Research Chairs and Senior Research Fellowships

Applicant guidance notes

Deadline: Thursday 14 March 2024, 4 pm GMT

The scheme opens for applications twice a year, with deadlines in March and September. The scheme is funded by the **Department for Science, Innovation and Technology (DSIT).**

1. Introduction

The Royal Academy of Engineering (the Academy) offers Research Chairs and Senior Research Fellowships to strengthen the links between industry and academia. The scheme supports exceptional academics at UK higher education institutions to undertake use-inspired research that meets the needs of the industrial sponsors.

Awardees are expected to:

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

The scheme provides funding for five years, capped at a maximum contribution from the Academy of **£225,000 over the five-year period.** The Academy will fund up to one-third (1/3) of 80% of the full economic costs (fEC). The Research Chair/Senior Research Fellowship must be held at a UK higher education institution.

In addition to the direct financial support, the scheme benefits include:

- Mentoring support from an Academy Fellow to offer independent expert advice and guidance on research related matters throughout the duration of the award.
- Training, events and additional Academy funding opportunities.
- Reduction of teaching and administrative duties to enable the awardees to focus on delivering use-inspired research, that creates impact for their industrial sponsors.
- Access to the Awardee Excellence Community, that brings together awardees from all career stages and disciplines to share their expertise, to collaborate and to contribute new perspectives to the Academy's work. The community will give you the opportunity to meet, learn from and support other awardees beyond your immediate cohort, as well as a broader cross section of Academy Fellows through a programme of events, and opportunities to connect in person and online.

2. Diversity and inclusion

The Academy 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.

3. Access Mentoring support

The Academy aims to provide additional support to applicants from groups that are persistently underrepresented within UK engineering through the grant application process. This positive action will contribute to improving diversity in the talent pipeline and widening the diversity of applicants and awardees within the Academy's research grant schemes.

To be eligible for Access Mentoring support, applicants must meet the eligibility criteria of the Research Chairs and Senior Research Fellowships scheme and must be either:

- **Women**
- **Black people, including those with any mixed ethnicity with Black ethnic background(s)**
- **Disabled people.**

The Academy accepts applicants' self-declaration on the above identified underrepresented groups under the host institution's guidance.

Access Mentoring is a resource limited opportunity. Applicants do not need to wait until the deadline to submit their application and can be matched with a mentor as soon as the application is approved. Early submission is encouraged. For more information on Access Mentoring please see the guidance.

4. 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.

The Academy will expect the awardee to contribute no more than four hours per week towards administration/teaching duties during their award (this will be pro-rated for part-time awards). Awardees may engage in other employment or academic activities outside of the time allocated to their award.

Research Chairs and Senior Research Fellowships can be held part time (at no less than 25% of the full-time equivalent) this must be clearly stated within the application.

Research Chairs and Senior Research Fellowships are entitled to maternity, paternity, adoption, sick or carers leave and any conversions to part-time working under the UK higher education institution's contractual conditions of employment. The Academy will extend the duration of the award pro-rata to take these requests into account.

5. Eligibility criteria

- Awards must be held at a UK higher education institution.
- The applicant must have a permanent academic position or an unconditional offer of such a position. The host institution's letter of support must make clear that they have offered a permanent position to the applicant stating the starting date. The permanent position must start before the award.
- Awards made in this round must start between 1 September and 31 October 2024.
- Research Chairs are professorial appointments, so applicants should already be a **professor or equivalent**.
- Senior Research Fellowships are senior academic appointments, so applicants should already be **reader or lecturer or equivalent.**
- Applicants should be able to demonstrate an outstanding research profile including a proven track record in securing external grant income and developing collaborations.
- Applications are welcome from any engineering discipline. Engineering is defined in its broadest sense, encompassing a wide range of diverse fields. If you are unsure whether your collaborative research project falls within the Academy's engineering remit area, please contact research@raeng.org.uk
- The duration of an award is five years. This applies to both full and part-time awards. The industrial sponsor must commit to fund the entire five-year period. Applications for shorter time periods will not be accepted.

