



Royal Academy
of Engineering

Research Chairs and Senior Research Fellowships

Applicant guidance notes
Deadline Thursday 9 March 2023



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Introduction

The Academy's Research Chairs and Senior Research Fellowships scheme aims to strengthen the links between industry and academia by supporting exceptional academics in UK universities to undertake use-inspired research that meets the needs of the industrial partners.



Awardees are expected to:

- Establish or enhance a world-leading engineering research group.
- Deliver 'use-inspired' research that meets the needs of their industrial partners.
- Disseminate the outcomes of their research for appropriate academic impact.
- Become a self-sustaining research group by the end of the award (by securing substantial grant income).

Applicants from UK universities are invited to submit collaborative research projects in any engineering discipline.

Diversity and inclusion

The Royal Academy of Engineering is committed to diversity and inclusion and welcomes applications from all underrepresented groups across engineering. It is the Academy's policy to ensure that no applicant is disadvantaged or receives less favourable treatment because of age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex or sexual orientation.

Part-time and flexible working

The Academy wants to support applicants to achieve a balance between their personal and work demands, and will consider individual requirements and part-time and other flexible working arrangements.

Eligibility criteria

1. Awards can only be held at UK universities.
2. All such awards made in this round must start on 1 September 2023.
3. Research Chairs are professorial appointments, so applicants should already be a professor or equivalent.
4. Senior Research Fellowships are senior academic appointments, so applicants should already be at reader or lecturer level or equivalent.
5. It is expected that applicants should be able to demonstrate an outstanding research profile including a proven track record in securing external grant income (RCUK, EU, industry, charities, and so on) and developing collaborations.
6. Applications are welcome from any engineering discipline. Engineering is defined in its broadest sense, encompassing a wide range of diverse fields, including computer science and materials. If you are unsure whether your collaborative research project falls within the Academy's engineering remit area, please contact: research@raeng.org.uk
7. The duration of an award is five years. (The Academy will expect the awardee to contribute no more than four hours per week towards administration/teaching duties.) The industrial sponsor must commit to funding the entire five-year period. Applications for shorter time periods will not be accepted.
8. The industrial sponsor must have a significant base in the UK. Usually no more than a maximum of two industrial sponsors per application is allowed.
9. In special circumstances, the 'industrial sponsor' may be another funding body such as a charity or government department. In such cases, the funding body is subject to the same terms and conditions as an industrial sponsor and must also demonstrate suitable pathways to impact in order to exploit research outcomes.
10. The industrial sponsor should contribute at least £250,000 towards this collaborative research project over the five-year period. This can include both cash and in-kind support. The amount of funding the industrial sponsor is willing to contribute is an important assessment criterion, being an indicator of the level of commitment to the post and the level of ambition for the group to be created.
11. The applicant is expected to have already identified an appropriate collaborative research project and secured the support of an industrial partner prior to submitting an application.
12. This research programme will naturally align with the interests of the industrial sponsor and its 'use-inspired research' should be underpinned by world-class basic research. This collaborative research proposal must be of mutual benefit to both industry and academic partners. Please note that it is not a contract research or consultancy agreement.



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Submission deadline

The submission deadline for this round of applications is **4.00pm on Thursday 9 March 2023**. Incomplete applications or applications submitted after this deadline will not be accepted.

Contracts

For successful applications, a bilateral contract will be drawn up between the university and the Academy. Our standard contract template is available [here](#) for reference.

An appropriate bilateral agreement between the university and industrial sponsor is also required and needs to be signed as a condition of the Academy/university contract.

Both contracts need to be completed in advance of the **1 September 2023** start date.

Resubmissions

The Academy no longer accepts uninvited resubmissions of Research Chair and Senior Research Fellowship proposals.



