



ROYAL
ACADEMY OF
ENGINEERING

Frontiers follow-on funding

Guidance for applicants

Applications open: 18 December 2019

Applications close: 3 February 2020

Project start date: on or before 13 March 2020

Project length: 12 to 36 months

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Introduction

Introduction to the Royal Academy of Engineering

We bring together the most successful and talented engineers from across the profession – our Fellows – to advance and promote excellence in engineering for the benefit of society.

We have three strategic priorities: make the UK the leading nation for engineering innovation and businesses, address the engineering and skills diversity challenge, and position engineering at the heart of society.

We are a national academy with a global outlook.

This scheme is offered by the Royal Academy of Engineering on behalf of all four UK National Academies, and therefore with the support of the Royal Society, Academy of Medical Sciences and British Academy.

Introduction to the Global Challenges Research Fund (GCRF)

The GCRF is a £1.5billion fund announced by the UK government to support cutting-edge research that addresses the challenges faced by developing countries. The Academy is a delivery partner for the GCRF. Please find more information about the fund via <http://bit.ly/GCRFhome>

This funding is awarded under the GCRF as part of the UK government's Official Development Assistance (ODA). As such, collaborations and projects supported by this programme should meet ODA requirements and must:

- Aim to promote the welfare and economic development of a country or countries on the [DAC](http://bit.ly/DACLIST) list of ODA countries: <http://bit.ly/DACLIST>
- Be designed to address a developmental need
- Focus on a specific challenge affecting a developing country/region.

Before making an application to this scheme please take time to read and understand the ODA guidance from the OECD: <http://bit.ly/ODAreq>

**Submission deadline:
2pm (UK time)
Monday 3 February 2020**

Introduction to this scheme

The core aims of the Frontiers follow-on funding are:

To be the next step for activities seeded by the UK National Academies' joint GCRF programmes

To support early- and mid-career researchers who want to forge a career that strives to achieve the global goals

To develop a community of interdisciplinary thinkers and researchers working at the technological frontiers for global development

The Frontiers follow-on funding scheme aims to build on, and scale up, successes from the UK National Academies' early- and mid-career research programmes funded by the GCRF.

The scheme aims to support collaborative research that tackles international development challenges and enables previously seeded projects to be developed into fully functioning collaborative research projects.

This programme is aimed at early- and mid-career researchers who have been named as the principal investigator or collaborator on one of the following schemes:

- Frontiers of Engineering for Development, and Frontiers of Development seed funding (*Royal Academy of Engineering*)
- Engineering for Development Research Fellowships (*Royal Academy of Engineering*)
- FLAIR Fellowships (*Royal Society*)
- Challenge-led Grants (*Royal Society*)
- Cities and Infrastructure Programme (*British Academy*)
- Networking Grants (*Academy of Medical Sciences*)

The allocated funding is a mid-sized award that bridges the gap between seed funding and larger scale grants, allowing awardees to take forward a collaborative project that tackles a global challenge. In the first round, only researchers based at a UK institution can lead the project (the Academy aims to open this to international leads in the future). All projects must have at least two collaborators who were a part of the original project.

This scheme provides:

- £100,000 to £300,000 (at a maximum of £100,000 per year) for between one to three years to cover direct costs related to an interdisciplinary, collaborative project that builds on the previously funded project and tackles a developing country challenge.
- Mentorship from an Academy Fellow.

