

UK Research and Innovation

Quick Reference

Please note that you must read the full Call document for guidance before submitting your proposal

UKRI Call: Interdisciplinary Circular Economy Centres

Call type: Invitation for outline proposals (first stage) followed by submission of invited full proposals (second stage)

Closing date: 16:00 05 December 2019

Funding Available: Up to £22.5m available in total for up to five Centres, each conducting interdisciplinary research that accelerates understanding and solutions to enable circularity of a resource flow (materials, material systems, products and/or services), including consideration of (multi-) sector contexts.

Note: there is a concurrent call for a Circular Economy Coordinator – we recommend that potential applicants read both call documents to familiarise themselves with the scope and format of the overall programme.

How to apply: This call has a two-stage process. The first stage invites outline proposals for a Centre focused on a resource flow with consideration of (multi-) sector contexts. Applicants are expected to have assembled the majority of the core interdisciplinary team but will have an opportunity to add to membership before the second stage, if their outline proposal is prioritised at this first stage; the outline stage is primarily focused on the case for the importance of the chosen resource flow. **At this first stage**, applicants must:

- Submit a Notification of Intent to Submit by 16.00 on 19 November 2019 via the form on the call page, and;
- Submit an outline proposal by 16.00 on 05 December 2019 via Je-S.

Principal Investigators of 8-12 outline proposals will then be invited to submit a full proposal at the **second stage**, details of which are provided in Annex 1.

Assessment Process: Outline proposals will be considered by an independent, interdisciplinary assessment panel. Invited full proposals will undergo postal peer review, followed by an interview panel, resulting in a rank ordered list.

Key Dates:

Activity	Date
Information webinars	17 October, 11.00; 22 October, 13.30
Intent to submit deadline	19 November 2019, 16.00
Outline proposal deadline	05 December 2019, 16.00

Outline assessment panel	w/c 13 January 2020
Invitation to submit full proposals	w/c 20 January 2020
Full proposal submission deadline	21 April 2020, 16.00 (TBC)
Postal peer review	May - June 2020
Full proposal interview panel	July 2020
Funding decision communicated	early August 2020
Grant start date	1 October 2020

Additional information:

The UK has potential to grow and prosper sustainably by transitioning to a more circular economy, where resources are processed with sustainability, waste minimisation and efficiency in mind, and where product lifecycles are optimised to generate more economic and social value including by recycling and/or reuse. However, this transition requires clear, evidence-based, implementation pathways, with broad underpinning research evidence. It must provide not only technical, technological and scientific advances, but also the social, behavioural, cultural, ethical, environmental, economic, legal and regulatory understanding required to support a successful transition. The UK Government has committed to delivering a more resource efficient economy in its Resources and Waste Strategy for England.

To address this, the £30 million UK Research and Innovation (UKRI) Interdisciplinary Circular Economy programme has been developed by the Arts and Humanities Research Council (AHRC), Biotechnology and Biological Sciences Research Council (BBSRC), Economic and Social Research Council (ESRC), Engineering and Physical Sciences Research Council (EPSRC), Natural Environment Research Council (NERC), and Innovate UK. The programme will support up to five interdisciplinary Centres via this £22.5m call (alongside £2.5m of future funding to enable small and medium enterprise involvement with Centres). The programme will also support a Coordinator and integration Hub.

Interdisciplinary Centres will be expected to elicit at least £2m of Project Partner contributions (in-kind or cash) over the lifetime of the Centre.

UKRI welcomes and encourages applications led by and involving any discipline. This call is being run by EPSRC on behalf of the UKRI Councils listed above.

There are specific requirements, such as on interdisciplinarity, spend dates and monitoring & evaluation. These will be reflected in specific grant conditions, which those funded will need to comply with.

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UK Research and Innovation

UKRI Call: Interdisciplinary Circular Economy Centres

**Call type: Invitation for outline proposals (first stage) followed by
submission of invited full proposals (second stage)**

Closing date: 16:00 05 December 2019

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Summary

UK Research and Innovation (UKRI) is inviting outline proposals for Interdisciplinary Circular Economy Centres, each focused on a nationally important resource flow. The term “resource flow” is defined broadly in the Scope section, but refers to processes involved in how a resource (materials, material systems, products and/or services) transforms between states as it flows through the system. The research should take a whole-systems approach, including considerations of the resource’s related waste streams and (re-)uses, within the range of (multi-) sector contexts being considered by the Centre.

Outline proposals will be prioritised, with approximately 8 to 12 invited to submit a full proposal for an Interdisciplinary Circular Economy Centre. Up to £22.5m will be available in total to fund up to five Centres, lasting up to 48 months, expected to be from 1 October 2020.

The programme is designed to provide the underpinning research understanding to enable the transition to a more circular economy. Outline proposals should highlight why the proposed resource flow is nationally important and how interdisciplinary investigation would enable the implementation of effective, evidence-backed solutions that improve the sustainability of economic growth, supporting better social, economic and environmental outcomes. This includes the role of government to achieve this transition, the broader cross-sector context of the resource flow, and key barriers to achieving these objectives.

Applicants should outline how their approach would enable interdisciplinary research and innovation. At outline stage, applicants should have identified the majority of the core interdisciplinary team that can provide relevant and diverse expertise. However, it is not expected that consortia will be fully formed at this stage and there will be opportunities to expand it if invited to submit a full proposal. **Multi- or single institution bids are both welcomed.**

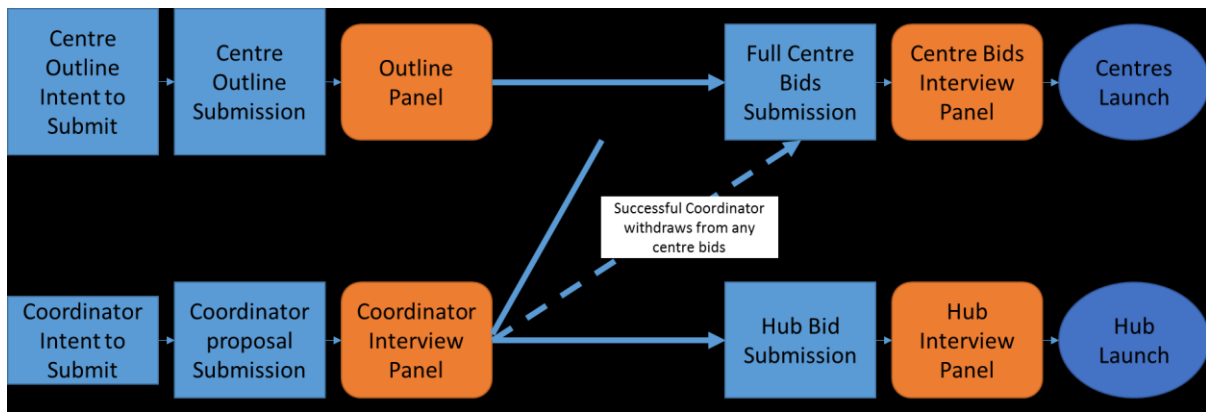
Centres will need to focus on interdisciplinary research to enable a more circular economy, engaging directly with businesses across sectors, policy-makers, the third sector, consumers and other relevant communities and stakeholders. Centres are expected to investigate the benefits, risks, costs and trade-offs associated with adopting a more circular approach. The focus on circular economy in this call does not presuppose how best to deliver environmental, social, cultural, economic and technical benefits for any particular resource flow.

Centres will be expected to secure at least £2m (cash or in-kind) in contributions from industrial or other partners over their lifetime.

Beyond the up to £22.5m available for Centres through this call, a further £2.5m will be available through future Innovate UK competitions for small and medium enterprise (SME) involvement with the Centres. This funding will enable SMEs to engage with the Centres and conduct collaborative research and development aligned to Centres' interests.

