

## Quick Reference

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

### Frontier Engineering: Progression Grants

**Call type:** Invitation for platform-type proposals

**Closing date:** Wednesday 21 November at 16:00

**How to apply:** Invited full proposals are to be submitted via Je-S through the Engineering Standard Research route.

**Assessment Process:** Invited full proposals will proceed through Engineering Standard Mode and will undergo postal peer review, followed by prioritisation panel, resulting in a rank-ordered list.

#### Key Dates:

Activity	Date*
Call for proposals issued	12 October 2018
Deadline for Full Proposals	21 November 2018, 16:00
Standard mode panel meeting	Early February 2019
Grant start date	From June 2019

**Additional information:** This is a closed call for the existing Frontier Engineering Centres.

#### Contacts:

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Queries regarding the submission of proposals through Je-S should be directed to the Je-S helpdesk (01793 444164 - [JeSHelp@rcuk.ac.uk](mailto:JeSHelp@rcuk.ac.uk))



Engineering and Physical Sciences  
Research Council

## Frontier Engineering: Progression Grants

**Call type:** Invitation for platform-type proposals

**Closing date:** Wednesday 21 November at 16:00

**Related themes:** Energy, Engineering, Healthcare technologies, ICT,  
Manufacturing the future, Physical sciences

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### Summary

EPSRC is inviting the existing Frontier Engineering Centres to apply for further funding to provide a baseline of flexible support (a platform) that can be used for the retention of key staff, feasibility studies, longer-term research and international networking to specifically enhance the sustainability and impact of the Frontier Engineering Centres. These awards are similar in nature to the previous EPSRC 'Platform Grants' scheme. This is a closed call for the existing centres funded through the Frontier Engineering scheme in 2012.

This is a call for full proposals, these proposals will be competitively assessed via the Engineering Standard Mode route.

## Background

The original intentions of the Frontier Engineering scheme, launched in 2012, were to contribute to UK prosperity through:

- supporting long-term and ambitious engineering research
- mobilising leadership in engineering
- shaping the portfolio in relation to national need

Alongside Grand Challenges this was the most transformational impact made by the Engineering Theme in the last Delivery Plan. It repositioned the subject of Engineering to look outwards and to take head on requirements of institutional change and career progression.

The mid-term review of the Frontier Engineering Centres in 2016 revealed that the initiative has had a major impact in key partner universities and in some cases opened up new fields. Therefore, not continuing to support these centres in some form could be a lost opportunity for impact and leadership. It is believed that there is an opportunity to accelerate the impact of these centres (nationally or internationally) and move towards scale-up and transition to application, or to maintain people capacity in priority areas to enable real culture change at an institutional level.

The recommendations following the review highlighted that talent development and retention is essential, that the boundaries of the chosen fields could be both pushed and further linked nationally and internationally, and that opportunities for ODA-related funding could be considered to accelerate impact in developing countries.

Since the review, it is recognised that some of the Frontier Engineering Centres have actively pursued further funding opportunities to push the boundaries of the chosen research areas and accelerate the impact of these centres. However, there remain significant opportunities for the Centres to deliver substantial impact on multidisciplinary research and enhance the careers of talented researchers in these priority areas to enhance real culture change at institutional level. To enable this we would like to offer an opportunity for the existing centres to apply for 'Platform-type' funding. This is seen as an appropriate way to provide flexible support needed for staffing within the core of the centre and to enhance the exploitation of the Centre's research and help the Centres transition towards sustainability.

The Frontier Engineering: Progression Grants are able to provide a baseline of flexible support (a platform) that can be used for the retention of key staff, feasibility studies, longer-term research and international networking to specifically enhance the sustainability and impact of the Frontier Engineering Centres. These awards are similar in nature to the previous EPSRC 'Platform Grants' scheme.

We expect funded Frontier Engineering: Progression Grants to support long-term capability for transformational engineering research through:

- Building on the existing research strengths and partnerships of the centre,

- Retention and training of key research staff within the centre,
- Promoting multidisciplinary research within and beyond the centre,
- Allowing strategic, longer-term research thinking for research groups within the centre,
- Enhancing Equality, Diversity and Inclusion across the Centre.

We also expect proposals to enhance engagement with the research and innovation landscape through:

- Increased support for networking across business, Public Sector Research Establishments, Catapults, Government and other public agencies, including international linkages;
- Providing experience & training for researchers within the centre in commercialising early stage research;
- Emphasising aspects such as pathways to commercialisation for technology developed through centre activities.

For more information about EPSRC's portfolio and strategies, see our website: <https://epsrc.ukri.org/research/ourportfolio/>

## **Funding available**

Applications for Frontier Engineering: Progression Grants should be staff-centric and the expectation is that requests should not exceed 2 years in duration and/or £750k EPSRC contribution and that resources requested are appropriate to the centre's research portfolio. Investigators' time should be appropriate to the planning and management of the grant.

Other directly incurred costs should be limited to travel, consumables and Creativity@home.