Eligibility criteria

1. The Principal Investigator (PI) must be 0 to 20 years' post-PhD and based at a UK higher education institution/university, in a department that is fully capable and committed to supporting the project and researcher.
2. If the PI has taken a career break that puts them beyond the 20 years post-PhD limit they may still be considered and should contact the Academy to discuss their eligibility.
3. The PI must have been a named PI or collaborator on one of the following awards (referred to as '**the original award**' hereafter):
 - a. Frontiers of Engineering for Development or Frontiers of Development seed funding (*Royal Academy of Engineering*)
 - b. Engineering for Development Research Fellowships (*Royal Academy of Engineering*)
 - c. FLAIR Fellowships (*Royal Society*)
 - d. Challenge-led Grants (*Royal Society*)
 - e. Cities and Infrastructure Programme (*British Academy*)
 - f. Networking Grants (*Academy of Medical Sciences*)
4. The PI must have at least one collaborator who was named on the original award. At least one collaborator must be based in a [DAC](#) list country. (note: these two roles can be fulfilled by the same person). There may be more than one collaborator, including individuals not named on the original award. Global South partnership must be an integral aspect of the proposal, with significant consideration of how to embody best practice in equitable partnerships.
5. If the PI on this application is the same as the PI on the original award, the original award must already be completed **or** be due to complete within three months of the application closing date.
6. If the PI on this application is a named collaborator on the original award they may apply at any stage of original award completion. However, ability to demonstrate good outcomes from the original award will be a benefit to the application.
7. The proposed activities must constitute interdisciplinary, collaborative, challenge-based research that addresses a specific need.
8. The proposal must meet [ODA](#) guidelines and be designed to positively impact or contribute to the sustainable economic or social development and/or welfare of a country or countries on the [DAC](#) list. The research must be led by a specific [DAC](#) list country development need, and outputs should be applied in an identified [DAC](#) list country.
9. Individuals are limited to **one application as PI**. They may be a named collaborator on more than one application, but should consider their workload and commitments in case all applications are successful.
10. There is no requirement for applications to focus on engineering, but they should involve technology, innovation or engineering in a significant way.

Please note – this is a new programme in the pilot phase, and we may not have considered every set of circumstances. If you think you should be eligible but fall outside of this list, please [contact us](#) to discuss your particular case.

Eligible costs under this scheme

Research costs -

up to 100% of directly incurred costs including:

- Staff costs for PIs and collaborators
- Staff costs for research assistants and PhD students
- Consultancy fees, including translation costs
- Equipment and project specific consumables
- Please note that individual pieces of equipment must have a value of under £10,000.

Travel and event costs -

up to 100% of directly incurred costs including:

- Travel, accommodation, and visas
- Subsistence costs for any researcher, collaborator or staff member staying away from home
- Event costs including venue hire and catering for meetings related to the project.

Other costs -

up to 100% of directly incurred costs including:

- Website, social media or advertising
- Conference costs including fees
- Up to £2,500 per year may be claimed by the PI university for administrative support.

The following costs are NOT eligible:

- Indirect costs, including overheads, beyond the £2,500 per year claimable by the PI's university for administrative support.
- Individual pieces of equipment that cost more than £10,000.
- The funding requested must not be calculated based on full economic costs.

Beyond the funding: what to expect

Mentorship

The Academy team will work with each PI to identify an appropriate Academy Fellow to be the project mentor. Mentors support and provide expert advice throughout the award's duration.

The PI and mentor will meet regularly to discuss the programme of activities, identify progress being made and make plans. Mentors may also attend project meetings, where appropriate.

Signposting, promotion and network building

The Academy team is on hand throughout the award period and beyond. It can signpost additional opportunities, including regional meetings, networking opportunities, and further funding options. Examples of how the Academy can support PIs and Co-applicants are as follows:

- PIs and Co-applicants are automatically enrolled in Frontiers newsletter and encouraged to be involved with programme activities.
- Where appropriate, the Academy can make introductions between awardees, the Fellowship, and its networks.
- If PIs and Co-applicants have exciting news to share, related to their project, this can be shared through the Academy's social media channels and newsletters, helping to build the profile of the project.

Your Commitment

- Reporting: six-monthly reports on both finances and project progress help the Academy team to stay up to date with your achievements and spot where you may need extra support.
- In addition to reporting, PIs and Co-applicants are encouraged to stay in regular contact with the Academy, strive to be role models to others, and engage with their peers around the world.
- Awards will begin in March 2020, and run for up to three years.