Centres will be part of the £30 million UKRI Interdisciplinary Circular Economy programme, collaboratively developed by the Arts and Humanities Research Council (AHRC), Biotechnology and Biological Sciences Research Council (BBSRC), Economic and Social Research Council (ESRC), Engineering and Physical Sciences Research Council (EPSRC), Natural Environment Research Council (NERC), and Innovate UK. The programme will support up to five interdisciplinary Centres through this call, a Coordinator and Integration Hub, and UKRI delivery of community building events.

UKRI are running a concurrent call to appoint the Circular Economy Coordinator, who will build a proposal for the Interdisciplinary Circular Economy Hub, providing national leadership and coordination, and driving knowledge exchange across the Centres and wider research and innovation landscape. It is expected that Centres will work with the Hub (and vice versa). Note that UKRI **does not** expect the appointed Circular Economy Coordinator to be an Investigator on a Circular Economy Centre. The successful Coordinator will therefore have to withdraw from any Centre bids before submission of full Centre proposals.



A mandatory Notification of Intent to Submit for this first stage must be submitted via the call page before **16:00 on 19 November 2019**. Applicants that have not registered an Intent to Submit will have their applications rejected.

This is the first part of a two-stage process. Outline proposals will be assessed at a sift panel in w/c 13 January 2020. It is expected that 8-12 Principal Investigators will be invited to lead the development of a full proposal (the second stage), and UKRI will aim to inform applicants of the outcome within two weeks of the panel. Anyone involved in outlines that are not prioritised will be encouraged to engage with those that are prioritised, where appropriate, as the full stage proposal interdisciplinary consortia are scoped and developed.

UKRI will organise, in collaboration with the successful Coordinator, consortium building workshops following the outline assessment panel, bringing together applicants invited to submit a full proposal, and the wider academic, industry, third sector and policy-making community. Workshops will provide further briefing on the overall programme and enable networking before the submission of full proposals. Applicants invited to submit a full proposal are expected to use the workshops to broaden and enhance their project teams as appropriate and in response to panel feedback, and to develop and strengthen links with users.

Background

The circular economy opportunity

Links to key policy, evidence and other reference documents (including those referred to in this section) can be found in Annex 2.

The UK economy is currently too linear: virgin raw material resources are turned into products, used and often disposed of as waste. Without significant change in how resources are managed, raw material consumption is set almost to double by 2060 (OECD – Global Material Resources Outlook to 2060) as the global economy expands and living standards rise. This will increase pressure on the environment even more so than today.

The UK Government recognises the benefits of adopting more circular approaches in several key strategies:

- In the Industrial Strategy, Government set its ambition to double resource productivity by 2050 and work towards zero avoidable waste by 2050; the Growing the Bioeconomy strategy sets out the opportunity for the bioeconomy to support these aims.

- In the Clean Growth Strategy, Government announced their aim to work towards zero food waste to landfill by 2030.
- In the 25 Year Environment Plan, Government announced it would work towards zero avoidable plastic waste by 2042, reform producer responsibility schemes and accelerate the shift to consistent recycling collections.
- The Resources and Waste Strategy for England sets out the UK Government's commitment to a more resource efficient economy, where resource usage is optimised and waste avoided.

The overarching objective of the Government's Resources and Waste Strategy is to reduce adverse impacts of resource use on natural capital – from extraction, disposal and greenhouse gas emissions associated with production, consumption and waste management. There are also resource security considerations. The Strategy states that the Government's preferred model is a circular economy approach. It brings out the importance of the waste hierarchy in achieving this goal, placing emphasis on preventing waste, then reuse followed by recycling/material recovery, waste to energy and landfill.

The programme also aligns with the goals of the Scottish Government's Zero Waste Plan, the Environment (Wales) Act, and the Investment Strategy NI.

A shift to a more circular economy, where resources are processed with sustainability, waste minimisation and efficiency in mind and where products are designed to encourage optimal utilisation and then recycling/repurposing/reuse, provides an opportunity for the UK to achieve more sustainable and clean economic growth and prosperity. While all predictions are uncertain, the circular economy value opportunity has been estimated as being worth \$4.5 trillion worldwide by 2030 (Accenture).

Key aspects of a circular economy can include:

- resource efficiency in production through greater use of industrial symbiosis systems;
- design of products so they are durable, repairable and recyclable or for buildings, to be repurposable and disassemblable;
- systems for sharing, re-use and resale including product servitisation systems;
- material substitution, recovery and recycling.

A more circular economy can achieve greater sustainability and security of material supply and leave economic activity less vulnerable to virgin raw material price fluctuations or supply shortages. It can lead to development of innovative processes, systems and products that use resources more productively, and minimise waste. A more circular economy reduces pressure on natural capital stocks and on the environment as a waste sink, with potential environmental and social benefits such as improvements in health, wellbeing and natural habitats.

Transition to a circular economy requires significant advances in current knowledge and understanding. It requires the ability to understand and reconfigure whole-systems and change business practices, supply chains and

market structures. It also requires knowledge of how people experience and engage with resources and products and what influences their behaviour. It must address the implications of how new business models and approaches would be financed and how these should interact with the regulatory framework. Any outcomes need to also consider the ethical, public acceptability and responsible innovation aspects from the start of the research activities.

Importantly, consideration also needs to be given to the risks and trade-offs associated with the circular economy. These include the consequences for certain sectors and employment levels, how circularity relates to product safety, considerations of environmental impact of new products and processes, and how the risks can be mitigated and solutions identified to enable a stable transition. Circularity is appropriate where it leads to the desired outcomes, and does not cause adverse impacts such as increasing overall greenhouse gas emissions. This consideration of risks and trade-offs as well as benefits needs systems-wide, interdisciplinary thinking, with action across business, government and society.

The UK has an excellent and internationally recognised research base across arts and humanities, biological, engineering, environmental, physical and social sciences. This research base is well-placed to enable the formation of interdisciplinary communities that will be required to address knowledge gaps relating to the circular economy. However, many current activities focus on a specific technology or economic sector, or part of the system – and these individual activities are often not joined up.

Opportunities exist to gain benefits from circular approaches for many resource flows within and across multiple economic sectors. As all resources – and their related waste streams, uses and sector contexts – have their own supply chain and stakeholders, each will have their own particular challenges that will inform where and when new approaches to circularity are appropriate, with a particular need for cross-sectoral learning and collaboration.

Programme objectives

This programme will build an interdisciplinary circular economy research and innovation community that will co-produce knowledge and advance understanding of the whole-system drivers of downstream outcomes. This will support policymakers and industry with frameworks to make more effective evidence-based decisions, and develop clear implementation pathways. It will be used to accelerate innovative solutions needed to enable change, and support strong national leadership and coordination facilitating cross-sector stakeholder engagement.