- The industrial sponsor must have a significant base in the UK. A maximum of two industrial sponsors per application are allowed.
- 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 exploit research outcomes and impact.
- The industrial sponsor must make a (cash or in-kind) contribution towards that is proportionate to the size of the organisation. It must cover the research project over the five-year period. Please note that 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.
- Applicants must have already identified an appropriate collaborative research project and secured the support of an industrial sponsor prior to submitting an application.
- The proposed research programme should naturally align with the interests of the industrial sponsor and its 'use-inspired research' should be underpinned by world-class research. The collaborative research proposal must be of mutual benefit to both industrial sponsor and host institution. Please note the proposal should not be a consultancy work.
- The Research Chairs/Senior Research Fellowship cannot be jointly hosted by more than one higher education institution/university.

6. Submission deadline

The submission deadline for this round of applications will be **Thursday 14 March 2024, 4.00 pm GMT.** Incomplete applications will not be accepted.

7. Resubmissions

The Academy accepts resubmissions of Research Chair and Senior Research Fellowship proposals by invitation only. The application will be considered as a new application and the ranking of applicants at the preceding round of applications will have no bearing.

8. Contracts

For successful applications, a bilateral contract will be drawn up between the host institution and the Academy. Our standard contract template is available here for reference.

An appropriate bilateral agreement between the host institution and industrial sponsor is also required and needs to be signed as a condition of the Academy/host institution contract. Although the Academy does not provide specific templates for industrial and university bilateral agreements, awardees can direct the university research and grants office to the government's 'University and business collaboration agreements: Lambert Toolkit' for reference.

Both contracts must be completed before the award start date.

9. Mentoring and monitoring

Awarded Research Chairs and Senior Research Fellows will work with the Academy 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 on behalf of the Academy.

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 host institution's head of department/school, a representative of the industrial sponsor, 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 proposed programme, performance indicators, team size, realised impact and exploitation, and any dissemination activities undertaken over the past year.

10. How to apply

Create an account
All applications must be submitted by the applicant themselves via the Academy's online Grant Management System (GMS) available at https://grants.raeng.org.uk. 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 as per our [Data Retention Policy](#).

Applicants must get approval and support for their proposal from the host institution's dean or pro-vice chancellor (or similar) and the research grants office prior to applying. We advise consulting them as soon as possible about a potential application. We recommend leaving plenty of time to complete the application form ahead of the deadline and thoroughly going through your application prior to submission.

The application form has seven sections and should take approximately one hour to complete, assuming you 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, 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 application after submission, which is recommended for reference. Assessment of the application will consist of a multi-stage process and those meeting the eligibility criteria will enter the assessment stages.

Please note that all applications must comply with Academy guidelines this includes "the use of generative AI in the grant application process" (see [Annex – 3](#)) and "national security guidelines" (See [Annex – 4](#)).

11. Completing the application form

After registering and logging into the GMS, 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:

- Contact details and application grade
- Applicant details/person specification
- Project details
- Case for support
- Potential impact
- Funding requested.
- 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 and return to them later if you so wish. Please read the guidance provided in this document in detail before starting an application.

You should also ensure that you have all the necessary documentation to complete the application, such as a copy of your CV and letters of support.

- **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).

The applicant must have a permanent academic position or an unconditional offer of such a position. The host institution's letter of support must make clear that they have offered a permanent position to the applicant stating the starting date. The permanent position must start before the award.

Q – Applicant's 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. Please ensure the contact email address is correct and will be valid for the entirety of the application process as this will be the main method of communication for your application.

Q – Contact details of the host institution and industrial sponsor
Please provide the name and contact details for both your host institution and industrial sponsor in this section. Please mark the host institution as the 'lead organisation'.

Q – Industrial sponsor size
Please indicate the size of the industrial sponsor that you will be collaborating with by selecting one of the options below. Please use table one as reference for completing this section. Two or more of the requirements must be met to determine industrial sponsor size. If two requirements are not met and the number of employees is <10 you should contact the Programme Manager for assistance with your application.