**Submission deadline:
2pm (UK time)
Monday 3 February 2020**

How to apply

All applications must be submitted by the lead applicant via the online system, available here: <https://grants.raeng.org.uk>. All applicants must first register with the system and provide some basic log-in details to create a profile.

Before completing the application form, applicants are asked to complete a **Diversity Monitoring Form** to help the Academy monitor and assess its [equality, diversity and inclusion policy](#). The information will be treated as strictly confidential, non-attributable and only reported when collated. It is gathered, stored and used in compliance with the Academy's Privacy Notice in line with the General Data Protection Regulation 2018. The information will only be used for statistical purposes with access restricted to staff involved in processing and monitoring the data. It will not be seen by anyone involved in any selection process. No information will be published or used in any way that identifies individuals. The Academy will retain personal information for six years.

The application form has six sections and should take approximately 4.5 hours to complete, assuming applicants have answered the questions offline and merely need to enter the information, rather than compose it. To compose the application in its entirety will take significantly longer.

Many of the questions have prescribed word limits that are designed to keep answers focused and give applicants an indication of the level of detail required.

Applicants can download a PDF of their application after submission, for their own reference.

Key dates

Monday 3 February 2020: Application submission deadline.

Friday 28 February 2020: Decisions communicated to the applicants.

13 March 2020: Projects begin, initiation report submitted.

March/April 2020: Academy staff will assist with project mentor matching.

August 2020, 2021 and 2022: Mid-year progress updates due.

February 2021, 2022 and 2023: Annual reports due, until final report.

Completing the application form

After logging into the GMS and selecting 'Frontiers follow-on', you should be presented with the 'Instructions' window. Here you will see some general instructions on how to use GMS, as well as the six sections of the application form:

1. Applicant, co-applicant(s) and institution details
2. Details of original project
3. Project and challenge details
4. Goals, objectives and outcomes
5. Funding requested
6. Statement of support and declaration.

At any stage in the application process you can save your work and return to it later. You can answer the questions in any order you like, so you can freely skip some sections and return to them later. Please read the guidance provided in this document in detail, so that you know exactly what is required in each section. You should also ensure that you have all the necessary documentation to complete the application, such as a copy of your CV and supporting letters.

Questions

1. Applicant, co-applicant(s) and institution details

	Question	Guidance
1	Lead applicant contact details	<p>This should be auto-populated by the system. The lead applicant will be the main contact for the award. They must be from a UK university and meet the eligibility criteria listed on page 5.</p>
2	Name, contact details and country of residence for the lead and co-applicant(s)	<p>Please list all the applicants in the table, including the lead applicant.</p> <p>Every application must have at least one named co-applicant. At least one co-applicant must be named on the original award, and at least one must be based in a DAC list country. These criteria may be fulfilled by the same person. There is no maximum limit to the number of co-applicants named on each award.</p> <p>You only need to name the main project team. For example, if you intend to hire a translator or use students in part of the project, you do not need to include them in this section.</p>
3.	CVs of the applicants	<p>Please upload CVs for the lead applicant and all co-applicants. CVs should be no more than three pages each, and should be combined into a single PDF document.</p> <p>There is no set format for the CVs, but they should include a list of publications (if applicable). You do not need to include contact details, as these are included in questions 1 and 2.</p>

2. Details of original project

	Question	Guidance
1.	Under which scheme was the original project?	Select which qualifying scheme your original project was funded under from a drop-down list.
2.	What was the lead applicant's role in the original project?	Indicate if the lead applicant was the lead awardee/PI or named collaborator/co-I on the original award.
3.	Original project title and reference code	Include the title of your original project, and funder-assigned reference code This is so that Academy staff can easily cross-check with your previous application.
4.	End date of the original project	Select the end dates of the original project. Bear in mind that if the lead applicant is the same person as the PI on the original award, the original award must already be completed or be due to complete within three months of the application closing date - Monday 3 February 2020. If the lead applicant is a named collaborator on the original award they may apply at any point during the progress of the original award.
5.	What were the main activities, outcomes and impacts from the original award?	Provide a summary list of the main activities, outcomes and impacts of the original award. If the award is underway, please indicate which objectives have already been completed and which are expected. This should take the form of a bulleted list, not a long narrative (400 words maximum).
6.	Upload the original project final report	If the original project has been completed, please upload the final report here as a single PDF. If the project is still underway, you may upload a report of your progress to date.