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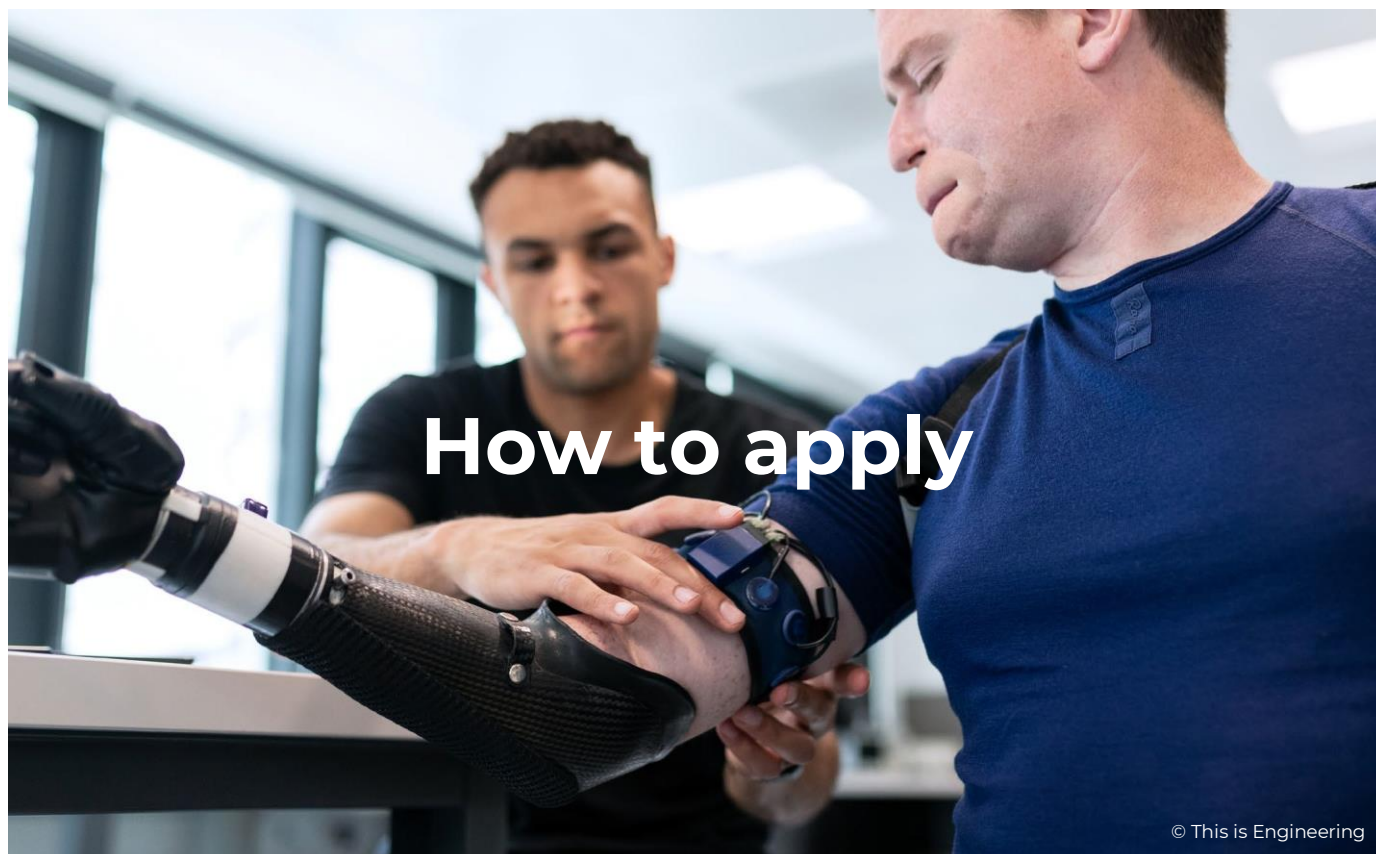
Mentoring and monitoring

The scheme's programme manager will work with each awarded Research Fellow to identify an Academy Fellow to be their mentor. The mentor will provide independent expert advice and guidance on research-related matters throughout the duration of the award. The mentor will also formally monitor the progress of the awardee to ensure that the Academy's funds are well spent.

The awardee must submit an annual progress report to the Academy, which will

be reviewed and evaluated by the assigned mentor. At the annual review meeting, the awardee, the university's head of department/school, a representative of the company, the mentor, and a member of Academy staff will discuss progress and agree future plans.

Annual reports should follow the reporting guidelines available [here](#), and will cover aspects such as: the progress made against the project plan, esteem indicators, size of the team, realised impact and exploitation, and any dissemination activities undertaken.



How to apply

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Create an account

All applications must be submitted via the Academy's online grant management system (GMS) available at <https://grants.raeng.org.uk>

The application should be submitted by the applicant from the host university. If not already registered, all applicants must first register with the online system and provide some basic login 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 Regulations 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 processes. No information will be published or used

in any way that identifies individuals. The Academy will retain personal information for six years from close of award.

