



**UK Research
and Innovation**

Quick Reference

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

ISCF Transforming Foundation Industries Research and Innovation Hub Call- Full proposals

Call type: Invitation for proposals

Closing date: 16:00 on 01 December 2020

Funding Available: This call is only for applications that were assessed in the previous outline stage of this funding call and were subsequently invited to submit to this second stage. Up to £4.7M will be available from the UKRI Industrial Strategy Challenge Fund (ISCF) for this call, and we expect to fund 1 Research and Innovation Hub.

How to apply: This call forms the second part of a two-stage process. An outline stage has already been held. **Applications will only be accepted from those who were successful at the outline stage and have been invited to submit a full proposal.** At this stage, applicants must submit their full proposal by 16.00 on 01 December 2020.

Assessment Process: The full proposal (invitation only) will be assessed by an expert interview panel.

Key Dates:

Activity	Date
Call open- Full proposal	13 October 2020
Call closed- Full proposal	16:00 01 December 2020
Interview Panel	January 2021
Funding decision	February 2021
Grant start date	01 April 2021

Additional information: Funding for the Transforming Foundation Industries (TFI) Research and Innovation Hub will be provided through the Industrial Strategy Challenge Fund (ISCF). Therefore, there are additional grant conditions and expectations as part of the funding which are fully detailed in this document.

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**UK Research
and Innovation**

**ISCF Transforming Foundation Industries
Research and Innovation Hub Call- Full proposals**

Call type: Invitation for proposals

Closing date: 16:00 on 01 December 2020

**Related themes: Engineering, Manufacturing the future, Physical
Sciences, Energy**

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Summary

The ISCF Transforming Foundation Industries (TFI) Challenge will be investing up to £4.7m in a Research and Innovation Hub which will be delivered by EPSRC on behalf of UKRI. The aim of this Challenge is to enable the foundation industries (made of six separate sectors: metal, glass, ceramics, paper, cement and chemicals) to work together to address their common challenges of competitiveness and sustainability. The Research and Innovation Hub call is a cross-Council opportunity that aims to fund a new cross-sector and multi-disciplinary research centre for the 'ISCF Transforming Foundation Industries' programme that will work to accelerate the development and adoption of new technologies and business models within the Foundation Industries.

The applicants should develop a multidisciplinary Research and Innovation programme, with match funding from industry, that focuses on linking innovators with industry to address challenges across the Foundation Industries. The activity of the Hub should result in a demonstrable increase in the transfer of knowledge from universities to industry through mechanisms such as technology transfer, change management and early stage 'proof-of-concept' projects. The research undertaken by the Hub must have the ability to generate credible and engaging impact and develop commercial opportunities. This could either cover the testing of new technologies and methods with potential beneficiaries in the relevant user(s) domain or looking at new ways of using existing knowledge/methods.

The Hub will be expected to elicit at least £4.7m of Project Partner contributions (in-kind or cash) over the lifetime of the grant. The Hub is expected to work closely with the wider Challenge and should also work collaboratively with the newly commissioned Transforming Foundation Industries Network Plus: <https://epsrc.ukri.org/funding/calls/iscf-transforming-foundation-industries-network-plus/>. Applications are expected to take an open and inclusive approach and to grow and evolve over the lifetime of the grant. The Hub should work collaboratively with existing UKRI investments specifically linking with other relevant Industrial Strategy Challenge Fund (ISCF) and Strategic Priority Fund (SPF) activities.

This call is running over two stages. The first (outline) stage has concluded – outline applications were assessed at an expert panel, held on 07 October 2020. Up to two proposals were then invited to submit a full stage proposal.

Applications may only be submitted by applicants who have been successful at the outline stage and were subsequently invited to submit to this second stage. All other applications will be rejected. Full proposals should be submitted before 16:00 on 01 December 2020, and will be assessed at an expert interview panel in January 2021.