3. Project and challenge details

	Question	Guidance
1.	Project details: Project title	This should be no more than 10 to 15 words and written in language that is understandable by a non-specialist.
2.	Project details: Abstract	The abstract should summarise the challenge that will be addressed and how it will be tackled in terms that are understandable by a non-specialist. Use no more than 300 words.
3.	Project details: total grant sought	<p>Input the total amount that is requested from the Academy. Applicants can claim up to £100,000 per year for up to three years – with an overall maximum of £300,000.</p> <p>This is the total for the entire grant period. Applicants will be asked for a more detailed breakdown later in the application form.</p>
4.	Project start date	The date that the project will begin. This must be on or before 13 March 2020
5.	Project end date	Projects may be between 12 and 36 months long.
6.	Which Global Challenge Area(s) will this project address?	<p>Select up to three Global Challenge Areas that the project will address.</p> <p>If you think your project will address more than three, please choose the three that are the most relevant. Please note that selecting more than one area will not necessarily strengthen your application – a lack of clarity on your objectives may count against you.</p>
7.	Which of the United National Sustainable Development Goals (SDGs) does this project address?	<p>Select up to three Sustainable Development Goals (SDGs) that the project will address.</p> <p>If you think that your project will address more than three, choose the three that are the most relevant. Please note that selecting more than one SDG will not necessarily strengthen your application – a lack of clarity on your objectives may count against you.</p>

	Question	Guidance
8.	You must select the DAC list country that your project will primarily focus on	Select a DAC list country from the drop-down list that will be the main focus of your project.
9.	Optional: select a second and third DAC list country	If applicable, you may select up to two additional countries that your project will focus on. Please note that selecting more than one country will not necessarily benefit your project, and should only be selected if they will form a core aspect of the research.
10.	Official Development Assistance – how does this project meet the ODA guidelines?	<p>Explain how the collaborative project will address the challenge identified in the country or countries selected above.</p> <p>You should focus on a specific challenge that will enhance social welfare and economic development in developing countries.</p> <p>For more guidance on ODA, please refer to GCRF guidance available via: www.ukri.org/research/global-challenges-research-fund.</p> <p>(400 words maximum).</p>

4. Goals, objectives and outcomes

	Question	Guidance
1.	Goals and objectives	<p>Identify the main goals that the project will aim to achieve. The goals should be broad statements about what the project will accomplish.</p> <p>Under each goal, please list the objectives. These are specific statements about each goal that explain how they will be achieved. These should be as specific, measurable, achievable, realistic and time-bound (SMART) as possible.</p> <p>(400 words maximum)</p>
2.	Programme of activities, methodology, outcomes and impact	<p>Describe the milestones that make up the overall programme of activities. If you are applying for more than one year, please make sure it's clear which milestones or activities will happen in each year. As a guide, you should use around 500 words for each year the project.</p> <p>Make sure it is clear which collaborator is responsible for each workstream or milestone activities.</p> <p>Please indicate what activities and research will be undertaken and what methodology will be used in pursuit of the research. You should also outline the expected outcomes and impacts related to each milestone, and how you will measure success - please make sure there is at least one metric, indicator or target for each milestone.</p> <p>(Maximum 1,500 words - 500 per year of the project).</p>
3.	Images and diagrams	<p>Optional – if you feel that an image or diagram would support your answer above, please upload it here. Make it clear when referring to it. Please only upload images and diagrams when needed - for the sake of review time.</p> <p>Documents must be combined into a single PDF for upload.</p>