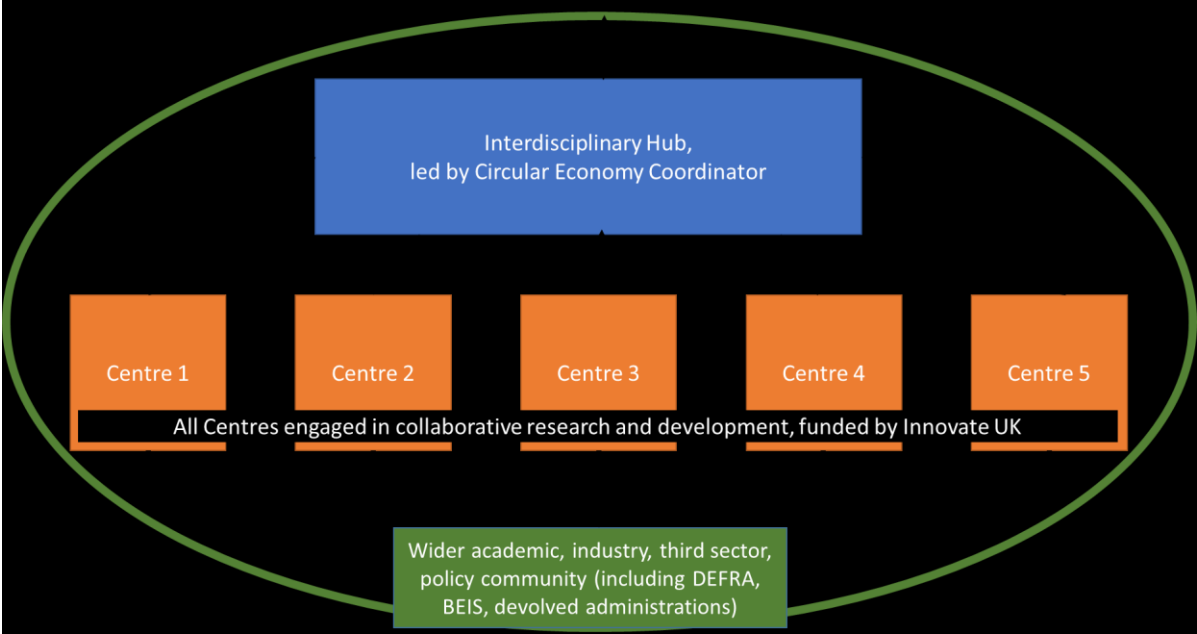
The programme has three key objectives, to:

1. Accelerate understanding and solutions to enable circularity of specific resource flows (including related waste streams and uses, and within sector contexts), by:
 - Identifying opportunities for change at different stages within the whole-system (e.g. material supply, design, value and function, manufacturing, reuse and recycling, resource recovery, waste) and across research, policy, business and individual consumers – and delivering pathways for change within resource flows and related waste

streams and uses, through comprehensive fundamental analysis. It will include consideration within and across sector contexts.

- Enabling identification, quantification and assessment of the environmental, social, cultural, economic, behavioural and technical benefits, risks, costs and trade-offs associated with the circular economy, and how these are valued and understood by different actors
 - Supporting Government, businesses, the third sector and consumers, to improve outcomes, including evidence to inform policy decisions, and to understand the barriers to change and how to overcome them. This will take on board the full range of considerations from environmental and resource security benefits to economic benefits;
 - Accelerating the implementation of new solutions to improve sustainability and reduce environmental impacts (e.g. in design, business/retail models, industrial dynamics, materials, (re)manufacturing and recycling processes, life cycle analysis, natural capital approaches, and cross-cutting technologies), and measures to encourage, incentivise and address barriers to adoption of these solutions (e.g. regulation, taxes and subsidies, behavioural interventions)
 - Offering further understanding of behaviour, values and behavioural change (including causal understanding from experiments) across the whole-system to increase the relevance and uptake of solutions.
 - Providing fundamental understanding of feasible transformation pathways where many agents interact to bring about circularity (consumers, business, third sector, government).
2. Provide national leadership, coordinate and drive knowledge exchange across the programme as a whole and with policy, consumer, third sector and business stakeholders, by:
- Consolidating cross-Centre learning and creating a common understanding of definitions and language for the tools used to deliver circularity (e.g. life cycle analysis, business models, understanding decision making and design);
 - Undertaking comprehensive whole-system research on circularity and examining interrelationships between resource flows and sectors with consideration for specific users and their needs, as well as how new business models can be financed and how regulatory systems may need to evolve;
 - Bringing in expertise from UKRI-wide programmes and resources in emerging fields such as big data, artificial intelligence, the creative economy, and synthetic biology.
3. Ensure research is embedded with stakeholders by involving businesses, policymakers, consumers and society, the third sector, and other affected groups and communities at every part of the programme – including provision of funding to enable SME involvement.

These objectives will be progressed by up to five Centres, and an integration Hub led by a Coordinator. UKRI have published a concurrent call (referred to on the call page for this call) to appoint the Coordinator, and the Coordinator will develop a proposal for the integration Hub. The Hub will play a significant role in terms of cross-cutting aspects of research. Centres will be expected to work closely with the Hub, and vice versa, to deliver against the objectives of the programme, and interact with the wider stakeholder community.



Scope of Centres

Applicants are invited to submit outline proposals for interdisciplinary research Centres that will support the transition to a circular economy for a specific resource flow, as defined below. UKRI expects to fund five Centres, each focused on a different resource flow, their related uses and wider (multi-) sector contexts. This will allow a detailed investigation of the benefits and trade-offs of a more circular economy, with opportunities for cross-sectoral learning and research. Appropriate consideration should be given to sector contexts, in order to analyse whole-systems consequences, barriers (e.g. regulatory), potential economic opportunities and the behaviour of the breadth of relevant actors. The separately-funded integration Hub will then deliver overarching coordination to provide a focus for wider national progress and will work closely with Centres to consider cross-cutting areas and to integrate research and innovation across resource flows. **Research can be from across the breadth of UKRI’s remit.**

Centres are expected to focus on the lifecycle of **one resource flow**. UKRI recognises that different disciplines will interpret this in different ways, and UKRI intends the definition to be broad to allow for interdisciplinary collaboration. What a more “circular” approach looks like is context-dependent and will vary for different resource flows and sector contexts; Centres are expected to investigate the benefits, risks, costs, trade-offs and barriers associated with adopting a more circular approach and the role of actors (be they government, businesses, consumers or others) to achieve desired outcomes. The focus on circular

economy in this call does not presuppose how best to deliver environmental, social, cultural, economic and technical benefits for any particular resource flow, or its related waste streams, uses or sector contexts.

In general, “resource” refers to material assets (materials/materials systems, whether virgin or secondary) used to create products and services, serving a range of functions and delivering varied forms of value, and the components or products derived from the identified material assets. In considering the “resource flow”, Centres are expected to consider all processes involved in how a resource transforms between states from conception to end of life as it flows through the system including consideration of related waste streams. As such, a Centre may focus on multiple materials as part of a wider resource system, such as to investigate potential benefits of material substitution.

Overall a more circular economy should lead to waste minimisation. Nevertheless Centres should cover related waste streams – any discarded substance or object relating to the resource system. The proposed research should therefore consider the full value chain of production for selected resource flows – the activities required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and re-use, recycling, repurposing, remanufacturing or disposal after use.

For this call, universally-applicable themes such as water or energy are not eligible to be the main focus of a proposed Centre, as they act across a number of resource flows. However, UKRI would expect these cross-cutting elements to be considered where they relate to the specific resource flows being studied in each Centre.

Each Centre will explore a resource flow that will be strategically important to future sustainability of the UK economy and quality of life. Centres can focus on either current or emerging resource flows and should demonstrate the strategic importance of the resource flow in terms of:

- The size of the opportunity – how important the resource flow will be to the UK in the longer term, in terms of the market size, environmental and societal impact, relevance in multiple sector contexts etc.
- How the Centre can contribute to UK government commitments relating to resource efficiency, reducing embodied greenhouse gas emissions, and achieving climate change commitments (Net Zero Target) - such as those in the Resources and Waste Strategy for England
- The extent to which interdisciplinary research could have a significant impact on the resource flow, increasing circularity and resource efficiency to a) reduce costs and material use, b) reduce pollution and greenhouse gas emissions, and c) improve quality of life. The research should provide actionable solutions, reducing uncertainty in policymaking and industry, while also offering insight into the benefits, risks and trade-offs across the whole system of transitioning to a more circular approach.

While the focus is on the resource flow’s relevance to the UK, Centres will be expected to consider the global context – for example, global supply chains and markets, international comparisons or the wider impacts of a more circular

economy. This may be directly via the work taking place in the Centre, or in interactions with the Circular Economy Hub.