The application form has seven sections and the form itself could take approximately seven to eight hours to complete. A summary of the guidance notes is embedded within the system itself. However, the guidance given below is more detailed so it is recommended that you keep this document to hand.

Many of the questions have prescribed word limits, which are designed to keep your answers focused and to give you an indication of the level of detail we require. In such cases, the number of words you have used will be displayed beneath the question and updated in real time.

Applicants can download a pdf of their applications after submission, which is recommended for reference. There is only one application stage and those meeting the eligibility criteria will enter the assessment stages.

Completing the application form

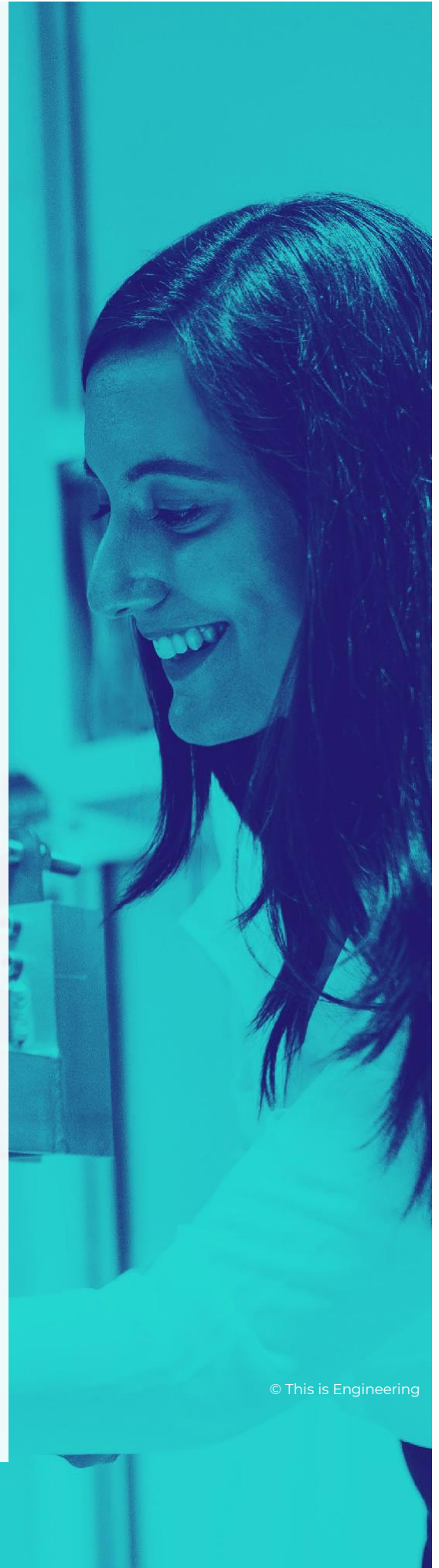
After registering and logging in to the online grants system, select the 'RAENG Portal' tab on the top left-hand side of your screen. Here you will be presented with a list of all Academy schemes that are currently accepting applications.

Find the Research Chairs and Senior Research Fellowships scheme and click on 'Start an application'. You should be presented with the 'Instructions' screen, where you will see general instructions on how to use the system, and links to the seven sections of the application form listed below:

1. Contact details and application grade
2. Applicant details/person specification
3. Project details
4. Case for support
5. Potential impact
6. Funding requested
7. Letters of support and declaration

You can save your work at any stage in the application process and return to it later. You can answer the questions in any order you like so you may freely skip some sections to return to later if you so wish. It is therefore worth viewing the application early on for an indication of what is required.

Please ensure that you have all the necessary documentation when you start completing the application, such as a copy of your CV and letters of support.



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1. Contact details and application grade

Q. Application grade

Select from the options from the dropdown menu to indicate the grade of application you are making, for example Research Chair (professor) or Senior Research Fellow (reader/lecturer).

Q. Applicant contact details

Please provide your name, current job title and contact details including postal address and a telephone number. Some of your details and those of your institution should be automatically generated by the system, as you provided these at registration.

Q. Contact details of the host university and industrial sponsor

Please provide the name and contact details for both your host university and industrial sponsor in this section. Please mark the university as the lead.

Q. Industrial company size

Please indicate the size of the industrial company that you will be collaborating with by selecting one of the options below. Please use the table below as reference for completing this section. When determining the industrial company size, the size is primarily determined by “Annual Turnover”, this is to avoid any confusion with overlapping criteria.