Background

The Transforming Foundation Industries Challenge, funded through the Industrial Strategy Challenge Fund (ISCF) will transform the UK's foundation industries (composed of the metal, glass, ceramics, paper, cement and bulk chemicals sectors) to make them internationally competitive, secure more jobs throughout the UK, and grow the sector by 2024. The Foundation Industries produce 75% of

all the materials in our economy and are vital for the UK's manufacturing and construction industries. Together, the Foundation Industries are worth £52Bn to the UK economy and produce 28 million tonnes of materials per year, accounting for circa 10% of the UK total CO₂ emissions.

The Transforming Foundation Industries programme will enable transformational change by these industries in how materials are sourced and processed, and the types of products manufactured, making them competitive and helping the UK achieve its ambitious Net Zero targets. Consumption of raw materials and energy use lead to significant operating costs and environmental impact: they operate in an internationally competitive landscape with long investment cycles, and the benefits from innovation are not shared through the supply chain, reducing incentive to invest. There is, however, an opportunity to address the challenges facing these critical sectors in collaboration, and therefore multiply the benefit of innovation across the sectors.

From initial sector engagements and workshops, many areas of common technical challenge have been identified, the five most pressing are: minimising process energy consumption through retrofit, developing improved recycling technologies, finding new processes to radically change product offering, better process control and exploring industrial symbiosis. This Challenge will enable the six sectors to work together to transfer mature solutions from one sector to another.

The ISCF challenge will be delivered through five different programme strands:

1. Establishment of the foundation industries pilot scale facility
2. CR&D programmes and phased demonstrators
3. New approaches to sustainable foundation industries
4. Establishing the foundation industries as a sector
5. Providing late stage finance

Call Scope

The Hub's research programme themes should engage with stakeholders to co-create and deliver a coherent package of activities and a programme of high quality, multidisciplinary research that addresses major, transformative user-inspired approaches and common challenges facing the foundation industries sectors. The Research and Innovation Hub will be, by nature, highly interdisciplinary including researchers across a range of disciplines such as social, economic, physical, and environmental science and draw on a wide range of expertise, knowledge and experience across business and research stakeholders. The Hub's programme will draw together this expertise to support collaboration on connecting high-quality innovators from universities with companies that can use the research in an industrial setting, focussing on sustainability issues linked to how materials are sourced and processed, and the types of products manufactured across the six sectors.

The Hub should consider a range of different approaches to realising impact and facilitating knowledge transfer. Knowledge transfer can occur in a number of ways and at a number of levels and what is appropriate will differ from project to

project. Industrialists are well placed to give specific advice on research approaches, market opportunities, intellectual property considerations and routes to market. You may also consider more informal approaches to knowledge transfer, through research dialogues to influence project direction or dissemination via industrially relevant events or showcases either at your university or company sites. In some cases it may make sense to involve businesses more actively, this may involve elements of the research taking place within the business, particularly where this may enable access to equipment or other facilities that would not be otherwise available. While this can offer an easier route to translation, you should consider how this relationship will be managed through an appropriate collaboration agreement, particularly with regard to intellectual property.

The proposed themes listed below are not exhaustive and applicants are encouraged to think innovatively in order to create a co-ordinated programme.

1. User inspired approaches

In this approach, it would be expected that industry leads on defining the research problems and works with the academic community to co-create the research plan. The research should be grounded in 'real world' applications and have close involvement with potential users. The research plan could include fundamental, applied or translational research but must include clearly identified and engaged stakeholders. One potential approach to effectively realising this goal is through 'In the Wild' deployment and evaluation, where some of the design is through usage.

2. Novel multidisciplinary approach to sector research

In this theme the applicants would take the current understanding of the barriers to implementation of new technologies and then use a multidisciplinary approach to develop new working models that aim to increase the adoption of research innovations in an industrial setting. Potential areas of focus could include managing change and innovation; managing regulatory frameworks; logistics and supply chain management. Although we would expect there to be multidisciplinary working across the themes, activity here should have a particular emphasis on developing a research plan across the discipline boundaries involving engineers, physical and environmental scientists, economists and social scientists to ensure that the new technology developed is successfully adopted.