Table one: Industrial sponsor size

Company size*	Must meet two or more of these requirements
Small	Turnover: No more than £10.2 M Balance Sheet total: No more than £5.1 M Number of employees: 10-49
Medium	Turnover: No more than £ 18M Balance Sheet total: No more than £ 18M Number of employees: no more than 249
Large	If it exceeds the medium size limits

The size definitions defined by "Research, Development and Innovation Streamlined Route" which references the Companies Act 2006 section 382 and 465.

- **Applicant's details/person specification**

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

Q – Applicant'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).
- Please ensure you acknowledge any career breaks if you would like the panels to take this into consideration when reviewing your application.

Please do not include personal information (e.g., gender, date of birth, and nationality) in the CV. The CV must be uploaded in a single PDF and the file size should be less than 5MB.

Q – Applicant'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 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.

500 words maximum.

Q – Applicant'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 has been 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.

- **Project details**

In this section you will be asked to provide a detailed summary of your research project.

Q – Project start date
Please enter your proposed start date: 1 September – 31 October 2024.

Q – Type of award – full time or part time
Pick from the drop-down menu the average percentage of working time you anticipate dedicating to the project: 25-100%.

Q – Work pattern during the fellowship
If your fellowship will be held part-time, please provide details of the format of the fellowship including anticipated part-time working pattern, any travel and accommodation arrangements, and how you propose to balance your university and industry commitments.
250 words maximum.

Q – Project title
The essence of the research should be captured in the title and should be as informative as possible. Please use **no more than 10 words** and ensure that it is **understandable to a non-specialist reader.**

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 – Resubmission (optional)

Have you previously applied to the Research Chairs and Senior Research Fellowships programme and the Academy has invited you to resubmit your proposal? If answering yes, please clearly articulate how your proposal differs from the previous submission.
200 words maximum.

Q – Subject category

Select one single broad engineering category that best describes your research proposal. The category selected will be used to identify reviewers and panel members for the assessment process. If your research proposal fits into several categories, please pick the category that is most applicable to your proposal. Please see Annex 1 for further information.

Q – Please provide keywords relating to the project

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

- **Case for support**

This section forms the main part of your application and asks you to provide details on your project and the activities you intend to undertake as part of the Research Chair/Senior Research Fellowship.

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 Chair/Senior Research Fellowship. Describe why this research is important and why this is an opportune time to pursue it.
250 words maximum.

<u>Q – Programme, methodology and key deliverables</u>
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. The plan should be realistic and robust over the 5-year award.
2,000 words maximum.

<u>Q – Images and pictures (optional)</u>
Upload any images and/or diagrams related to your project that add value to your application. Any images/diagrams uploaded must be referenced in the application form. **The images/diagrams must be collated and uploaded as a single PDF** in the order you wish them to be viewed. **The file size should be less than 5MB.**

<u>Q – Project timeline</u>
Upload a Gantt chart or equivalent to show the schedule of activities for the duration of the project. Please ensure major milestones are clearly plotted. You may wish to include a diagram showing how the work packages and your collaborations will interact. **The chart/diagram must be collated and uploaded as a single PDF.**

<u>Q – Reference List (optional)</u>
Upload a list of the reference material referred to in your application. Where possible include web-links to any open access articles. You may want to highlight the most relevant ones. **The reference list must not exceed one page and should be uploaded in a single PDF.**

<u>Q – Choice of industrial sponsor and host institution</u>
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 (including how large it is, staff numbers, funding, research facilities).
300 words maximum.

Q – Why the Academy should support this application
A statement outlining the added value that would accrue from the Academy funding, for example how will the support from the Academy benefit your research programme, the awardee, the industrial sponsor, the centre at the host institution 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.

- **Potential impact**
In this section, you are required to describe your future plans, ambitions, dissemination strategies and the related 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
Identify the groups in society that will benefit from the research, as well as any positive societal and economic impacts it will have.

What are the benefits of this research and for who? 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 industrial sponsor.
300 words maximum.