Company Category	Annual turnover	Number of Employees
Micro	£0 to £1.9 million	0 to 9
SME	£2 million to £24.9 million	10 to 49
Medium	£25 million to £499.9 million	50 to 249
Large	£500 million +	250 +

These are SME sub-categories as defined by the European Commission here:

http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en

These company size categories have been based on UK government definitions, found here: <https://www.gov.uk/government/collections/mid-sized-businesses>

2. Applicant details/ person specification

This section requests details about the quality and suitability of the candidate and is where your CV should be uploaded.

Q. Candidate's CV

The format and content of your CV is left to your discretion. You do not need to include contact details here again as these are included earlier in the application. As a minimum, please include the following in your CV: your research track record, details of external grant income secured, list of key publications and conference presentations, PhD students supervised, and awards/prizes received (if any). The CV should be uploaded as a PDF and the file size should be less than 5MB.

Q. Candidate's track record

Outline how your professional experience and academic track record makes you suitable for this award. Include details of any relevant experience you believe demonstrates this and a summary of results and outcomes of your recent research. You have up to 500 words to answer this question. You may also wish to include:

- any relevant previous collaborative work/partnerships with other researchers, research organisations, industries or other beneficiaries, both nationally and internationally
- the economic and/or societal impact of your research
- details of any external grant income secured (funder, value, PI/CoI)
- any other information regarding your research track record.

Q. Candidate's most significant achievements

Please describe three to five of your most significant achievements in your research career. We would like to emphasise that all achievements and outputs are welcome and

considered valuable to the Academy, not just peer-reviewed publications. Outputs also include, and are not limited to: code, patents, spin-out companies, events, public engagement and policy impact. Please briefly explain the significance of the achievement in a way that will explain it to a researcher from your discipline who may not be familiar with latest work in the particular field. *500 words maximum.*

The Academy's research programmes are aligned with the principles of the Declaration on Research Assessment ([DORA](#)). If research articles published in peer-reviewed journals are to be included in an application, we would therefore like to emphasise that the scientific content of a paper is much more important than publication metrics or the identity of the journal in which it was published.

Q. Impact of COVID-19 (optional question)

The Academy understands that the impact of the coronavirus pandemic on researchers and their work will be varied. If you wish, please provide a summary of how the pandemic has affected your research activities that reviewers and panel members should consider. Reviewers and panel members will be advised to take into consideration the unequal impacts that COVID-19 related disruptions might have had on individuals.

The impact can include, but is not limited to, the following examples: pause on experiments/research plans, reduced ability to work due to additional caring responsibilities, delays in publishing/submitting a key paper(s) (please note pre-prints can be included in your publications list). *500 words maximum.*

3. Project details



Q. Project title

The project title should not be longer than six words and should be understandable to a non-specialist reader. The essence of the research should be captured in the title and should be as informative as possible.

Please note that the position will be known as the 'Industry Sponsor/Royal Academy of Engineering Research Chair (or Senior Research Fellow) in project title'. A succinct title will be beneficial for media/outreach activities.

Q. Abstract

Describe the research and expected outcomes in terms that can be understood by a non-specialist reader. Demonstrate a knowledge and understanding of past and current work in the subject area both in the UK and abroad. *250 words maximum.*

Q. Project start date

Awards made in this round must start on **1 September 2023**.

Q. Please provide keywords relating to the project

List 10 keywords to help us identify suitable reviewers for this application.

Q. Subject category

Select the broad engineering category that best describes your research area. This will be used to guide the reviewers. If your research fits into several categories, please pick the category that is most applicable to your proposal.

4. Case for support

Q. Goals and objectives

Please state the goals and objectives for the project, in order of priority. Please note that if awarded, the awardee's performance will be assessed against these objectives.

250 words maximum.

Q. Timeliness and novelty

Outline why the proposed project is of sufficient novelty to warrant consideration for this prestigious Research Chairs/Senior Research Fellowships scheme. Describe why this research is important and why this is an opportune time to pursue it.

250 words maximum.

Q. Programme, methodology and key deliverables

Describe the five-year work programme, indicating the research to be undertaken and the methodology to be used in pursuit of the research. Outline specific deliverables anticipated. Also include details on how novel, realistic/ambitious the project is, and include milestones by which to measure progress.