The scope of this call is intentionally broad and it is for applicants to determine nationally important resource flows, related waste streams and the (multi-) sector contexts. It is expected that applicants will demonstrate why their proposed resource flow is of future strategic importance to the UK, and why adopting a more circular approach to that resource flow now would deliver against the objectives of this programme.

UKRI is not specifying any priorities for resource flows, or sector contexts. However, for illustrative purposes only, examples of resource flows could include (but are not limited to):

- Goods and services (e.g. clothing, consumer electronics, pharmaceuticals, financial and retail services)
- Bioeconomy and natural resources (e.g. biological resources and processes, paper and forestry, rare earth metals, food manufacture, agriculture, or other industrial processes - and their waste and by-products)
- Materials systems and related waste streams (relating to current and or future materials e.g. construction or transport)

For any resource flow, a whole system approach is required. The scope and focus of resource flow and sector context(s) should be selected so that research challenges are appropriate for the expected funding timeframe of up to four years. In considering this, applicants may want to consult (links in Annex 2):

- The outputs of two UKRI workshops held in June 2019
- DEFRA's Resources and Waste Strategy for England, which sets out DEFRA's priorities in this space
- The Government's Bioeconomy strategy, which sets out BEIS's priorities for the bioeconomy

Delivering a step-change towards a more circular economy will rely on the added value created by bringing research disciplines together, ensuring co-creation with supply chain partners and other relevant stakeholders (e.g. relevant sector councils), and securing consumer engagement. Research conducted should be focused on specific real world contexts, but should also be fundamental and experimental (for technologies, focused on technology readiness levels [TRLs] 1-3). Additional funding will be provided via a subsequent Innovate UK call to enable SMEs to engage with this research and pursue business-led collaborative research and development to test out emerging ideas.

A crucial aspect of this call is that the required improvement in outcomes will need interdisciplinary research and innovation. Centres will therefore need a truly interdisciplinary approach and to consider the whole system. They will provide further understanding of behaviour change and the contextual factors which influence the system, enabling the design, production and uptake of acceptable, usable, realistic solutions (noting the focus on fundamental research), delivering the innovative solutions needed, and improving understanding of feasible transformation pathways to bring about circularity and improved outcomes.

Funding available

Up to £22.5 million will be available through the full proposal stage of this call. Centre proposals should not exceed £4.5 million (80% FEC). **Note that this £4.5m does not include indexation**, due to the specific nature of this funding. Applicants will have to account for this (i.e. inflationary increases) when costing their grants. **Budgets are not required at the outline proposal stage.**

Proposals will be for up to 48 months duration, starting on 1 October 2020.

Please note: Due to the nature of this funding, grant extensions will only be considered under exceptional circumstances (in line with the Equality Act 2010) and will require UK Research and Innovation agreement on a case-by-case basis. The Research Organisation remains responsible for compliance with the terms of the Equality Act 2010, including any subsequent amendments introduced while work is in progress, and for ensuring that the expectations set out in the UK Research and Innovation statement of expectations for equality and diversity are met.

UKRI intend to support five Centres each looking at a different resource flow. This is to ensure that in totality, a breadth of research and innovation capability is developed in the UK, enabling cross-sector learning to contribute to delivering a broad-based, more circular economy. All Centres will address their resource flow from an interdisciplinary approach, and proposals are welcome from research areas across the UKRI remit.

Securing the engagement and buy-in of relevant users will be key to the success of the Centres. Support from Project Partners is a requirement for Centres. At the full proposal stage, Centre proposals will be expected to detail the cash and in-kind contributions Project Partners will provide. Each Centre has a target of securing at least £2m in contributions (cash and/or in-kind). It is recognised that different sectors, disciplines, institutions and resource flows will elicit different levels of stakeholder contributions; the £2m figure is not therefore a condition at the point of application, but a target figure over the lifetime of Centres, and across the breadth of the Centre (whether single or multi-institution). Centres that have not met the £2m target may be required via an additional grant condition to elicit additional stakeholder support before the grant mid-point.

Involvement from industry and users of all sizes can facilitate innovation, and can help to ensure the uptake of outputs of the research by users. To reduce financial barriers to SMEs and enable them to participate in the Centres, UKRI will subsequently run competitions worth up to £2.5m for SMEs to engage in collaborative research and development (CR&D). Further details on CR&D funding are provided in Annex 1.

Equality, Diversity and Inclusion

The long term strength of the UK research base depends on harnessing all the available talent. EPSRC expects that equality and diversity is embedded at all levels and in all aspects of research practice and funding policy. We are committed to supporting the research community, offering a range of flexible options which allow applicants to design a package that fits their research goals, career and personal circumstances. This includes career breaks, support for people with caring responsibilities, flexible working and alternative working

patterns. With this in mind, we welcome applications from academics who job share, have a part-time contract, or need flexible working arrangements.

Peer review is central to EPSRC funding decisions; we require expert advice and robust decision making processes for all EPSRC funding initiatives. We are committed to ensuring that fairness is fully reflected in all our funding processes by advancing policy which supports equality, diversity and inclusion. Please see our Equality and Diversity webpages

<https://epsrc.ukri.org/funding/equalitydiversity/> for further information.

Guidance on Journal-based metrics

As part of our commitment to support the recommendations and principles set out by the San Francisco Declaration on Research Assessment (DORA; <https://sfdora.org/read/>), UKRI reviewers and panel members are advised not to use journal-based metrics, such as journal impact factors, as a surrogate measure of the quality of individual research articles, to assess an investigator's contributions, or to make funding decisions.

The content of a paper is more important than publication metrics, or the identity of the journal, in which it was published, especially for early-stage researchers. Reviewers and panel members are encouraged to consider the value and impact of all research outputs (including datasets, software, inventions, patents, preprints, other commercial activities, etc.) in addition to research publications. We advise our peer reviewers and panel members to consider a broad range of impact measures including qualitative indicators of research impact, such as influence on policy and practice.

Equipment

Equipment over £10,000 in value (inclusive of VAT) is not available through this call. Smaller items of equipment (individually under £10,000) should be included under the Directly Incurred - Other Costs heading (at the full proposal stage).

For more information on equipment funding, please see:

<https://epsrc.ukri.org/research/facilities/equipment/>

Eligibility

For this call, standard UKRI eligibility rules apply relating to the status of the organisation and the employment status of individuals applying. Investigators from **all disciplines supported by UKRI** are welcomed and encouraged to apply.

Eligible organisations are Higher Education Institutes, Research Institutes and Research Organisations that can apply for funding from UKRI Research Councils.

A list of eligible organisations to apply to UKRI is provided at:

<https://www.ukri.org/funding/how-to-apply/eligibility/>.

Certain Public Sector Research Establishments (PSREs) are also eligible to apply. If PSREs wishing to apply have not previously applied for UKRI funding and are not currently designated Independent Research Organisation (IRO) status, they may be required to complete an eligibility form; to be eligible, PSREs will need to

demonstrate research capacity and capability relevant to UKRI, as per the standard eligibility rules. PSRE applicants should contact UKRI at the earliest opportunity to discuss their interests in applying (contact details are provided at the start of this call document).

For information on the eligibility of individuals to receive funding, see: <https://epsrc.ukri.org/funding/applicationprocess/fundingguide/eligibility/investigators/>

UKRI expects the choice of investigators to reflect the full scope of the proposal, with each investigator representing a different area of research. Applicants are expected to provide details of how they envisage the proposed Centre would enable interdisciplinary research and innovation. UKRI would expect investigators to direct and coordinate the programme, providing expert guidance and drawing in others as appropriate; the direction of the Centre must encompass the combined expertise available in the wider applicant team, and not solely rely on the experience of the Principal Investigator. At the outline stage the majority of the core interdisciplinary team covering relevant and diverse expertise should have been identified. However, it is not expected that consortia will be fully formed at this stage and there will be opportunities to expand it if invited to submit a full proposal. At the full proposal stage, the team must include the full range of skills and expertise needed to address the call objectives.