Q – Academy's strategic goals (optional)

How do you align with the Academy's 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 Academy 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 industrial sponsor? You have already explained what the benefits of the research are. Here you should also explain how the benefits and exploitation mentioned 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 host institution and industrial sponsor. Please note that we expect that all projects should aim to produce some substantial publishable research results that are available in the public domain. Publication may be delayed until equally shared intellectual property has been suitably protected.

200 words maximum.

- **Subsidy control compliance**

To ensure that the Academy is compliant with the 'Subsidy Control Act 2022, the next few questions follow as standard within our research programme calls to ensure that the Academy appropriately determines whether the grant is a subsidy.

In the event that your application/award is deemed to be a subsidy, further investigations and requirements will need to be implemented and carried out to ensure that we comply with funder regulations as per section 14 of the 'Research, development and innovation streamlined route' guidance pertaining to the 'Subsidy Control Act 2022'. For definitions and more information, please refer to Annex 2 of this document. Alternatively, please use the links provided for full terms and conditions.

Q – Subsidy control compliance: To assist with subsidy control compliance, please confirm whether your research project is either:

a. A piece of non-economic scientific research (with or without commercial collaborators) in terms of the Statutory Guidance on Subsidy Control clause 15.33 "Non-economic scientific research may be carried out in collaboration with commercial organisations, as long as the commercial organisation does not receive a specific benefit from the financial assistance given to the research organisation. This would be the case, for example, where the commercial organisation pays the full cost of the project; or where results that do not give rise to intellectual property rights may be widely disseminated and where any intellectual property rights arising from the project are allocated to the organisations involved in a manner which reflects their contributions (i.e. intellectual property rights resulting from the activities of the research organisation are fully allocated to it). The commercial organisation is also unlikely to benefit if the research organisation receives compensation equivalent to the market price for the intellectual property rights which result from their activities."

b. An Industrial Research project with identified commercial collaborator(s) ("Industrial Research means the planned research or critical investigation that is aimed at the acquisition of new knowledge and skills for developing new products, processes or services; or that is aimed at bringing about a significant improvement in existing products, processes or services") For more details, see RD&I Streamlined route guidance 14.3.

Q – Subsidy control compliance: How many commercial organisations are you collaborating with on this project?
Please enter an integer between 1-100, including the industry host in this application.

Q – Subsidy Control Compliance: Can you confirm that when working with that/those commercial organisation(s) that results that do not give rise to intellectual property rights will be available to be widely disseminated and that any intellectual property rights arising from the activities of the research organisation fully allocated to it?

- If **yes**, this statement should also be confirmed by the University and industry sponsor in supporting letters.
- If **no**, the Academy will need to review the particulars of the benefits to the commercial organisation.

- **Funding requested**

Please provide a breakdown of the funding requested. You must consult with the host institution for support in completing this section. **Each application is capped at a maximum contribution from the Academy of £225,000 over the five-year period.** When completing the costs table, some of the cells are auto calculated and all values submitted should be rounded up to the nearest pound.

The Academy will fund up to one-third (1/3) of 80% fEC and the host institution is expected to cover for the remaining balance. The funding requested can be used flexibly in the following cost categories:

- Salary costs
- Indirect costs
- Estates costs
- Other costs

The Academy expects the awardees to gain additional funding from other sources. Where applicants hold existing grants that cover for specific spend, such

as salary, to avoid double counting the Academy's funds can be reinvested into the Research Chair/Senior Research Fellowship programme in another way, providing it is sensible and justified.

Please note, one of the assessment criteria will be the level of support that the university and industrial sponsor is willing to contribute towards the award.

Given the launch of the new [Subsidy Control Act 2022](#), after the decision in principle to fund and prior to grant offer we may require a revised costing of the proposed project or other changes or assurances to be compliant with the revised requirements.

Table A: Total cost (100% fEC) of Research Chair/Senior Research Fellowship
Please provide a full cost breakdown (fEC) in terms of gross salary, indirect costs, and estates costs. Additionally, to comply with subsidy control guidelines, please use the definitions below to complete the "other costs" section.