2,000 words maximum.

Q. Images and pictures (optional)

Use this section to upload any pictures related to your project, as a single PDF document with the images in the order you would like them viewed, and reference them in your response to the methodology questions.

Q. Gantt chart

Use this section to upload a Gantt chart detailing the plan and timeline for the project.

Q. References (optional)

Use this section to upload a list of the reference material referred to in your application. Where possible include web-links to any open access articles.

Q. Choice of industry sponsor and host institution

Provide justification for the choice of industrial sponsor including the strategic importance of this relationship to your institution. Outline what would be the expected benefits for the company by co-funding this appointment. Provide details of what has been achieved so far through any existing collaborations and what the overall perceived long-term vision is.

Provide justification for the choice of your host institution and background to the research group/centre of excellence, including comparison with other centres in the UK and its scale (how large it is, staff numbers, funding, research facilities).

300 words maximum.

Q. Why the Academy should support this collaboration

A statement outlining the added value that would accrue from the Academy funding, for example why should the Academy support this application? How will the support from the Academy benefit your research programme, the awardee, the industrial sponsor, the centre at the university and the UK? *400 words maximum.*

Q - Team development

Identify routes for expanding the awardee's research team and career. What training/skills will be provided and how will they be obtained? What will be the anticipated make-up of the team created (for example, numbers of PhDs and postdocs)?

200 words maximum.

Q – Risk management

Identify and assess any risks that may jeopardise the success of the project. Outline any contingency plans designed to mitigate these risks. *200 words maximum.*

5. Potential impact

Q. Strategic collaborations

Describe any existing and future collaborations, in addition to your industrial sponsor on this project, and how these will contribute to or enhance the project.

200 words maximum.

Q. Beneficiaries and impact

What are the benefits of this research? Quantify the extent of the benefits and identify potential beneficiaries. If the benefits do not directly relate to wealth creation and/or to improving the quality of life, give details of other beneficiaries and explain their importance. Also indicate when these impacts will become apparent.

Beneficiaries should extend to a wider community than those of the applicant's immediate professional circle and the industry sponsor. *300 words maximum.*

Q. Academy's strategic goals (optional)

How do you align with our strategic priorities? Note this is not an assessment criterion and is for staff use only. We want to understand the extent to which our programmes as a whole meet our strategic aims, but your answer will not influence the decision and applications are judged purely on merit. The strategic plan is available on our website [here](#).

Select the answer that best describes the strategic aims your research will address:

- Sustainable society
- Inclusive economy
- Both
- Neither

Please give a short explanation for the answer you have selected.

100 words maximum.

Q. Diversity and inclusion

The Royal Academy of Engineering strives to create cultures in which everyone can thrive, and we believe that diverse perspectives

enrich our collective performance.

What does diversity and inclusion mean to you, and what are you and your team doing to address it? Consider your team, collaborators and universities, the implications on your research design and topic and the overall contribution this will have on your success. *250 words maximum.*

Q. Exploitation

How will the results be exploited, both in general terms and more specifically by the industry sponsor? In the previous question, you explained what the benefits of the research are. Here you should explain how the benefits and impacts mentioned above will be achieved.

Identify what mechanisms are in place for identification, protection and subsequent exploitation of any deliverable that may arise from the research (including details of any specific collaborative agreement, where relevant). You should also indicate when these routes to exploitation are likely to be implemented, including your plans beyond the period of the award.

300 words maximum.

Q. Intellectual property rights

State the intellectual property rights arrangement agreed between the university and industrial sponsor. *200 words maximum.*



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6. Funding requested

One of the assessment criteria will be the level of support that the university and industrial sponsor is willing to contribute towards the appointment.

Table A: Total cost (fEC) of Research Chair/Senior Research Fellowship post

You will be asked to provide a full cost breakdown (fEC) of the Research Chair/Senior Research Fellowship post in terms of gross salary, indirect and estates costs. Applicants should consult with their university research support office regarding the completion of the required costings table (see below).

	Year one	Year two	Year three	Year four	Year five	Total
Salary costs						
Indirect costs						
Estates costs						
Total						

Table B: Contribution from the Royal Academy of Engineering

The Academy will fund up to one-third (1/3)* of 80% of the full economic costs (fEC). The allowed costs are gross salary, indirect costs and estates costs.