## **Equality, Diversity and Inclusion**

The long term strength of the UK research base depends on harnessing all the available talent and the Research Councils have together developed the ambitious UK Research and Innovation Equality, Diversity and Inclusion Action Plan <https://www.ukri.org/files/legacy/skills/action-plan-edi-2016/>

In line with the UK Research and Innovation Diversity Principles, EPSRC expects that equality and diversity is embedded at all levels and in all aspects of research practice. We are committed to supporting the research community in the diverse ways a research career can be built with our investments. This includes career breaks, support for people with caring responsibilities, flexible working and alternative working patterns. With this in mind, we welcomes applications from academics who job share, have a part-time contract, need flexible working arrangements or those currently committed to other longer, large existing

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

## Equipment

Equipment requests are not permitted on Frontier Engineering: Progression Grants applications.

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

## Eligibility

This is a closed call for the existing Frontier Engineering Centres:

- Modelling complex and partially identified engineering problems- Application to the individualised multiscale simulation of the musculoskeletal system, University of Sheffield
- Frontier Manufacturing: Scaling up synthetic biology, Imperial College London
- Centre for Nature Inspired Engineering (CNIE): Addressing Challenges in Sustainability and Scalable Manufacturing, UCL
- Synthetic Biology applications to Water Supply and Remediation, University of Glasgow
- An New Frontier in Design: The Simulation of Open Engineered Biological Systems, Newcastle University

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 to apply to EPSRC 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/>).

When adding a new proposal, you should select:

- Council 'EPSRC'

- Document type 'Standard Proposal'
- Scheme 'Standard'

Note that clicking 'submit document' on your proposal form in Je-S initially submits the proposal to your host organisation's administration, not to EPSRC. Please allow sufficient time for your organisation's submission process between submitting your proposal to them and the call closing date. EPSRC must receive your application by **16:00 on 21 November 2018**.

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

Your full proposal should consist of:

- single Je-S application form for each Frontier Engineering: Progression Grant
- Full case for support - 8 pages
- Pathways to impact - two pages
- Justification of resources - two pages
- Project partners' letters of support
- CVs for named staff (2 A4 sides maximum per CV).

Since Frontier Engineering: Progression Grants are not project based, workplans are not required.

Guidance on what is required in the proposal sections is below.

### Title

Please submit your proposal with the following title format:

'Frontier Engineering: Progression Grant in XXX'

### Full Case for Support

The case for support should be a maximum of 8 sides of A4 under the following headings:

- **Track record of investigators**
- **Team Profile** covering the research staff in the group to be supported.
- **Profile of the Centre:** The proposal must demonstrate that the Centre has and national and internationally leading reputation and a high international profile in the relevant research area.
- **Future plans** - How do the investigators plan to take advantage of the additional support the proposed Frontier Engineering: Progression Grant would provide for the Frontier Engineering Centre? When describing this work, investigators should refer to the timeliness and relevance to the existing Centre's work, the future research ambitions of the Centre and

national importance of the proposed future research direction, including how it aligns to EPSRC portfolio and strategy. The proposal should also describe how the Frontier Engineering: Progression Grant will actively enable the development and promotion of the careers of its team members, both named investigators and research assistants and enable the team to take a longer term more strategic view of their research as a means of developing and strengthening the strategic vision and provide improved career opportunities for team members.

- **Management** – outline how the proposed Frontier Engineering: Progression Grant will be managed and how this will be different to a standard mode grant.
- **Funding** – a table or chart should be included illustrating the current funding portfolio of the group as well as the projected plan of anticipated support. It should be explained how the group has the ability to obtain significant funding from a variety of sources, and will continue to do so. Plans for future sustainability must be outlined in the proposal.

### **Pathways to Impact**

This should be a maximum of two sides of A4. This section should cover how the potential pathways to impact will be delivered, engaging with the entire value chain (from discovery, to understanding through to integration/adaptation, demonstration and deployment), including:

- Outreach activities to promote networking and collaboration with non-Frontier Engineering: Progression Grant researchers and engaging the wider public in research
- Training activities to accelerate impact from the Frontier Engineering: Progression Grant activities
- User engagement activities to engage collaborators with the Frontier Engineering: Progression Grant, including influencing and working with other stakeholders, to ensure acceleration of impact and time to market.

For further guidance on Pathways to Impact, please see the Research Councils UK website: <https://www.ukri.org/innovation/excellence-with-impact/pathways-to-impact/> and <https://epsrc.ukri.org/funding/applicationprocess/preparing/impactguidance/>.

### **Justification of Resources**

This should be a maximum of two sides of A4. This should justify the resources required to undertake the research programme, support the grant operations and implement the Pathways to Impact.

### **Project Partner Statements of Support**

Statements of support are required from any project partners involved in the proposal and listed on the Je-S form. These letters from project partners should:

- confirm their rationale for support for the Frontier Engineering: Progression Grant from their business needs and drivers

- confirm the contribution of cash and in-kind support
- be dated and on headed paper, making clear the role of the signatory in the user organisation.

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 to EPSRC **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.