3. Knowledge transfer cross-sector

Activity in this theme would focus on deriving common and interconnected learning from across the sectors. Research plans should outline an approach to addressing key challenges and barriers to change as well as exploiting opportunities for coordinated activity and cross-cutting research in order to maximise the impact across the sectors. The potential for different sectors to work together to address sustainability challenges may also be explored (e.g. through concepts such as industrial symbiosis).

In delivering on these themes, our expectation is that the Hub will:

- provide a scientifically coherent programme of research aimed at exploiting cross sectoral themes and opportunities, and understanding common challenges faced
- highlight technology transfer opportunities across the sectors, including commercialisation activities
- engage strongly with relevant sectors and disciplines, to enhance knowledge exchange between academia and industry, and deliver significant impact
- support active career development programmes aimed at building research capacity
- complement the research activities and programme objectives of the TFI workstreams
- design and implement an Equality, Diversity and Inclusion plan for the Foundation Industries

Applications are expected to take an open and inclusive approach and to grow and evolve over the lifetime of the grant. To reflect this, it is expected that the applicants should develop a flexible approach to the research agenda and priorities of the Programme beyond the first six months of the Hub to account for changes in the landscape, emerging opportunities and industrial sector priorities.

Securing the engagement and buy-in of relevant users will be key to the success of the Hub, and support from Project Partners is a requirement. The Hub will be expected to elicit at least £4.7m of Project Partner contributions (in-kind or cash) over the lifetime of the grant. At the outline stage it is important for applicants to demonstrate initial Project Partner interest (and where possible, contributions), and detail planned approaches to eliciting more leveraged support. At full proposal stage, applicants should detail the cash and in-kind contributions Project Partners will provide, as has been agreed at the point of application. Please note there is no set target of Project Partner contributions at either the outline or full proposal stage. The panel will be asked to assess evidence of stakeholder interest and contributions at each stage, in the context of the disciplines and sectors involved, and the context of the current external Covid-19 situation. Applicants should make the case for why the total Project Partner support at application stage, and planned approaches towards eliciting more leveraged support, are appropriate in the context and reach of their submission.

This call is being run by EPSRC on behalf of UK Research & Innovation Councils, however, it should be noted that PIs and Co-Is from all disciplines supported by UKRI are welcomed and encouraged to apply. It is expected that the Hub will be led by a multidisciplinary team where the Principal Investigator may be supported by a number of Co-Investigators and Project Partners, with inter-organisational proposals encouraged. 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.

The Hub is expected to have the same core management team as proposed in the outline proposal but may be asked to build on it and extended it as appropriate to address the feedback given by the Outline panel. The PI is not

expected to change between the outline and the full proposal bid; the exception to this would be where a PI has been successful awarded the Network Plus grant. In this case, the PI should inform UKRI which Co-I has been nominated as a replacement before submitting the full proposal. Investigators can only take up the Principal Investigator role on either the ISCF Transforming Foundation Industries Network Plus **or** the ISCF Transforming Foundation Industries Research and Innovation Hub.

The Hub is expected to work closely with the wider Challenge and should also work collaboratively with the newly commissioned Transforming Foundation Industries Network Plus: <https://epsrc.ukri.org/funding/calls/iscf-transforming-foundation-industries-network-plus/>. In addition, the Hub should outline a commitment to working collaboratively, and to identify and exploit potential opportunities to work with other existing UKRI investments, where appropriate, to maximise impact. Other investments include but are not limited to:

- ISCF: Industrial Decarbonisation Research Innovation Centre
- ISCF: Transforming Construction Network Plus
- Circular Economy Nicer programme
- EPSRC Manufacturing hubs

As with all ISCF activities, the UKRI team will have an active investment management relationship with this Hub. The ISCF challenge director will have the right to terminate activities that are not delivering on objectives.