Please ensure sufficient time to create Je-S accounts for Investigators who do not currently have one.

Unsuccessful proposals from this call are not subject to the EPSRC repeatedly unsuccessful applicants policy (<https://epsrc.ukri.org/funding/applicationprocess/basics/resubpol/rua/>).

UKRI are running a concurrent call to appoint a Circular Economy Coordinator, who will build a proposal for a Interdisciplinary Circular Economy Hub. UKRI **does not** expect the appointed Circular Economy Coordinator to be an Investigator on a Circular Economy Centre. The successful candidate for Coordinator will therefore have to withdraw from any Centre bids before submission of full Centre proposals. Unsuccessful Coordinator applicants will be eligible to be an Investigator on any full proposal for a Centre and will be encouraged to attend community building events associated with this call.

How to apply

A two-stage application process will be used.

- **Stage 1 – Outline proposals.** Application details are given below. As written below, applicants **must** submit a Notification of Intent to Submit by 16:00 19 November 2019 before submitting their outline proposal by 16:00 05 December 2019.
- **Stage 2 – Full proposal.** Application details are given in Annex 1, for information, but remain subject to change. Further details of the Je-S submission route, including the confirmed full proposal deadline, will be made available to applicants whose outlines are prioritised by the panel. Only applicants invited to submit a full proposal may do so, and no other full Centre proposals will be accepted.

Notification of Intent to Submit an outline proposal

Any applicant intending to submit an outline proposal must submit a Notification of Intent to Submit via the online survey on the call page by 16:00 19 November 2019. This is to facilitate the short timescales for peer review, which are a condition of this funding; Notifications of Intent will not be assessed, and will be used solely to plan the assessment process. The following will be asked for:

- Names, departments and institutions of the Principal and known Co-investigators (note that it is not expected that the full proposal consortium will be known at the outline proposal stage, but the majority of the core interdisciplinary team should be identified)
- A brief description of the proposed resource flow (and where appropriate, key sector contexts) that the Centre will focus on (maximum 100 words)
- A maximum of 200 words detailing the focus area of your bid and how this aligns to the the objectives and requirements of this call.

Applicants that do not register with their Notification of Intent to submit by the deadline will have their applications rejected. Please note that the Notification of Intent to submit is not intended to restrict detail in the final submission, and changes will be allowed; applicants considering major changes to the scope of their Centre or to the project team between the Notification of Intent to submit and the outline proposal closing dates should discuss with UKRI before proceeding. The information in the Notification of Intent to submit will not form part of the peer review process.

Submitting an outline proposal

You should prepare and submit your proposal using the Research Councils' Joint electronic Submission (Je-S) System (<https://je-s.rcuk.ac.uk/>). **Note that this call will only open in Je-S on 23 September 2019.**

Although multi-institutional bids are welcomed, only one Je-S application form should be submitted for a given outline proposal. It is the responsibility of the lead organisation to ensure all the documentation required is submitted with the proposal form. This will also be the case at the full proposal stage.

When adding a new proposal, you should select:

- Council 'EPSRC'
- Document type 'Outline Proposal'
- Scheme 'Outline'
- On the Project Details page you should select the UKRI Call: Interdisciplinary Circular Economy Centres – Outline Proposals.

Note that clicking 'submit document' on your proposal form in Je-S initially submits the proposal to your host organisation's administration, not to UKRI. Please allow sufficient time for your organisation's submission process between

submitting your proposal to them and the call closing date. UKRI must receive your application by 16:00 on 05 December 2019.

Guidance on the types of support that may be sought and advice on the completion of the research proposal forms are given on the EPSRC website (<https://epsrc.ukri.org/funding/applicationprocess/>) which should be consulted when preparing all proposals.

Guidance on writing an outline proposal

The following documents should be submitted with outlines:

- Je-S application form
- Outline Case for support (4 pages)
- Applicant team management track record (2 pages – of type Additional Document)

Do not upload any other attachments. If submitted they will not be sent to the panel.

Outline Case for support

The case for support should be a maximum of four sides of A4 and should use the following headings:

- **Strategic national need for the proposed resource flow**
 - Relevance of the resource flow to the UK's future economy, environment, security and society
 - Benefits to consumers, Government, business (across a range of sector contexts), and other stakeholders
- **Potential for impact of proposed research and innovation**
 - This section should include high-level details on the proposed programme of interdisciplinary research and innovation, such as key research questions and challenges.
- **Vision and approach for convening the interdisciplinary research, innovation and expertise needed (including user engagement)**
 - At the outline stage, applicants are expected to have assembled the majority of the core interdisciplinary team covering a diverse range of experience and expertise. Applicants will be able to add to the team if successfully invited to submit a full Centre proposal.
 - This section should include details on how applicants will engage across the programme and with wider UKRI investments. This approach should consider how equality, diversity and inclusion is embedded in plans for building collaborations, including in how the core interdisciplinary team is recruited, how the diverse range of perspectives in the community will be reflected and encouraged, and how the team will create an inclusive and accessible environment for broad participation.

These headings match the assessment criteria, and it is expected that the case for support addresses all three criteria.

Applicant team management track record – up to 2 A4 pages

There are no headings for this document, recognising both that there will be different proposed management structures, and that teams will evolve between the outline and full proposal stage. Applicants should use the document to highlight the management capabilities of the team as currently constituted – especially in successfully managing complex, interdisciplinary activities. The track record does not have to focus specifically on the Principal Investigator, and should demonstrate the track record across the applicant team.

Applicants should use the document to outline their proposed management structure and demonstrate how this structure and the team composition will enable them to build a consortium for the full Centre proposal, and to manage an interdisciplinary Centre if funded. The structure should reflect the applicants' approach to embedding equality, diversity and inclusion in collaboration building.

Je-S form

Please do not complete any details in the project partner section as this should be left blank. Involvement of collaborators in the bid can, where appropriate, be described in the outline case for support as described above.

Note that budgets are not required at the outline stage, and will only be required for full proposals. As such, applicants should put £0 for any part of the Je-S form where costings are required.

Further guidance on completing the Je-S form can be found at <https://je-s.rcuk.ac.uk/Handbook/pages/GuidanceonCompletingaStandardG/EthicalInformation.htm>. Other relevant guidance includes: EPSRC's policy on animal use in research (<https://www.epsrc.ukri.org/about/standards/animalresearchpolicy/>) and the Responsible Innovation Framework (<https://epsrc.ukri.org/research/framework/>).

Please note that on submission via Je-S, **all** non-PDF documents uploaded are converted to PDF; the use of non-standard fonts may result in errors or font conversion, which could affect the overall length of the document. We recommend that all attachments are uploaded into Je-S as Adobe Acrobat files (PDF) to prevent layout changes to the document.

All attachments must be completed in single-spaced typescript in Arial 11 or another sans serif typeface of equivalent size, with margins of at least 2cm. For example, Arial Narrow is not an allowable font type. Text in embedded diagrams or pictures, numerical formulae or references can be smaller, as long as it is legible. Text in tables and figure labels not within embedded diagrams or pictures should be at least 11 point. For advice on writing proposals see: <https://epsrc.ukri.org/funding/howtoapply/preparing/>

User Engagement Strategy

At the outline proposal stage, applicants should outline their approach to user engagement in the outline Case for Support. Successful applicants at the full proposal stage will be required to develop and execute a strategy for engaging with potential users of the research funded in the project (resources for this

activity can be requested as part of the Pathways to Impact and must be justified in the application). Further information on expectations for the full proposal stage is given in Annex 1.

Assessment process

A two-stage assessment process will be used.

In the event of this call being substantially oversubscribed as to be unmanageable, UKRI reserve the right to modify the assessment process.