Salary increments over the period of the project should be taken into account, but possible future pay awards should not be

anticipated, and inflation should not be applied. The Academy is not able to cover the costs of the apprenticeship levy on research grants.

*In this round, the Academy's contribution will be capped at a maximum of £45,000 per annum, which equates to a total of £225,000 over five years.

	Year one	Year two	Year three	Year four	Year five	Total
Salary costs						
Indirect costs						
Estates costs						
Total						

Table C: Contribution from the industry sponsor

The industrial sponsor should contribute at least £250,000 towards this collaborative research project over the five-year period.

This can be used flexibly to support the project and may include both cash and in-kind contributions (for example access to facilities, technical staff, equipment, data,

consumables). In-kind support should be fully costed.

The Academy understands the possible impact of the COVID-19 on the industry sponsor's support and accepts flexibility of matched funding. Further details of the impact of the coronavirus pandemic on the business can be provided in the letter of support.

	Year one	Year two	Year three	Year four	Year five	Total
Cash contribution						
In-kind support						
Total						

Table D: Contribution from the university

The university should match the Academy’s contribution.

This can be used flexibly to support the project and may include both cash and in-kind contributions (for example provision of PhD studentships, PDRAs, equipment, consumables). In-kind support should be fully costed.

	Year one	Year two	Year three	Year four	Year five	Total
Cash contribution						
In-kind support						
Total						

Q - Provide details of in-kind support from the industry sponsor

Include any in-kind support that the industry sponsor is willing to provide. This can include, for example, access to facilities, technical staff, equipment, data, consumables.
200 word maximum.

Q - Provide details of in-kind support from the university

Include any in-kind support that the university is willing to provide. This can include, for example, provision of PhD studentships, PDRAs, equipment, consumables.
200 words maximum.





7. Letters of support and declarations

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This section seeks confirmation for the support that both the industry sponsor and the university will provide. A declaration of support is also required from the applicant's university grants/research office or equivalent.

Q. Letter of support from the university

A pro-vice-chancellor, dean or equivalent at the host university should write this letter of support. It should be on headed paper, signed by the author and uploaded by the applicant as a PDF.

The letter should address the following points:

- 1.** Details of how the candidate's current teaching (and related) duties will be covered during the award. (Note: contractually, the Academy will expect the awardee to contribute no more than four hours per week towards administration/teaching duties as this is a full-time award).
- 2.** The institution's commitment to the proposed collaborative research project and partnership with the chosen industry sponsor. The strategic alignment with university strategy and research priorities including details of previous and planned investment and support to facilitate the development of this research group.
- 3.** Detail how the university intends to reinvest any salary savings back into the research project (provision of PhD studentships, postdoctoral research associates, teaching replacement).

- 4.** Impact of COVID-19 on the host university's support. The host university can use this letter of support to highlight the impact of the coronavirus pandemic on their support for the award if they wish. Reviewers and panel members will be advised to take into consideration the unequal impacts that COVID-19 related disruptions might have on the host university's support for the award.

If these areas are not clearly addressed, the letter will be returned for revision prior to review.

The Academy expects institutions to be committed to, and provide support that aligns with, principles set out in *The Concordat to Support the Career Development of Researchers* and *The Concordat for Engaging the Public with Research*.

Q. Letter of support from industry sponsor

A letter of support should be included from the industrial sponsor that outlines their commitment and contribution to the award. The letter should be on headed paper, signed by the author and uploaded by the applicant as a PDF. The letter should address the points given below.

Referring to the numbers will aid identification:

1. Outline the industry sponsor's commitment and support for the collaborative research project and how this aligns with their research and development strategy.
2. Explain why the industry sponsor decided to partner with the host university and the Academy.
3. Outline how the candidate will contribute to your company's operational objectives.
4. Outline the expected outcomes and deliverables during and beyond the five-year period.
5. Provide a brief background about the industry sponsor, its turnover and staff numbers.
6. Confirm the financial contributions and any in-kind support that the industry sponsor will make to this research collaboration over the five-year period of the award.
7. Outline other possible benefits to the industry sponsor, such as industrial strategy, policy and access to graduates.
8. Impact of COVID-19 on the industry sponsor's support. The industry sponsor can use this letter of support to provide details of the impacts of coronavirus pandemic on the business.

Q - University declaration (mandatory requirement)

The declaration from the applicant's university should be completed by the head of the university's central research office or equivalent (the body that administers grant applications). The letter should be on headed paper and should carry the signatory's name, position and the university's official stamp (if available). The letter must confirm the application has been approved by the university, and must contain the exact wording given below, as well as any additional remarks that the university wishes to make.