For advice on writing proposals see:

<https://epsrc.ukri.org/funding/howtoapply/preparing/>

## **Assessment**

### **Assessment process**

These applications for Frontier Engineering: Progression Grant funding will be assessed via the normal standard mode process

<https://epsrc.ukri.org/funding/applicationprocess/routes/standardresearch/>

### **Assessment criteria**

#### **Primary criterion:**

##### **Quality**

- Novelty and timeliness of any research that builds on existing research strengths of the Centre;
- Ambition, adventure and transformative aspects (including reference to multidisciplinary nature of the research);
- Appropriateness of the proposed methodology in enhancing the activities of the Centre;
- Added value and demonstration of the need for a Frontier Engineering: Progression Grant.

#### **Secondary criteria:**

##### **Importance**

- How the Centres research contributes to, or helps maintain the health of other research disciplines, contributes to addressing key UK societal challenges, contributes to current or future UK economic success and enables future development of key emerging industry(s);



- Meets national strategic needs by establishing or maintaining a unique world-leading research activity (including areas of niche capability);
- Fits with and complements other UK research already funded in the area or related areas, including the relationship to the EPSRC portfolio and our stated strategy.

### **Impact**

- How complete and realistic are the impacts identified in this work;
- Effectiveness of activities identified to realise these impacts, including any additional resources;
- Relevance and appropriateness of any beneficiaries or collaborators

### **Applicant**

- The extent to which applicants are able to deliver the proposed project, making reference to
  - Appropriateness of the track record of the applicant;
  - Membership of the proposed Frontier Engineering: Progression Grant group (including Research Assistants), the balance of skills and why these people should be supported;
  - Development and promotion of the careers of its team members, both named investigators and research assistants.

### **Resources and Management**

- The effectiveness of the proposed planning and management and whether the resources requested are appropriate and fully justified;
- Demonstration of the group's ability to attract research funding from a variety of sources, including leverage of new research funding.

Feedback will be provided where instructed by the panel, however the panel outcomes will be published after the meeting on EPSRC Grants on the Web.

### **Guidance for reviewers**

This is a closed call for the existing Frontier Engineering Centres to apply for further funding to provide a baseline of flexible support to specifically enhance the sustainability and impact of the Frontier Engineering Centres.

These proposals will go through a competitive peer review process and will be assessed at an Engineering standard mode panel.

### **Additional 'Frontier Engineering: Progression Grants' Criteria to be considered within the standard reviewer form**

- **Added Value** (please include an assessment of this criteria under Quality section)

- To what extent does the proposal enhance the activities of the Centre. The proposal must demonstrate the group's need for a Frontier Engineering: Progression Grant, such as retaining key people currently supported on short term contracts, and providing the group with opportunities not available through standard project based funding, for example, the exploration of new research directions that may be considered 'too risky' for standard research projects.
- **Team development** (please include an assessment of this criteria under Applicant (2) Balance of Skills of the project team, including academic partners)
  - How will the group/team use the grant to actively develop and promote the careers of its research members
- **Funding** (please include an assessment of this under Resources & Management section)
  - Comment on whether the research team have demonstrated an ability to attract research funding from a variety of sources and how they propose to use the platform grant to leverage new research funding.

Information about the EPSRC peer review process and guidance for reviewers can be found at: <https://epsrc.ukri.org/funding/assessmentprocess/review/>

Guidance for reviewing standard grants can be found here:

<https://epsrc.ukri.org/funding/assessmentprocess/review/formsandguidancenotes/standardgrants/>

## Moving forward

Submissions to this call will 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 for proposals issued	October 2018
Deadline for Full Proposals	21 November 2018, 16:00
Standard mode panel meeting	Early February 2019
Grant start date	From June 2019

\*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

- Sarah Billingham (01793 844420 - [Sarah.billingham@epsrc.ukri.org](mailto:Sarah.billingham@epsrc.ukri.org))
- Andrew Lawrence (01793 444317- [Andrew.Lawrence@epsrc.ukri.org](mailto:Andrew.Lawrence@epsrc.ukri.org))

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Please contact your university research office for help and advice on writing your proposal and allow enough time before the closing date for your organisation's submission process.

## Change log

Name	Date	Version	Change
Sarah Billingham	12/10/2018	1	N/A

## Appendix

### Je-S attachments Check List

#### Standard:

Attachment Type	Maximum Page length	Mandatory/Optional	Extra Guidance
Case for Support	Eight pages	M	Comprising up to two A4 sides for a track record, and six A4 sides describing proposed research and its context.
Pathways to Impact	Two pages	M	
Justification for Resources	Two pages	M	
CVs	Two pages each	As Required by EPSRC	For named and visiting researchers, and researcher co-investigators only.

Project Partner Letters of Support	No page limits	As Required by EPSRC	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	As Required by EPSRC	In exceptional circumstances a maximum of three letters can be submitted.
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.
Other attachment	No page limit	As required, at EPSRC request only	This can be used for a document that does not fit under any of the headings above. This attachment type is not seen by reviewers or panel members.