The following can be considered as other costs:
- Personnel costs (not your salary so that it's not double counted); researchers, technicians and other supporting staff to the extent employed on the project.
- Costs of equipment and instruments, to the extent utilised on the project.
- Costs of conducting research and of external consultancy and contractual research or other knowledge assets, including patents bought or licensed from outside sources.

Applicants should consult with their host institution research support office regarding the completion of the required costings table (see below).

Salary increments over the period of the project should be considered, but possible future pay awards should not be anticipated. **Please note that the Academy does not pay inflation and inflation should not be applied to the costs**. In addition, the Academy is not able to cover the costs of the apprenticeship levy on research grants.

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

Indirect costs						
Estates costs						
Other 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) in Table A. The allowed costs are gross salary, indirect costs, estates costs and other costs. **Please use the 'Total' from Table A for this calculation.**

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						
Other costs						
Total						

Table C: Contribution from the industrial sponsor

The industrial sponsor must make an auditable cash or in-kind contribution towards this collaborative research project over the five-year period. The required contribution should be proportionate to the size of the industrial sponsor.

- Small enterprises are required to contribute a minimum of £125k.

- Medium enterprises are required to contribute a minimum of £175k.
- Large enterprises are required to contribute a minimum of £250k.

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 industrial 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 (if necessary).

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

Table D: Contribution from the host institution
The host institution 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, postdocs, equipment, consumables). In-kind support should be fully costed. The host institution is expected to make up any shortfall in the total cost (fEC) of any proposed application.

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

- **Letters of support and declarations**

This section seeks confirmation for the support that both the industrial sponsor and the host institution will provide. A declaration of support is also required from the applicant's host institution grants/research office or equivalent. **The submission deadline will not be extended due to an individual's unavailability.**

Q – Host institution letter of support
A pro-vice-chancellor, dean or equivalent at the host institution must provide a 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, this will be pro-rated for individuals on part-time fellowships).
2. The host institution's commitment to the proposed collaborative research project and partnership with the chosen industrial sponsor. The strategic alignment with institution strategy and research priorities including details of previous and planned investment and support to facilitate the development of this research group.
3. Details of how the host institution intends to reinvest any salary savings back into the research project (provision of PhD studentships, postdocs, teaching replacement).

4. Impact of COVID-19 on the host institution's support (if necessary). The host institution can use the 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 consider the unequal impacts that COVID-19 related disruptions might have on the host institution's support for the award.
5. Details confirming that when working with the industrial sponsor(s) that results that do not give rise to intellectual property rights will be available to be widely disseminated and that any intellectual property rights arising from the activities of the research organisation fully allocated to it.

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, The Concordat for Engaging the Public with Research, and [DORA](#).

Q – Industrial sponsor letter of support
A letter of support must 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 following points, referring to the numbers will aid identification:
1. Outline the industrial sponsor's commitment and support for the collaborative research project and how this aligns with their research and development strategy.
2. Explain why the industrial sponsor decided to partner with the host institution and the Academy.
3. Outline how the applicant will contribute the industrial sponsor's operational objectives.
4. Outline the expected outcomes and deliverables during and beyond the five-year period.
5. Provide a brief background about the industrial sponsor, its turnover, and staff numbers.
6. Confirm the financial contributions and any in-kind support that the industrial sponsor will make to this research collaboration over the five-year period of the award.

7. Outline other possible benefits to the industrial sponsor, such as industrial strategy, policy, and access to graduates.

8. Impact of COVID-19 on the industrial sponsor's support (if necessary). The industrial sponsor can use this letter of support to provide details of the impacts of coronavirus pandemic on the business.

9. Declaration of results that do not give rise to intellectual property rights are available to be widely disseminated and are any intellectual property rights arising from the activities of the research organisation are fully allocated.