Stage 1: Outline proposals

There will be no postal peer review of outline proposals. Outlines will be subject to peer review by an independent, interdisciplinary panel (note: not an interview panel) with the expertise necessary to assess the proposals against the criteria listed, without additional external reviewers' comments. The panel will be selected by UKRI to reflect the call remit and the need for interdisciplinarity.

The panel will be asked to assess the applications against the criteria in this document and make a recommendation on whether they should be considered for invitation to full proposal. In addition to considering the panel's recommendations, UKRI will consider the coverage across disciplines, resource flows and sector contexts when deciding which outline proposals to invite to develop a full proposal. It is expected that 8-12 full proposals will be invited.

The panel will be invited to provide feedback to all outline proposals. In particular, the panel will be encouraged to provide feedback to successful outline applicants on gaps in expertise and/or opportunities to bring in researchers from other disciplines (which may include recommendations on bringing in researchers involved in unsuccessful outlines). Applicants will be expected to take this feedback into account when building a consortium for the full proposal stage.

Stage 2: Full Centre proposals

Provisional details are given in Annex 1, for information, but remain subject to change. Further details will be made available to applicants whose outline proposals are prioritised by the panel.

The aim of the outline stage is to prioritise resource flows of the highest national strategic importance and with the greatest potential for impact from interdisciplinary research and innovation. As such, Investigators on outlines that are not prioritised to submit a full proposal will be encouraged to engage with applicants on outlines that are prioritised. In turn, applicants who are invited to submit a full proposal will be expected to address feedback from the outline panel relating to research or disciplinary gaps and opportunities, and to fully engage during the consortium building stage with the breadth of the interdisciplinary community (beyond their existing networks and collaborators), including applicants whose outlines were not prioritised.

Assessment criteria

Stage 1: Outline proposals

All three criteria are equally weighted.

- **Strategic national need for the proposed resource flow**
 - A clear demonstration of the strategic importance of the proposed resource flow to the UK's future economy, environment, security and society, offering benefits to consumers, Government, business (across sector contexts), and other stakeholders
- **Potential for impact of proposed research and innovation**
 - How interdisciplinary research and innovation relating to the proposed resource flow will contribute to addressing the objectives of this programme, delivering both a) the development of actionable solutions that are capable of being implemented over the lifetime of the Centre, and b) improved environmental, social, economic and/or health outcomes
 - How the proposed research fits with and complements UK research already funded in the area or related areas across the UK Research and Innovation portfolio, and how the research requirement differs from other existing initiatives, funded by UKRI and more broadly
 - Evidence of potential to engage with actors across the whole-system of the proposed resource flow, including consumers, policy-makers and businesses, to deliver activities that will achieve a more circular economy, and enable collaborative research (including cross-sectoral learning) going forward
 - The extent to which existing or historical barriers to collaborative research for the proposed resource flow have been identified and will be overcome
- **Vision and approach for convening the interdisciplinary research, innovation and expertise needed (including user engagement)**
 - Applicant team has a track record of managing complex, interdisciplinary activities
 - A strong approach to forming an interdisciplinary partnership of researchers with the necessary skills (including associated enabling disciplines) to address the challenges identified in this call, and the overall programme ambition of supporting cutting-edge multi- and interdisciplinary research
 - A clear vision for the research, skills and expertise required to address the resource flow, whether in the current applicant team or otherwise, and whether academic or from other stakeholders
 - A demonstration of the applicants' plans to embed equality, diversity and inclusion into delivery of the full Centre bid, including in how the core interdisciplinary team is recruited, how the diverse range of perspectives in the community will be reflected and encouraged, and how the team will create an inclusive and accessible environment for broad participation.

Note: At the outline stage, applicants are expected to have assembled the majority of the core interdisciplinary team but will be able to add to it if

successfully invited to submit a full centre bid. For this criterion, applicants should therefore address the expertise (academic and/or user) required, both in terms of the expertise that already exists among the applicant team, and any gaps in the current team. It is expected that there will be gaps. The panel will provide feedback on gaps (or opportunities to engage with other disciplines) and successful applicants at this stage will be expected to address this feedback during the consortium building stage before full proposal submission.

Stage 2: Full proposals

Proposed assessment criteria for the full stage are given in Annex 1, for information, but remain subject to change. Further details will be made available to applicants whose outline proposals are prioritised by the panel.

Grant additional conditions (GACs)

Centre grants will be subject to the standard UKRI grant conditions; however, the nature of this funding requires further grant additional conditions, such as on interdisciplinarity, spend dates and monitoring & evaluation. Proposed grant additional conditions are given in Annex 1, but remain subject to change and will be confirmed in the full proposal call document.

Moving forward

Submissions to this call will not count towards the EPSRC Repeatedly Unsuccessful Applicants Policy. Further information about the policy can be found at: <https://epsrc.ukri.org/funding/howtoapply/basics/resubpol/rua/>

More detailed information for the full proposal stage will be provided to applicants whose outlines are prioritised, once the outcomes of the outline stage are known.

Key dates

Activity	Date*
Information webinars	17 October, 11.00; 22 October, 13.30
Intent to submit deadline	19 November 2019, 16.00
Outline proposal deadline	05 December 2019, 16.00
Outline assessment panel	w/c 13 January 2020
Invitation to submit full proposals	w/c 20 January 2020
Full proposal submission deadline	21 April 2020 (TBC)
Postal peer review	May – June 2020
Full proposal interview panel	July 2020

Funding decision communicated	Early August 2020
Grant start date	1 October 2020
Grant end date	30 September 2024

*UKRI aims to adhere to the key dates as published; however, there may be exceptions where the panel meetings may have to change due to panel member availability.

Contacts

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Change log

Name	Date	Version	Change
Nick Cooper and Lisa Coles	12.09.2019	1.0	As published
Nick Cooper and Lisa Coles	24.09.2019	1.1	Additional links added to Annex 2; webinar times added.

Appendix 1

Je-S attachments Check List for Outline proposals

Attachment Type	Maximum Page length	Mandatory/Optional	Extra Guidance
Case for Support	Four pages	Mandatory	Case for Support should cover the four headings outlined in the call document.
Applicant team management track record	Two pages	Mandatory	To cover track record as outlined in the call document.

Please ensure you adhere to the above attachment requirements when submitting your proposal. Any missing, over length or unnecessary attachments may result in your proposal being rejected.

Annex 1: Full Centre proposal applications

The information below is provided for information, but is subject to change. Further details will be made available to applicants whose outline proposals are prioritised by the panel.

Principal Investigators (PIs) must have been successful at the outline stage in order to submit an application to the full proposal stage.

Centres are expected to have the same core management team as proposed in the outline proposal but should have built on it and extended it as appropriate to meet the interdisciplinary needs of the call. The PI is not expected to change between the outline and the full proposal bid. The only exception to this would be where the PI has been successful in the parallel Coordinator call and has chosen to take this role instead, as the successful Coordinator cannot be an investigator on any Centre full proposal. In this case the PI should inform UKRI which Co-I has been nominated as a replacement before submitting the full proposal.

Applicants considering major changes to the scope of their Centre between the outline and full proposal stage should discuss with UKRI before proceeding. UKRI reserves the right to reject a full proposal where there have been significant changes that have not been discussed with UKRI.

Scope of Centres

A typical Centre will undertake interdisciplinary whole systems research and would comprise:

- A Principal Investigator and a number of Co-Investigators with track record of excellence within their disciplines, who will lead the Centre
- Postdoctoral Research Assistants distributed across the groups involved
- A project manager
- A knowledge mobilisation/communications manager whose role will include coordinating knowledge exchange between the Centre, Hub and the wider landscape
- Funds for engagement and collaboration outreach across key disciplines and sectors, and internationally if appropriate
- Funding to engage with collaborative research and development projects (funded by Innovate UK) to enable SME involvement and encourage innovation towards a circular economy

As well as delivering interdisciplinary research focused on a given resource flow, the Centre must also act collaboratively with other Centres, the Interdisciplinary Circular Economy Hub (if awarded), and the wider academic, industrial, policy and stakeholder community to maximise the impact of the overall circular economy programme.