	Question	Guidance
4.	Project timeline	<p>Upload a diagram, such as a Gantt chart or similar, to show the schedule of activities for the duration of the funding. Ensure all major milestones are plotted. You can use any format that you prefer, but it should be clear and informative.</p> <p>Please upload the diagram as a single PDF document</p>
5.	Risks and mitigation	<p>Outline any significant risks that the project may face, and how you will take action to mitigate them – (200 words maximum).</p>
6.	Project mentor	<p>An Academy Fellow will be assigned to every successful application to act as a project mentor. The matching process, undertaken by the Academy staff, will happen once the award has been made.</p> <p>Please outline what you would like from your mentor. This should include which discipline, sector or experience you would like them to represent, and what areas you would like to get advice or input into. (200 words maximum).</p>
7.	Engagement and/or dissemination	<p>Identify how you will share the outcomes or impacts of the project with appropriate audiences. This may include stakeholders and the public, as well as peers. We encourage the use of innovative and/or technical methods. (200 words maximum).</p>

5. Funding requested

1.	Question	Guidance																																													
	Costs table	<p>Fill in the total project costs that you will request from the Academy, based on the eligible costs listed in on page 5 of this document. The table is divided as follows, and adds up rows and columns automatically:</p> <table border="1" data-bbox="571 555 1385 981"> <thead> <tr> <th></th> <th>Y1</th> <th>Y2</th> <th>Y3</th> <th>Total:</th> </tr> </thead> <tbody> <tr> <td>Staff costs</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Consultancy and services</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Equipment and project consumables</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Travel (including accommodation, subsistence and visas)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Event costs (including venue hire and catering)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other costs</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Administrative costs from lead university</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total:</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>No fields are mandatory, so only use the ones that you require. However, please ensure that all costs you are requesting are represented – failure to do so may result in us awarding you less than your project requires.</p> <p>The total project cost must not exceed £300,000, with a yearly maximum of £100,000.</p>		Y1	Y2	Y3	Total:	Staff costs					Consultancy and services					Equipment and project consumables					Travel (including accommodation, subsistence and visas)					Event costs (including venue hire and catering)					Other costs					Administrative costs from lead university					Total:				
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2.	Other funding or in-kind contributions	This question is optional. If you have any other funding, and offer of funding, or will be using any in-kind contributions you should indicate them here.																																													
3.	Justification of costs	<p>Provide a descriptive breakdown of the funding requested. The justification should be a narrative description of what resources are requested and why. It should include:</p> <ul style="list-style-type: none"> • All the costs outlined in the costs table. • How equipment will be used and by whom. • Which collaborator will spend the money. If it is not the lead applicant the collaborating universities will usually require a contract to be in place. Please ensure that you begin this process early on, in order to avoid delays. <p>(400 words maximum)</p>																																													

6. Statements of support and declaration

The lead applicant and co-applicants must provide various letters of support and declarations from their institutions, universities, or organisations. These must be obtained in plenty of time, as failure to provide them at the time of submission will, unfortunately, disqualify an otherwise eligible application. Extensions will not be granted in order to obtain the letters.

1. A letter of support from the lead applicant's institution. The Head of Department or School, Pro Vice-Chancellor or Dean at the lead applicant's institution/University must complete a statement in support of the application. Please see the applicant guidance for what is required in the letter of support. The statement must be on headed paper and be signed. The letter must include:

- A statement in support of the application and applicant.
- Alignment of the proposed project with the university research strategy and priorities.

The letter should be no more than two pages long and must be uploaded as a single PDF document.