On behalf of the 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 Royal Academy of Engineering's website, and I also confirm that:

- the costs provided in this application are correct and sufficient to complete the award as envisioned
- any shortfall in funding discovered after the award has been made will be covered by the university
- if awarded, the applicant will be given full access to the facilities, equipment, personnel and funding as required by the application
- the applicant will be employed by the university for the duration of the award
- the applicant's teaching and administrative duties will be restricted to a maximum of four hours per week for the duration of the award
- I am authorised to approve the submission of applications for funding and this application has successfully met all of our internal approval procedures
- the university will have an appropriate bilateral agreement or equivalent in place with the industrial sponsor by the proposed start date as stated in the application and agrees to share this with the Academy.

Q – Applicant declaration

This section will ask the applicant to confirm that all the information they have submitted in their application is accurate and that they will update the Academy of any changes that may affect the project.

This section will also ask the applicant to acknowledge that the Academy will disclose the information contained within this application to external parties for the purpose of assessing the case.

Assessment process

Review

The full application will receive a minimum of three expert reviews (usually Fellows of the Academy). Expert reviewers will provide comments against each of the following assessment criteria, the overall quality of the application and a recommendation on whether they should proceed to interview. Full reviewer guidance notes are available [here](#).

Quality of the candidate

- Quality of the applicant's research track record and the academic quality of the underpinning basic research.
- Quality of the applicant's research vision and their potential to establish or enhance a world-leading research group at the host university in their chosen field of engineering.

Quality of the collaborative research programme

- The quality and significance of the proposed 'use-inspired' collaborative research programme (including timeliness, novelty, vision and ambition).
- Quality and effectiveness of the proposed planning and management and whether the requested resources are appropriate and have been fully justified.

Strength of the strategic partnership

- The strength and long-term sustainability of the strategic partnership between the company and the university.
- The commitment and level of support from both the host university and the industry sponsor.

Beneficiaries and impact

- Extent to which the industry sponsor and other beneficiaries will benefit from the proposed collaborative research programme.

- The potential to translate research outcomes into societal and economic impact.

Sift panel

Applications will then be considered by the sift panel, consisting of Academy Fellows, who will rank the applications and select candidates for interview. Each applicant will be considered by two panel members, one with expertise in your area and one without. Those applicants not asked to attend an interview will be informed of this decision as soon as possible following the sift panel's decision.

Interview

The interviews (50 minutes) will be conducted by a generalist panel consisting of at least three Academy Fellows. Panellists will provide comments against the assessment criteria outlined above.

The ranking of candidates during the preceding sift panels will have no bearing at interview, with all interview candidates considered to have equal standing.

Following the interviews, the panel will rank the applications and select the top ranked candidates for awards.

Interviews will take place at the Academy in July 2023.

Please ensure that the interview dates are added to the diaries of: the candidate, their pro-vice chancellor (Research) and/or dean as well as a representative from the industry sponsor (all three parties are required to attend the interview).

Declaration on Research Assessment (DORA)

The Academy's research programmes are aligned with the Declaration on Research Assessment (DORA), which is a set of principles aiming to improve the ways in which the output of research is evaluated by funding agencies, academic institutions, and other parties. The outputs from research are many and varied, and as a funder of engineering research the Academy needs to assess the quality and impact of these outputs to make awards - it is imperative that research output is measured accurately and evaluated wisely.

In the assessment of research output, we would like to emphasise that all outputs are welcome and considered valuable to the Academy. Outputs can include open data sets, software, publications, commercial, entrepreneurial or industrial products, clinical practice developments, educational products, policy publications, evidence synthesis pieces and conference publications. With regard to research articles published in peer-reviewed journals, the scientific content of a paper is much more important than publication metrics or the identity of the journal in which it was published.

We value and appreciate the time and effort that reviewers give to support our research programmes. A good, helpful review for the Academy is one that assesses research on its own merits rather than by surrogate measures, such as on the basis of the journal in which research is published.



Assessment process

March 2023

Submission deadline is Thursday 9 March

March to May 2023

Applications sent to peer review

June 2023

All applicants informed of the outcome of their application and interviews arranged

July 2023

All applicants informed of interview outcomes

July 2023

Interviews

