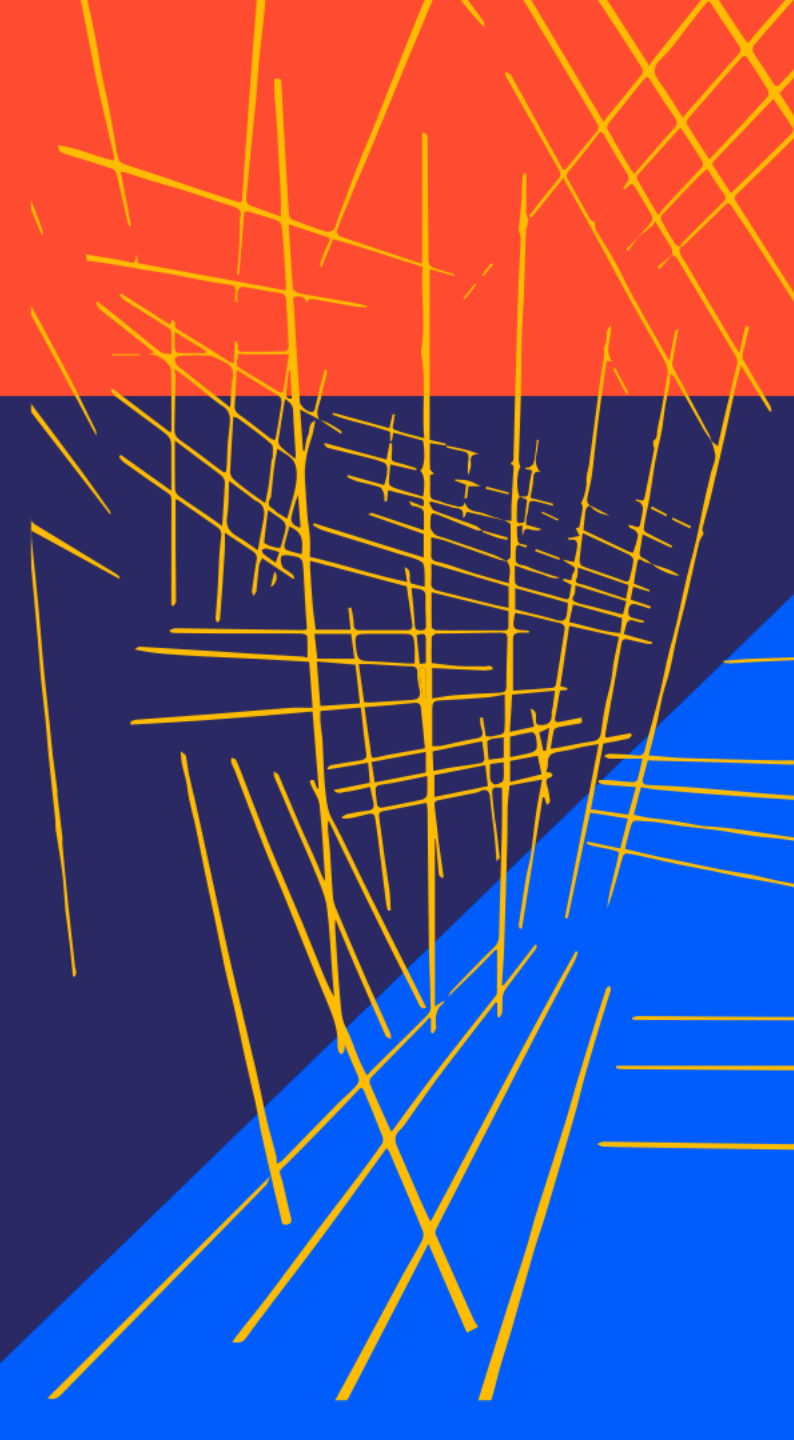




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Panel Q&A Session

**Ethan Tull, EPSRC
Derek Craig, EPSRC
Susie Stevenson, ESRC
Sarah Webb, NERC
Harriet Trewin, BBSRC
Ruqaiyah Patel, EPSRC**





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Questions?





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Thank you



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