User Engagement Strategy

Importantly the Centres must deliver actionable solutions. They should be designed and delivered in partnership with relevant users, including industry and government. A condition of Centre grants will be for Centres to engage with

central Government, UKRI and the Interdisciplinary Hub, including by having representatives of each on the Centre's advisory board, and by a Centre representative participating in the Hub's advisory board. The programme will be overseen by a Programme Management Board and Strategic Advisory Group, and the Centres will be required to provide regular progress reports to the Board and Advisory Group, and if necessary, to implement their recommendations.

Successful applicants at the full proposal stage will be required to develop and execute a strategy for engaging with potential users of the research funded in the project (resources for this activity can be requested as part of the Pathways to Impact and must be justified in the application). This strategy should be reviewed and updated regularly as part of the formal management of the grant.

The strategy should cover:

- how and when potential users have been / will be identified;
- what form the engagement will take;
- what steps will be taken to ensure that outputs of the research are made available to potential users;
- suitable metrics for determining the success of the strategy in delivering value to users.
- Collaboration and engagement with the Hub, and the wider Circular Economy programme, and detail how the Centre would identify and exploit potential opportunities to work with other existing UKRI investments, where appropriate, to maximise engagement and impact.

To reduce financial barriers to SMEs and enable them to participate in the Centres, UKRI will subsequently run competitions worth up to £2.5m for small and medium enterprises (SMEs) to engage in collaborative research and development (CR&D). Details of the competitions will be communicated once the Centres have begun, but it is expected that calls will run as follows:

- Competitions will be open to any eligible SME, in line with Innovate UK's usual processes (e.g. on state aid, size of SMEs, being UK registered)
- SMEs will have to demonstrate that their CR&D project is aligned to the work of at least one Circular Economy Centre. It will be expected that SMEs engage with the Centres before applying
- The CR&D funding will enable feasibility studies or other small innovation projects (e.g. developing technologies or business models)

Submitting an application

You should submit your proposal using the Research Councils' Joint electronic Submission (Je-S) System (<https://je-s.rcuk.ac.uk/>). Further details of the Je-S submission route will be made available to the successful outline proposals.

Although multi-institution bids are welcomed, only one Je-S application form should be submitted from the Hub host institution, requesting all of the funds for the overall Centre. Multiple Je-S proposals will not be accepted.

Full proposals invited following a successful outline stage must have the 'Related Grant' field completed in Je-S. Please use the option 'Successful Outline'.

Note that clicking 'submit document' on your proposal form in Je-S initially submits the proposal to your host organisation's administration, not to UKRI.

Please ensure you allow sufficient time for your organisation's submission process between submitting your proposal to them and the Call closing date, which will be in April 2020, and is expected to be 21 April 2020 (this will be confirmed in the full proposal call document).

Assessment process

Full proposals will be subject to postal peer review. Applications that receive sufficiently supportive comments will be invited to submit a response.

Reviewers' comments and the response will be considered at a panel meeting, at which applicants (the Principal Investigator and up to three other members of the team) will be interviewed. The panel will be asked to assess the applications against the full proposal assessment criteria and make a recommendation about whether they should be considered for funding. In addition to considering the recommendations from the interview panel, UKRI will again consider the coverage across disciplines, resource flows, and sector contexts in making the final funding decision.

Feedback will be in the form of reviewers' comments. The interview panel will be invited to provide any further feedback, where appropriate.

Assessment criteria

The assessment criteria for the full proposals are standard EPSRC assessment criteria and are listed below. Additional detail describing what will be expected under each assessment criterion will be made available to all successful applicants following the outline panel.

- Quality of the circular economy research programme (Primary)
- National Importance of the circular economy research programme (Secondary Major)
- Pathways to Impact (Secondary)
- Applicant team (Secondary)
- Resources and Management (Secondary)
- Proposal Assessment (Secondary)
 - This will cover elements such as Added Value, and Equality, Diversity and Inclusion plans.
- Advocacy for research and innovation in the circular economy (Secondary)

- This criterion will solely be assessed at the interview stage.

Guidance on writing an application

It is currently expected that full proposals must include as a minimum (other attachments may be required in some cases):

- single Je-S application
- case for support – twenty pages
 - Two page track record
 - Eight pages to address the assessment criteria
 - Eight page technical annex (containing further details on e.g. specific work packages)
 - Two page management strategy
- CV for the proposed Principal Investigator - two pages per CV
- Pathways to Impact - four pages
- Justification of Resources - two pages
- work-plan - two pages
- Project Partner Letters of Support
- Host Organisation statement – two pages per organisation.

Guidance on what is required in the different proposal sections will be elaborated on in the full proposal guidance.

Grant additional conditions (GACs)

Grants will be subject to the standard UK Research and Innovation grant conditions; however, due to the nature of this funding, it is proposed that the following grant additional conditions will be added to this call. Note that further conditions may also be added, and these draft conditions may be amended before the full proposal assessment panel:

- This call is subject to the following conditions:
 - GAC 1 – Engagement with stakeholders and Integration Hub

This grant is awarded on the condition that the project will work in strategic partnership with other Centres funded through this call and the Interdisciplinary Circular Economy Hub, if awarded, and will undertake a wider networking role with the research and user community outside the Centres and Hub.

The project investigators will attend Hub meetings as required, providing regular project updates and reports, and engaging fully with the Hub management and steering group. Failure to do so will result in the suspension of the grant.

- GAC 2 – Governance

Further to RGC 7 Monitoring, this grant is subject to the framework principles of the UKRI Interdisciplinary Circular Economy programme and will be expected to work alongside other grants and governance structures under this scheme where appropriate.

EPSRC will nominate a member of UKRI staff (The Project Officer) who will be your primary point of contact. The Project Officer will ensure that the project is being run in accordance with the terms and conditions and in line with financial due diligence. The Project Officer(s) should have access to all documentation of Governance and Reporting bodies, in so far as it relates to the administration and application of the grant. As funding administrators, all UKRI staff have agreed to maintain the confidentiality required by all parties involved in EPSRC funded research.

This grant must establish and run an independent Advisory Board, or equivalent body, to oversee the running of the project and provide advice on the strategic direction and activities of the project. The terms of reference and membership of this group (at least 50% independent membership and an independent Chair) should be agreed with UKRI. The Project Officer will also be expected to attend and participate in Advisory Board and other appropriate meetings for the duration of the grant.

A representative of the Interdisciplinary Circular Economy Hub, if awarded (funded through this overall programme) must be invited to meetings of the Advisory Board.

- GAC 3 – Review

In addition to the requirements set out in standard UKRI grant conditions RGC 7.4 Research Monitoring and Evaluation, 7.5 Disclosure and Inspection, EPSRC reserve the right to instigate a review of all or part of the grant at any stage during the lifetime of the award as well as after the grant has finished. A mid-term review of this grant will take place to assess the performance of the grant in line with the peer reviewed body of work, published scheme assessment criteria and Key Performance Indicators/milestones and deliverables. EPSRC will give the Grant Holder due notice of the date of any review and will provide details of the Terms of Reference and documentation required. Any review will be conducted by an expert panel, which will make recommendations to EPSRC for the grant's future.

- GAC 4 – Project Partners

It is a requirement of this funding that the Grant Holder obtains at least £2 million of Project Partner contributions (which can be cash or in-kind). Where this value was not attained in the original proposal, the Grant Holder must be able to demonstrate at the mid-term review that £2 million of contributions has been obtained, or will be obtained by the end of the grant.

- GAC 5 – Reporting

In addition to the requirements set out in the standard UKRI grant condition RGC 7.4.3, the Grant Holder is responsible for providing quarterly progress reports against non-financial performance metrics. A detailed list of performance metrics and instructions for reporting will be agreed with the Grant Holder upon commencement of the grant.