Q – Host institution declaration letter

The host institution declaration letter must be completed by an appropriate individual from the host institution's research support office or equivalent. The letter must be on headed paper and should carry the signatory's name, position, contact details, and the institution's official stamp (if available). The letter must confirm the application has been approved by the institution and **must contain the wording given in the box below**, as well as any remarks that the institution wishes to make. **Please note that the wording provided in the box below is specific to the Research Chairs and Senior Research Fellowships scheme, and the wording is updated and different to previous rounds.**

> **On behalf of the host institution, 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 project as envisioned.
> - Any shortfall in funding discovered after the award has been made will be covered by the institution, potentially through other grants.
> - 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 institution for the duration of the award.
> - Results that do not give rise to intellectual property rights are available to be widely disseminated and any intellectual property rights arising from the activities of the research organisation will be fully allocated.
> - The applicant's teaching and administrative and non-research duties will be restricted to a maximum of four hours per week during their award (this will be pro-rated for part-time awards).
> - I am authorised to approve the submission of applications for funding and confirm this application has successfully met the eligibility criteria and all of our internal approval procedures.
> - The institution 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's 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 on 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.

Once you have read and understood the declaration included in the application form, please confirm by selecting the check box. A grey '**submit application'** button will become available once the application form is completed.

Please note that once submitted the application cannot be edited and updated, but you may view it from your GMS account.

<u>Q – Marketing: where did you hear about the scheme? (optional question)</u>
This question is optional, but it helps the Academy to understand which
marketing materials are most successful at reaching the academic community to
improve future communications work.

12. Assessment process

Stage 1: expert review
The full application will be assessed by a minimum of three expert reviews
(usually Academy Fellows). Expert reviewers will provide comments and score
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 applicant
- 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.
- Consideration of diversity and inclusion in research and team
  development.

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

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

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

Financial costing of the proposal
- Quality and level of the financial contribution from the industrial partner and host institution.

Sift panel

The Academy staff will collate all reviewers' comments and scores into a summary table and rank the applications by overall score and the Yes/No recommendations. These are presented to the sift panel for a final decision on which applications should proceed to interview stage. Those applicants not asked to attend an interview will be informed of this decision as soon as possible following the sift panel's decision.

Stage 2: interview

The interview will be conducted by a generalist panel consisting of at least three Academy Fellows. Each interview will take about 50 minutes. 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. All interview candidates are 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 virtually in July 2024.

Please ensure that the interview dates are added to your diaries and to the ones of pro-vice chancellor (Research) and/or dean as well as a representative from the industrial sponsor. **All the parties are required to attend the interview**.

Shortlisted applicants will be invited for interview by end of June 2024.
The applicants will be notified of the outcome of the interview by end of July 2024.

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.

13. Key dates

Process	Date
Applications for Access Mentoring support deadline (optional support).	4.00pm GMT on Thursday 15 February 2024
Applications deadline.	4.00pm GMT on Thursday 14 March 2024
Stage 1 – expert review Applicants are informed of the stage 1 outcomes.	June 2024
Stage 2 – interview (online).	July 2024
Interviewed applicants are informed of the stage 2 outcomes.	By end of July 2024
Awards start.	1 September 2024 – 30 October 2024

For all queries, please contact the Royal Academy of Engineering's research programmes team at research@raeng.org.uk

14. Annex 1 – Subject category

1) Civil, construction and environmental
Including aspects of civil and structural engineering; construction materials; earthquakes; wind and fire engineering; building engineering physics; construction management; numerical modelling; environmental engineering; water resources and flooding; offshore and coastal engineering; hydraulics; climate change and sustainability; waste management; geotechnical engineering; geomatics/surveying.

2) Materials and mining
Including metallurgy; metal forming; corrosion; failure analysis; structural integrity; non-destructive testing; inspection technologies; failure prevention; fabrication and repair technologies; welding and joining technologies; discovery and development of mineral resources; extraction and processing of minerals; mining engineering; materials performance; materials research; plastics and composites; structural materials (excluding materials specifically covered elsewhere).

3) Chemical and process
Including all aspects of chemical and process engineering; aspects of fuel technology; oil; coal and gas technologies; carbon; carbon sequestration; clean technology; combustion; catalysis; particulates; food processing; fermentation processes; pharmaceutical engineering; biotechnological processes.