Activities under the ISCF Transforming Foundation Industries challenge will be evaluated at the challenge level - all the grants funded under ISCF Transforming Foundation Industries will be evaluated as a whole.

Funding available

The Transforming Foundation Industries ISCF is awarding up to £4.7M (at 80% FEC) for one Research and Innovation Hub grant. We will apply indexation to a grant before an offer letter is produced therefore the total EPSRC contribution requested (including any justified exceptions costs paid at 100%) must not exceed £4.62M to allow for the inclusion of these indexation costs. Applicants are advised to speak to their research office for support in completing their resource costings.

The award will be made for 36 months duration.

Funding requested as part of this call may include, but is not exclusive to:

- Core research activities or technologies that are necessary or valuable to the Hub, including the appropriate dissemination of research knowledge
- 'Grand challenge' research funding to support major research projects/themes, the focus of which are driven by long-term Foundation Industries research challenges of users and/or capturing future industrial opportunities from emerging research areas
- Operational funding, supporting:

- Hub administration, management and governance
- Hub marketing and communications
- Activities to design and implement an Equality, Diversity and Inclusion plan
- Hub outreach and public engagement
- Funding to enable the development of new industrial partnerships (e.g. costings for a business development manager)

The Hub is expected to work collaboratively with the newly commissioned Transforming Foundation Industries Network Plus, and avoid duplication of activity. As such please consider which elements of the networking and engagement activity the Network Plus would be better placed to lead.

Securing the engagement and buy-in of relevant users will be key to the success of the Hub, and support from Project Partners is a requirement. At the outline stage it is important for applicants to demonstrate initial Project Partner interest (and where possible, contributions), and detail planned approaches to eliciting more leveraged support. At full proposal stage, applicants should detail the cash and in-kind contributions Project Partners will provide, as has been agreed at the point of application. Please note there is no set target of Project Partner contributions at either the outline or full proposal stage.

Full costings are required at both outline and full proposal stage. Changes to the costings between the outline and full stage are permitted as appropriate to address the feedback given by the Outline panel.

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.

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 Version 05 October 2020

our Equality and Diversity webpages
<https://epsrc.ukri.org/funding/equalitydiversity/> for further information.

Responsible Innovation

EPSRC is fully committed to develop and promote responsible innovation. Research has the ability to not only produce understanding, knowledge and value, but also unintended consequences, questions, ethical dilemmas and, at times, unexpected social transformations. We recognise that we have a duty of care to promote approaches to responsible innovation that will initiate ongoing reflection about the potential ethical and societal implications of the research that we sponsor and to encourage our research community to do likewise.

Responsible innovation creates spaces and processes to explore innovation and its consequences in an open, inclusive and timely way, going beyond consideration of ethics, public engagement, risk and regulation. Innovation is a collective responsibility, where funders, researchers, interested and affected parties, including the public, all have an important role to play. Applicants are expected to work within the EPSRC Framework for Responsible Innovation given on the EPSRC website (<https://epsrc.ukri.org/research/framework/>).

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 (inc. vat) is not currently available through this call and it should be possible to carry out the research plan in the submitted proposal without additional Capital resource. Applicants invited to submit a full proposal will be notified directly if there are any changes to this policy.

Smaller items of equipment (individually under £10,000) can be in the Directly Incurred - Other Costs heading.

For more information on equipment funding, please see:
<https://epsrc.ukri.org/research/facilities/equipment/>

Eligibility

For this call, standard UKRI research grant 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.

Only applicants invited to submit a full proposal following the outline stage may apply. The Hub is expected to have the same core management team at full proposal stage as proposed in the outline proposal but may be asked to build on it and extend it as appropriate to address the feedback given by the Outline panel. The PI is not expected to change between the outline and the full proposal bid.

The exception to this would be where a PI has been successful awarded the Network Plus grant. In this case, the PI should inform UKRI which Co-I has been nominated as a replacement before submitting the full proposal. Investigators can only take up the Principal Investigator role on either the ISCF Transforming Foundation Industries Network Plus **or** the ISCF Transforming Foundation Industries Research and Innovation Hub.