2. A declaration from the lead applicant's institution. This should be completed by an appropriate officer from the research grants office or equivalent. The letter must be on headed paper and include the signatory's name and position, and an official stamp - if applicable. The purpose is to ensure that, if successful, the lead applicant will have the support they require to carry out the project. It must include the **exact wording**:

"On behalf of the institution/university I can confirm that I have read and accept the application guidance and other information regarding this award scheme, which is provided on the website of the Royal Academy of Engineering. I also confirm that:

- *The costs submitted in the application are correct and sufficient to complete the project as envisaged. Any shortfall in funding discovered after the award has been made will be covered by the university, potentially through other grants.*
- *The applicant will be employed by the university for the duration of the award.*
- *If awarded, the applicant and co-applicant(s) will be given full access to the facilities, equipment, personnel and funding as required by the application.*
- *The institution will ensure that the proposed programme of work has been agreed between all collaborators and institutions involved, and that all necessary contracts, visas, IPR agreements, financial processes and other necessary arrangements are in place before the start of the project.*

- *I am authorised to approve the submission of applications for funding and this application has successfully met all our internal approval procedures."*

The letter may also contain further remarks, if the University wishes. Please make sure the letter is no more than two pages long.

3. A letter of support from the co-applicants' organisations. Each organisation should provide a letter of support from an appropriately senior representative - equivalent to a Head of Department or School, Pro Vice-Chancellor or Dean. Each letter must be on headed paper, be signed, and should not exceed two pages. Please combine the letters into a single PDF for upload. The letters should include:

- A statement in support of the application and applicant.
- Alignment of the proposed applications with organisational priorities.
- A commitment that the organisation will ensure that the proposed programme of work has been agreed with the lead applicant institution, and to undertake the necessary actions to put contracts, agreements, financial processes and other arrangements in place.

Further to the letters, the lead applicant will also be required to tick a check box to agree to be bound by the conditions of the scheme, and put their name to the following statement:

I understand that, should this application be successful, the institution will be required to sign a contract based upon the terms and conditions published on the website. I confirm that all the information submitted herein is wholly accurate at the time of submission, and I will update the Royal Academy of Engineering of any material changes which may affect the project.

I confirm that I have the permission of any person or persons I have included contact details for, to share their details with the Royal Academy of Engineering for the purposes of administering this application.

Furthermore I acknowledge that the Royal Academy of Engineering will disclose the information contained within this application to external parties for the purpose of assessing the application.

Once this page, and all the other form pages, are complete, a 'submit application' button will become available at the top of the page. If the button does not become available, please make sure that every collaborator who has accessed the form has marked **every page** as complete - this is almost always the reason that the button has not become available, and unfortunately the Academy staff cannot save the pages on their behalf.

Assessment of applications

Please be assured that the Academy requests that anyone involved in reviewing applications must treat them with strict confidence. The Academy does not contact any third parties listed in the application, and all details are handled in confidence.

Stage 1: eligibility checking

Applications will first be checked for eligibility by Academy staff. The application will be checked against the criteria on pages 5 and 6. Cross checks with staff at the Royal Society, Academy of Medical Sciences, and British Academy will be made where the original project was funded by an Academy other than the Royal Academy of Engineering.

Stage 2: Panel review

All applications will be reviewed by at least one reviewer with technical expertise relevant to the project, plus one 'generalist' reviewer who has expertise in research or innovation for international development. Expert reviewers provide comments against the overall quality of the applications, ODA compliance, and the following assessment criteria:

- Quality of the collaboration and collaborative project, including interdisciplinarity and embodying best practice in equitable partnering.
- Whether the project is challenge-led and seeking a specific outcome which will promote the welfare or economic development of a country or countries on the [DAC](#) list.
- Ability for the project to address the identified challenges effectively and efficiently.
- Quality of the proposed project – including the quality of the research vision, programme of work, and novelty.
- Whether the vision and requested resources are appropriately targeted and scaled.

Stage 3: Sift panel meeting

Once all applications have been reviewed they will be considered side-by-side and ranked by a cross-Academy panel of Fellows. Following the panel meeting, decisions will be communicated to project teams via the lead applicants.

For any queries please contact the programme manager:
Alice.Marks@RAEng.org.uk