4) Aerospace
Including all aspects of aeronautical engineering and aerospace manufacturing; turbomachinery and aerothermal engineering; avionics; radar systems; antennae; satellite systems; autonomous systems; aspects of systems engineering; airlines; materials for aerospace.

5) Transport and mechanical
Including all aspects of mechanical engineering; automotive; rail and marine engineering; transportation infrastructure; engines; turbomachinery; mechatronics; acoustics and vibrations; ultra-sonics; heat and thermodynamics; fluid dynamics.

6) Manufacturing and design
Including manufacturing management and manufacturing process innovation; manufacturing business improvement and re-engineering; CAD/CAM; robotics for manufacturing; engineering design.

7) Electrical and electronic

Including electrical, electronic and control engineering; design for electronics; aspects of nanotechnology and semiconductor engineering; lasers; optoelectronics; photonics; microwave engineering; instrumentation; display technology; solid state electronics.

8) Energy and power

Including energy technologies; electric power and energy systems engineering; nuclear and renewable energy generation; energy infrastructure; management of energy and energy resources for generation, storage, and transmission; distribution and conversion of electric energy and power; electricity supply and energy conservation; hydrogen power; fuel cells.

9) Medical and bioengineering

Including all aspects of medical and biomedical engineering; orthotics; prosthetics; ultrasound for medicine; medical scanning and imaging; drug delivery; biomedical materials; tissue engineering; medical devices; medical robotics and computer assisted surgery.

10) Computing and communications

Including computational and software engineering; informatics; web and data science; telecommunications; mobile telephony; broadband; wireless spectrum; signal processing; television, film, and broadcasting; computer and video games; special effects.

15. Annex 2 – Subsidy control guidance and definitions

This programme most commonly awards grants on the basis that they are for non-economic research conducted with a collaborating industrial organisation. However, should a research organisation declare that an industrial organisation is to gain a direct benefit from the project then the Academy would award the grant under the Streamlined route for RD&I (SC10780) on the basis that it is an industrial research project that represents an indirect subsidy to the industrial organisation. The Academy will not fund projects that would be classified as be feasibility studies or experimental development projects as defined in the Research, Development and Innovation Streamlined Subsidy Scheme guidance.

Should the project be classified as an Indirect Industrial Research project and subsequently awarded as an indirect subsidy to the collaborating industrial organisation then the Academy will need to seek assurances about the level of funding already received by that commercial organisation in respect of the project to ensure compliance with the cumulation rules of the streamlined route, and ensure that funding for that project has not nor will exceed the £3M cap by awarding of the proposed grant. Per the streamlined route, the subsidy ratios allowed for an Industrial Research Project are: 85% for small enterprises, 75% for medium-sized enterprises, and 65% for large enterprises with the enterprise required to commit to, and demonstrate input at, the required level to comply with those ratios i.e. if the Academy awarded 85k for a grant and the collaborating commercial organisation was a small enterprise they would be required to commit and evidence on request the required input 15k of funds for eligible costs under the streamlined route.

The Academy will need to review the particulars of the benefits to the industrial organisation. Further investigations will need to be carried out to ensure that we comply with funder regulations as per section 14 of the Research, development and innovation streamlined route guidance pertaining to the 'Subsidy Control Act 2022'.

Definitions:

This scheme will only fund collaborative engineering research projects between industry and academia. Research projects must include "industrial research" with a focus on "research and development" and "innovation".

"**Industrial research**" *means the planned research or critical investigation aimed at the acquisition of new knowledge and skills for developing new products, processes or services or for bringing about a significant improvement in existing products, processes or services.*

"**Research and development**" *means activities which must be novel, creative, uncertain in outcomes, systematic and transferable and/or reproducible. All five*

criteria are to be met every time a research and development activity is undertaken whether on a continuous or occasional basis.