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

For information on the eligibility of organisations and individuals to receive EPSRC funding, see the EPSRC Funding Guide:

<https://epsrc.ukri.org/funding/applicationprocess/fundingguide/>

A list of eligible organisations is provided at: <https://www.ukri.org/funding/how-to-apply/eligibility/>

How to apply

Submitting an application

You should prepare and submit your proposal using the Research Councils' Joint electronic Submission (Je-S) System (<https://je-s.rcuk.ac.uk/>).

Full proposal stage (Invitation only)

When adding a new proposal, you should select:

- Council 'EPSRC'
- Document type 'Standard Proposal'
- Scheme 'Standard'
- On the Project Details page you should select the 'ISCF TFI Research and Innovation Hub- Full Proposal' call.

Full proposals invited following a successful outline stage must have the 'Related Grant' field completed in Je-S. Please use the option 'Successful Outline'. EPSRC must receive your application by 16:00 on 01 December 2020.

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 application

Full Proposal (Invitation only)

The following documents should be submitted at the full proposal stage:

- Je-S application form
- Case for support (12 pages)
- CV for the Principal Investigator and named research staff (2 pages)
- Justification of Resources (2 pages)
- Workplan (1 page)
- Host institution letter of support
- Project partner letters of support

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

Je-S form

- A single Je-S application.

Full proposal case for support (up to 12 sides of A4)

- Track record of the applicants (2 pages) – details of the PI and Co-Is as well as key industry partners. Applicants should use the document to highlight both the research expertise and 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.
- Description of proposed research and its context (6 pages)
 - Background and context of the proposal in the context of the Foundation Industries and broader ISCF Challenge
 - Overall vision and ambition for the Hub including the approach to interdisciplinary and cross-sector working
 - How the applicants will maximise the impact of the Hub (see User Engagement Strategy section below)
 - Research programme and methodology – this should be focused on high-level objectives, research questions and challenges, with technical detail for at least the first six months of the Programme outlined in the two-page technical annex

- Details of the planned approach to Project Partner and other stakeholder engagement, including plans for attaining further Project Partner contributions
- Details of the planned approach to developing an equality, diversity and inclusion strategy (see grant condition AGC7)
- Technical annex (2 pages)- This is intended to provide additional information on the research programme for at least the first six months of the grant (for example on individual work packages or themes). Please ensure there is sufficient detail to allow peer review to assess the quality and ambitious nature of the research.
- Management strategy (2 pages)
 - Day-to-day management strategy for ensuring individual research projects meet the overall vision for the Hub, and for use of resources. This should include the approach the management team will take to making decisions about where the focus of the Programme research agenda should be beyond the first six months of the Hub taking into account changes in the landscape, emerging opportunities and industrial sector priorities.
 - How equality, diversity and inclusion (ED&I) is embedded in plans for building collaborations, including in how the core interdisciplinary team will embed ED&I into all activities, 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.
 - Monitoring strategy, which should include how outcomes will be baselined, set and monitored, including in the context of the Challenge as a whole, and how these will be reassessed in the case that the direction of the research programme changes through the lifetime of the grant.

CV of the Principal Investigator and named research staff (up to 2 sides of A4)

Please provide a CV for the Principal Investigator that demonstrates a track record in managing large complex research grants and of collaborating with users. CVs are also required for named research staff (including Researcher Co-Investigators), or visiting researchers. CVs are not required for Co-Investigators, and should not be attached.

Justification of the Resources requested (up to 2 sides of A4)

- This document must present a full justification for all resources being requested, and demonstrate value for money and cost-effectiveness.

Work Plan (up to 1 side of A4)

- It is expected that the work plan includes a comprehensive plan for at least the first 6 months, which relates to the management strategy to give appropriate milestones for when important decisions on the direction of the research will be taken. Applicants are encouraged to retain flexibility in the workplan to respond to emerging priorities and opportunities, especially in the context of the evolving external Covid-19 situation.