- GAC 6 – Expenditure

This grant will not be adjusted for indexation.

The Grant Holder is responsible for ensuring that indexation is accounted for within the quarterly budgeted profile.

At the start of the grant the financial spend profile will be agreed by UKRI and is outlined below. The financial profiles are based on those provided in the BEIS allocation letter to UKRI.

In addition to any reporting requirements set out in GAC 4, the Grant Holder must immediately notify the UKRI Project Officer(s) of any accumulation, slippage or variation in expenditure greater than 5% of the annual profiled funding. We reserve the right to re-profile the grant if required.

Any deviation from the agreed allocation of funding and profiled costs must be negotiated and approved through written consent by UKRI. The approval of profile changes should not be assumed and will be dependent on spend across all associated grants.

At the end of the grant period a breakdown of the expenditure should be submitted along with the final expenditure statement.

- GAC 7 - Cost and time overrun

No slippage or grant extensions (beyond exceptional circumstances in line with the Equality Act 2010) will be allowed. EPSRC will not be responsible for any cost overrun incurred during the course of this grant. The Research Organisation(s) will be required to make up any shortfall from alternative sources.

- GAC 8 – Start date of the Grant

Notwithstanding RGC 5.2 Starting Procedures, this grant has a fixed start date of 1 October 2020 – no slippage of this date will be permitted. Expenditure may be incurred prior to the start of the grant and be subsequently charged to the grant, provided that it does not precede the date of the offer letter.

- GAC 9 – Publicity and Branding

In addition to RGC 12.4 Publication and Acknowledgement of Support, the Grant Holder must make reference to the UKRI Circular Economy programme and UKRI funding and include the UKRI logo and relevant branding on all online or printed materials (including

press releases, posters, exhibition materials and other publications) related to activities funded by this grant.

- GAC 10 – Equality, Diversity and Inclusion

In addition to RGC 3.4, the Grant Holder is expected to prepare a full equality, diversity and inclusion plan for the duration of this grant to demonstrate best practice in equality, diversity and inclusion throughout the lifetime of this funding award. This must be recorded through the grant reporting process.

Annex 2: Links to key policies and strategies

UKRI have provided links below to policies and strategies of relevance to the circular economy. As outlined in the call document, UKRI is not specifying any priorities for resource flows, and the inclusion or exclusion of documents relating to a given resource flow is not intended to indicate any prioritisation. However UKRI hopes that these documents will provide general guidance to applicants in making the case for their given resource flow.

Public sector strategies, policies and activities

UKRI Delivery Plans: <https://www.ukri.org/about-us/delivery-plans/>

Government strategies:

- Industrial Strategy:
<https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future>
- Clean Growth Strategy
<https://www.gov.uk/government/publications/clean-growth-strategy/clean-growth-strategy-executive-summary>
- 25 Year Environment Plan
<https://www.gov.uk/government/publications/25-year-environment-plan>
- Resources and Waste Strategy for England
<https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england>
- Growing the Bioeconomy:
<https://www.gov.uk/government/publications/bioeconomy-strategy-2018-to-2030>

Scottish Government's Zero Waste Plan:

<https://www2.gov.scot/Publications/2010/06/08092645/11>

Environment (Wales) Act:

<http://www.legislation.gov.uk/anaw/2016/3/contents/enacted>

Investment Strategy NI: <http://www.isni.gov.uk/home/>

Other references in the call document

OECD Global Material Resources Outlook to 2060, OECD, 2018:

<http://www.oecd.org/environment/global-material-resources-outlook-to-2060-9789264307452-en.htm>

Accenture report: <https://www.accenture.com/gb-en/insight-creating-advantage-circular-economy>

Ellen MacArthur Foundation: <https://www.ellenmacarthurfoundation.org/>

Outputs of UKRI circular economy workshop:

<https://epsrc.whp.rcuk.ac.uk/newsevents/pubs/ukri-circular-economy-workshops-june-2019/>

Other relevant UKRI documents

Outputs of 2016 Research Council workshop:

<https://ahrc.ukri.org/documents/project-reports-and-reviews/circular-economy-workshop-report/>

BBSRC reports on the bioeconomy, biotechnology and bioscience:

<https://bbsrc.ukri.org/documents/1607-evidencing-the-bioeconomy-report/>

<https://bbsrc.ukri.org/documents/forward-look-for-uk-bioscience-pdf/>

<https://bbsrc.ukri.org/documents/capital-economics-biotech-britain-july-2015/>

Technopolis Impact assessment of EPSRC funding on the circular economy:

<https://epsrc.ukri.org/newsevents/pubs/impactassessmentepsrcfundingcirculareconomy/>

Other relevant documents suggested by UKRI

Example relevant links to the Waste and Resources Action Plan (WRAP) website:

<http://www.wrap.org.uk/about-us/about/wrap-and-circular-economy>

<http://www.wrap.org.uk/content/employment-and-circular-economy>

<http://www.wrap.org.uk/content/econometric-modelling-and-household-food-waste>

http://www.wrap.org.uk/sites/files/wrap/Courtauld_2025_Annual_Review_2017_18.pdf

UN Sustainable Development Goals:

<https://sustainabledevelopment.un.org/post2015/transformingourworld/publication>

UN Global Resources Outlook, 2019:

<http://www.resourcepanel.org/reports/global-resources-outlook>

BEIS Green Finance Strategy:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/813656/190701_BEIS_Green_Finance_Strategy_Accessible_PDF_FINAL.pdf

CCC: Net Zero: <https://www.theccc.org.uk/wp-content/uploads/2019/05/Net-Zero-The-UKs-contribution-to-stopping-global-warming.pdf>

Reports from the Natural Capital Committee:

<https://www.gov.uk/government/collections/natural-capital-committee-documents>

Scottish Government circular economy strategy:

<https://www.gov.scot/publications/making-things-last-circular-economy-strategy-scotland/>

Zero Waste Scotland website: <https://www.zerowastescotland.org.uk/our-work/circular-economy>

Welsh Government Sustainable Management Guide:

<https://gov.wales/sites/default/files/publications/2019-06/sustainable-management-of-natural-resources-guide.pdf>

POST Note on Designing a Circular Economy:

<http://researchbriefings.files.parliament.uk/documents/POST-PN-0536/POST-PN-0536.pdf>

Bibliometric analysis of circular economy research:

https://www.researchgate.net/publication/329293962_Worldwide_Research_on_Circular_Economy_and_Environment_A_Bibliometric_Analysis

Deloitte/Utrecht report on circular economy in the EU:

https://circulareconomy.europa.eu/platform/sites/default/files/171106_white_paper_breaking_the_barriers_to_the_circular_economy_white_paper_vweb-14021.pdf

Next Manufacturing Revolution report:

<http://www.nextmanufacturingrevolution.org/nmr-report-executive-summary>

Reports from the Valuing Nature Network: <http://valuing-nature.net/natural-capital-synthesis-reports-0>

ESRC suggested publications

<https://www.cccep.ac.uk/publication/sustainable-growth-in-the-uk-seizing-opportunities-from-technological-change-and-the-transition-to-a-low-carbon-economy/>

<https://steps-centre.org/publication/the-circular-economy-and-the-global-south/>

<https://steps-centre.org/publication/chinas-low-carbon-future-offers-global-opportunities/>

<https://steps-centre.org/publication/the-new-politics-and-geographies-of-scarcity/>

<https://steps-centre.org/publication/destabilisation-of-sustainable-energy-transformations-analysing-natural-gas-lock-in-in-the-case-of-germany/>

https://www.cusp.ac.uk/themes/p/bookchapter_gb_circularity-thinking/

<https://www.cusp.ac.uk/themes/aetw/pwg/>

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