*"**Innovation**" means a new or improved product or process (or combination thereof) that differs from the previous products or processes and that has not been made available to potential users (product) or brought into use (process).*

*"**non-economic scientific research**" means a commercial organisation does not receive a specific benefit from the financial assistance given to the research organisation.*

Definitions provided from the 'Research, development and innovation streamlined subsidy scheme' document pursuant to section 10 (5) of the 'Subsidy Control Act 2022'.

16. Annex 3 – Guidelines on the use of generative AI in the grant application process

The guidelines presented below outline the approach adopted by the Royal Academy of Engineering concerning the utilization of generative artificial intelligence (AI) during the grant or prize application (or nomination[1]) process. In certain cases, specific schemes may choose to implement more stringent regulations regarding the use of AI tools, especially when it is deemed crucial to directly capture the applicant's voice. If the employment of generative AI tools were to be disallowed for specific schemes, it is essential to ensure clarity by explicitly stating this restriction in the corresponding scheme's advertisement[2].

Note that given fast-moving progress on AI tools, this guidance may need to be updated at short notice as new capabilities become accessible. We strongly encourage staff members who become aware of new generative AI-powered solutions that significantly impact our processes to promptly contact us.

Guidelines for Applicants[3]:

1. Taking Responsibility for Content: Applicants are fully responsible for all the content presented in their grant applications. The grant process does not penalise the use of generative AI tools, but it is imperative to ensure that the application reflects the applicant's own voice[4] and ideas.
2. Rigorous Approach: Applicants should exercise caution when using generative AI tools to avoid the inclusion of 'hallucinated' references or factual errors. These often become more common when up to date content on a very specific topic is required, which is typical for most of our application areas. Such inaccuracies will be perceived as indications of a lack of rigor and will negatively impact the assessment of the application.
3. Partial Use of AI Tools: It is not acceptable to solely rely on generative AI tools to write the entire grant application from start to finish. While these tools may be used to assist in various aspects, the application must primarily represent the applicant's own work.
4. Plagiarism Considerations: Applicants should be aware that the output generated by some AI tools may utilize ideas from other human authors without proper referencing. As this is considered a form of plagiarism, it is essential to ensure that all sources are appropriately attributed.
5. Proper Acknowledgement of AI Usage: Applicants must provide clear acknowledgement if they have used generative AI tools in the process of

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[1] These guidelines do not apply to nominations for Fellowship, or for roles of Fellows within the Academy, which are covered by separate policies and processes.
[2] Potentially it might even be this restriction applied only to certain questions or elements within the application. In this case, scheme managers should be particularly careful to be explicit what is permitted where.
[3] Also similar for prize nominators.
[4] For applicants whose first language is not English, machine translation may be used, but care should still be taken to ensure the accuracy of this translation, especially for technical vocabulary.

writing their grant applications. This includes disclosing the name of the tool used and describing how it was utilized. The following style should be employed for referencing5:

- I acknowledge the use of [insert AI system(s), version number and link] to generate materials for background research, styling, proofreading, etc.
- I acknowledge the use of [insert AI system(s), version number and link] to generate materials that were included within my final assessment in modified form.

6. Applicant declaration within GMS: These will standardly include explicit statements that the ideas presented are the applicant's own and not plagiarised or containing intellectual property they do not have rights to use, and that all contributions have been appropriately referenced or credited including the use of any machine intelligence tools used in developing the application. An inaccurate declaration will be grounds for immediate rejection of the application and potentially exclusion of the applicant and their organisation from future opportunities.

17. Annex 4 – Guidelines on national security

The Academy is the UK's National Academy for engineering and technology and seeks to increase the potential positive benefit that innovations can have for society, whilst reducing the risks of harm. Hence, in all our activities, we seek to minimise the risk that technology developed as part of work that we support could be misused by a foreign state to build a capacity to target UK interests in a hostile fashion or to control or repress their population. There is a risk that for some grant activities, failure to protect IP and a lack of due diligence into collaborators could result in sensitive technology being transferred to and misused by a hostile or repressive foreign state. As such all applicants should ensure they are familiar with the Academy's [Policy on National Security-Related Risks.](#)