Project Partner Letters of Support (no page limit)

Letters must:

- Outline the benefits the Project Partner hopes to achieve from participating in the Hub
- Include an indication of the level and nature of financial, staff and/or other support they are willing to put into the Hub. It is important that Project Partners detail their contributions explicitly (cash and/or in-kind value) in their letters of support, and that the values of these contributions match the information submitted through Je-S. UKRI recognises that Project Partner contributions may be affected by the current external situation.
- Be signed, dated (with dates no more than 6 months before the call closing date) and on letter headed paper. The signatory should hold a sufficiently senior position to authorise the commitments detailed on behalf of the organisation.
- EPSRC defines a Project Partner as any collaborating organisation (other than a host academic institution) that is contributing to the grant, but not receiving any funding from the grant. In exceptional circumstances, where a partner cannot be formally recorded as a Project Partner (for example, because they are due to financially benefit from the grant), the partner's specific contributions can be captured using the 'letter of support' document type. A maximum of two such letters are allowed.

Letters of Support (including Host Institution Letter of Support; no page limit)

A Letter of Support from the **lead** host institution should be uploaded using the 'letter of support' document type. Letters should include the institution's commitment to the Hub for the lifetime of the award, and the alignment of the Hub's proposed research to the institution's strategy. Two additional Letters of Support are also permissible in exceptional circumstances, where a partner cannot be formally recorded as a Project Partner (see Project Partner Letters of Support section for more details).

Guidance on completing the submission via Je-S

Applicants should use the Ethical Information section on the Je-S form to demonstrate to peer reviewers that they have fully considered any ethical issues concerning the material they intend to use, the nature and choice, current public perceptions and attitudes towards the subject matter or research area. EPSRC will not fund a project if it believes that there are ethical concerns that have been overlooked or not appropriately accounted for. All relevant parts of the Ethical Information section must be completed. If the research will involve human participation or the use of animals covered by the Animals (Scientific Procedures) Act 1986 it is recommended that applicants pay particular attention to the guidance highlighted below. EPSRC reserves the right to reject applications prior to peer review if the Ethical Information sections are not completed correctly.

Further guidance on completing the Je-S form can be found at <https://je-s.rcuk.ac.uk/Handbook/pages/GuidanceonCompletingaStandardG/EthicalInforma>
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[tion.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 onto Je-S 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.

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

Successful applicants 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 but 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.

Assessment

Assessment process

There are multiple application stages in this call. The outline proposal stage closed on 03 September 2020. The outline proposals were then considered at an expert outline panel on the 07 October 2020 using the assessment criteria outline below to produce a rank ordered list.

Up to two outline proposals were then invited to submit a full proposal by **16:00 on 01 December 2020**. The applicant team will be invited to interview in January 2020 and assessed by an expert panel. The interview panel will have the opportunity to interview on all assessment criteria and applicants may be asked to present to the panel at the start of the interview. The interview panel will

recommend a single proposal for funding. Feedback will be in the form of panel comments.

Please note there is no postal peer review at either stage of the assessment process.

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

Assessment criteria

Outline stage:

Quality (Primary):

- Degree of novelty in the research plans and approach
- The appropriateness of the proposed methodology

Fit to the scope of the call (Primary)

- Evidence that the proposed Hub will be able to form an interdisciplinary and cross-sector collaboration to address common challenges across the Foundation Industries
- Evidence of strong industry engagement with clear routes to commitment to the project

Resources and management (Secondary):

- The effectiveness of the proposed planning and management and whether the requested resources are appropriate and have been justified

Partnership and business engagement strategy (Secondary):

- Clear evidence to demonstrate present or future collaboration between lead institute and industrial partner/s
- Evidence to elicit at least £4.7m of Project Partner contributions (in-kind or cash) over the lifetime of the grant

Leadership and vision of the hub (Secondary)

- Overall strategy for the Hub, including vision and plans for longer term impact and sustainability
- A clear vision and ambition, with a programme of work that has been developed across the different sectors and in partnership with industry.
- Evidence of strong leadership and management skills
- A demonstration of the applicants' plans to embed equality, diversity and inclusion into delivery of the full Hub bid

Applicants ability (Secondary)

- Evidence and track record of managing complex, interdisciplinary activities
- Capability of the Hub team in terms of research, skills and expertise to tackle the research challenges, engage with users and to deliver impact, including levels of collaborator engagement

Full Proposal

Quality (Primary)

- The novelty, relationship to the context, timeliness and relevance to identified stakeholders
- The ambition, adventure, transformative aspects or potential outcomes
- The suitability of the proposed methodology and the appropriateness of the approach to achieving impact including knowledge transfer between industry and academia.

National Importance (Secondary major)

- The Foundation Industries need for the research activity outlined by the Hub
- Potential for transformative impact on the research community, society and the UK economy including emerging industries
- Articulation of how the Hub will meet the needs of the UK in the context of this ISCF Challenge.

Resources and management (Secondary):

- The effectiveness of the governance, Hub support and management structure including industrial partners
- The appropriateness of the proposed planning, including a clear timeline for at least the first 6 months
- The appropriateness and justification of the requested resources

Partnership and business engagement strategy (Secondary):

- A clear engagement strategy and strategic plan between lead institute and industrial partners
- The appropriateness of planned activities to allow the generation and implementation of ideas.
- Details of level of commitment from the industrial partner/s and how additional leverage will be accessed over the lifetime of the award

Leadership and vision of the Hub (Secondary)

- Overall strategy for the Hub, including vision and plans for longer term sustainability

- A clear vision and ambition, with a programme of work that has been developed in partnership. Evidence of how this vision will be achieved and how the partnership will contribute to ISCF Transforming Foundation Industries strategies
- Coherence and relevance of the work packages in line with the vision.
- Appropriateness of the leadership team
- A strong commitment to collaborate with the TFI Network Plus, and across the wider programme, and to identify and exploit potential opportunities to work with existing UKRI investments
- Strong commitment to supporting the development of researchers at all stages

Applicants ability (Secondary)

- Appropriateness and the track record of the applicants
- The balance of skills of the project and management team, including academic and non-academic partners

Strategy for Equality, Diversity and Inclusion plans (Secondary)

- The appropriateness of a plan to create a successful Equality, Diversity and Inclusion support strategy, and related resources

Panel feedback will be given following the full proposal stage.

Grant additional conditions (GACs)

Grants will be subject to the standard UK Research and Innovation grant conditions however the following additional grant conditions will be added to this call:

AGC 1: This grant has been funded under the Transforming Foundation Industries Industrial Strategy Challenge Fund (ISCF) and will form part of a programme of funded projects delivered through Innovate UK and EPSRC. Investigators and researchers associated with this grant are expected to promote the aims and be advocates for the Transforming Foundation Industries ISCF through working both within and beyond the Programme.

AGC 2: Notwithstanding RGC 5.2 Starting Procedures, this grant has a fixed start date of the 1st of April 2021 – 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.

AGC 3: In addition to RGC 12.4 Publication and Acknowledgement of Support, the Grant Holder must make reference to ISCF 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. A dedicated website must be set up within six

months of the start of the grant and regularly maintained to provide a resource for engagement with the wider community.

AGC 4: 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.

AGC 5: Further to RGC 7 Monitoring, this grant is subject to the framework principles of the Transforming Foundation Industries ISCF and will be expected to report progress in association with other grants and governance structures under this scheme where appropriate.

AGC 6: This grant must establish and run an Independent Advisory Group, 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 the EPSRC. The Project Officer will also be expected to attend and participate in Advisory Group and other appropriate meetings for the duration of the grant.

AGC 7: 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 submitted to UKRI within the first 6 months of the grant and reconsidered annually in conjunction with the Advisory Group.

AGC 8: This grant is supported through the Industrial Strategy Challenge Fund (ISCF) which is led by a UKRI-appointed ISCF Challenge Director. In accepting this award, the Principal Investigator (PI) acknowledges the need for the Challenge Director to have control over the Challenge and agrees to work with the Challenge Director to ensure that the work supported under this grant contributes to the overall delivery of the Challenge. Whilst the PI is expected to take advice from the Challenge Director to steer the research towards meeting the aims of the Challenge; the PI still retains control of the project funds for the duration of the project with advice from the Management Team and Advisory Group.

AGC 9: Where the grant is associated with more than one research organisation and/or other project partners, a formal collaboration agreement must be in place with the basis of collaboration between the organisations including the following:

- the process of the flexible allocation of resources throughout the project,
- ownership of intellectual property, and
- rights to exploitation.

It is the responsibility of the Research Organisation to put such an agreement in place before the research begins. The terms of collaboration agreements must not conflict with the Research Councils' terms and conditions.

The EPSRC contact must be informed within three months of the start of the grant, that the collaboration agreement is in place and has been signed by all partners and/or the progress made (unless some alternative timeline has been

agreed with EPSRC beforehand). If sufficient progress has not been made within three months of the start of the grant, EPSRC reserves the right to enact RGC 11.1. Arrangements for collaboration and/or exploitation must not prevent the future progression of research and the dissemination of research results in accordance with academic custom and practice.

AGC 10: The Grant Holder must immediately notify the Project Officer(s) of any material accumulation, slippage or variation in expenditure. Financial reporting may be requested by EPSRC on to-date expenditure and forecast grant expenditure on up to a quarterly basis. 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 Us, acting on behalf of UKRI ISCF.

AGC 11: Additional financial or non-financial information may be requested outside of the standard annual and quarterly reporting cycle. The grant holder agrees to comply with these requests in a timely manner.

AGC 12: In addition to the requirements set out in standard UKRI grant conditions RGC 7.4 Research Monitoring and Evaluation and 7.5 Disclosure and Inspection, EPSRC reserves 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 may 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.

AGC 13: It is a requirement of this funding that the Grant Holder attains a target 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 through financial reporting the level of contributions that have been obtained, or will be obtained by the end of the grant. Unless UKRI agrees that the target should be lower, the target will be £4.7 million.

AGC 14: 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.

Moving forward

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

Key dates

Activity	Date*
Call open- Full proposal	13 October 2020
Call closed- Full proposal	01 December 2020
Interview Panel	January 2021
Funding decision	February 2021
Grant start date	01 April 2021

*EPSRC aims to adhere to the key dates as published, however there may be exceptions where the sift, prioritisation or interview meeting may have to change due to panel member availability.

Contacts

EPSRC Materials team: Materials@epsrc.ukri.org

Je-S helpdesk: JeSHelp@je-s.ukri.org; +44 (0) 1793 44 4164- lines are open Mon-Fri 10am – 2pm

Change log

Name	Date	Version	Change
Rosanna Greenop	05/10/20	1	N/A

Je-S attachments Check List

Full proposal:

Attachment Type	Maximum Page length	Mandatory/Optional	Extra Guidance
Case for Support	Twelve pages	Mandatory	Comprising up to two A4 sides for a track record, six A4 sides describing proposed research and its context, two A4 sides for the

			technical annex detailing the research plan and questions to be addressed in at least the first six months of the project and a two page management plan.
Workplan	One page	Mandatory	
Justification for Resources	Two pages	Mandatory	
CVs	Two pages each	Mandatory	For the Principal Investigator, named and visiting researchers, and researcher co-investigators only.
Project Partner Letters of Support	No page limits	Mandatory	Must be included from all named project partners. Must be on headed paper, and be signed and dated within six months of the proposal submission date.
Letters of Support	No page limits	Mandatory	Required from the host institution only. Maximum of three in total.
Proposal Cover Letter	No page limit	Optional	The cover letter can be used to highlight any important information to EPSRC. This attachment type is not seen by reviewers or panel members.

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.