Funding opportunity

EPSRC Centres for Doctoral Training

Opportunity status:	Closed
Funders:	**Engineering and Physical Sciences Research Council (EPSRC)**, **Arts and Humanities Research Council (AHRC)**, **Biotechnology and Biological Sciences Research Council (BBSRC)**, **Economic and Social Research Council (ESRC)**, **Medical Research Council (MRC)**, **Natural Environment Research Council (NERC)**, **Science and Technology Facilities Council (STFC)**
Co-funders:	Ministry of Defence
Funding type:	Grant
Total fund:	£324,000,000
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Closing date:	7 March 2023 4:00pm UK time

⊘ Page updated with details of how cover letters (optional) can be submitted to this funding opportunity.

Apply for funding for Centres for Doctoral Training (CDTs) to deliver high quality, cohort-based doctoral education.

These CDTs will produce the next generation of internationally recognised doctoral researchers to address key interdisciplinary engineering and physical sciences needs, aligned to regional, national and global priorities across academia, industry and other sectors.

EPSRC expects to commit up to £324 million to support approximately 40 CDTs across the engineering and physical science landscape.

Applications are welcome from eligible institutions that are able to demonstrate the ability to host a CDT by meeting all the criteria detailed in the opportunity.

Who can apply

Organisational eligibility

Eligible organisations are those approved by UK Research and Innovation (UKRI) at the time the opportunity opens.

Eligibility as an organisation.

Applications are welcome from eligible institutions who can demonstrate the ability to host a CDT in a world-leading research training environment. Applications must be led by a research degree awarding body. We will allow 1 application each, as lead, from the Henry Royce Institute and the Rosalind Franklin Institute.

Given the scale of CDTs, the institution or collaboration applying must include a critical mass of supervisors with internationally recognised research excellence, and a proven track record of doctoral supervision.

Individual eligibility

The principal investigator must be from the lead organisation for the application and satisfy the standard EPSRC eligibility criteria.

Check if you're eligible for funding.

Organisations where staff are eligible to participate as co-investigators are those approved by UKRI at the time the opportunity opens.

We also welcome research technical professionals and **professional research and investment strategy managers** who are integral to developing the CDT bid as co-investigators.

Collaborative bids and international involvement

Applications are welcomed from both single and multi-institutional teams. Collaborations with non-academic project partners are expected where appropriate for the focus of the centre.

In assembling the centre team, applicants must consider what is most beneficial to deliver the centre vision, research environment, and training provision being proposed. We also welcome CDT proposals which include elements of international engagement where they add value to the proposed centre. Clear plans for engaging with new and existing collaborators over the duration of the CDT should be outlined in the case for support.

New and existing centres

Applications to refresh existing centres and those to support new centres will be considered together. They will be assessed using the same assessment process and criteria. Existing centres are expected to use their achievements and learning to support their proposal and to demonstrate the added value of further investment. EPSRC will not set any expectation on the number of existing or new centres that will be supported. EPSRC will not provide peer reviewers with any further information about existing centres beyond that included in applications.

Demand management

We expect high demand for this funding opportunity, and we will limit the number of applications that can be submitted as lead institution.

All eligible institutions will be able to submit 1 application as the lead. We have notified institutions with allocations greater than 1 with an email to the Pro-Vice-Chancellor for Research or equivalent role.

There will not be a limit on the number of applications that project partners or eligible institutions can partner on.

For information on these limits please see **CDT 2023 organisation allocation (PDF, 160KB)**.

Submissions to this funding opportunity will not count towards the **EPSRC repeatedly unsuccessful applicants policy**.

Webinars

EPSRC is holding 3 webinars to support this funding opportunity. Attendees are required to register for 1 of the 3 options which are:

- 15 December 2022 at 10am
- 5 January 2023 at 11am
- 9 January 2023 at 2pm

Register for a webinar.

What we're looking for

Scope

Applications are required to demonstrate the specific need for doctoral training through the CDT mechanism which includes the following key features:

- a clear requirement for doctoral level education in their area
- the need for a cohort-based training approach
- the provision of both depth and breadth in the research training proposed is necessary to address the identified skills need

We expect many CDTs to seek significant business or other leverage and to be developed with business or other input from users of research.

This CDT investment will address key engineering and physical sciences needs aligned to our 3 discovery and 4 mission-inspired priorities, and to regional, national and global drivers and opportunities as detailed in the **EPSRC strategic delivery plan 2022 to 2025**. Applications must be centred within EPSRC's research and training remit but interdisciplinary and multidisciplinary CDTs extending more widely across the breadth of UK Research and Innovation (UKRI) are welcome.

Further information on the **areas EPSRC and other research councils support** is available on the UKRI website. There is specific information on priorities for skilled people in quantum technologies developed by EPSRC and partners as part of the National Quantum Technologies Programme (NQTP) on the EPSRC and **NQTP websites**.

Proposals focused on the applications and implications of novel and existing artificial intelligence (AI) technologies should be submitted to the **UKRI Centres for Doctoral Training in artificial intelligence funding opportunity**.

Proposals focused on the mathematical and computational foundations of AI without a clear application to one of the UKRI AI CDT priority areas should be submitted to this EPSRC CDT funding opportunity.

Applicants who are unclear about which funding opportunity is best suited to the vision for their CDT should seek advice from EPSRC. We reserve the right to move applications from this funding opportunity to the UKRI AI CDT funding opportunity before or after the outline assessment, and vice versa, should an application better fit the scope of the other funding opportunity.

The doctoral education delivered by the CDTs should provide:

- the support for 5 student cohorts, with a minimum cohort size of 10 doctoral students per academic year, on a 4-year doctorate or equivalent, with a critical mass of supervisors (around 20 to 40) of internationally recognised research excellence with a track record of doctoral supervision
- a cohort approach to doctoral education including peer-to-peer learning both within and across cohorts. This cohort approach to education should be provided throughout the lifetime of student's doctorate training programme. Students may also work as a cohort to address research challenges
- opportunities for significant, challenging, and original research projects leading to the award of a doctoral-level degree in accordance with a university's standard regulations. Universities are free to choose the type of research doctoral qualification that is offered to students for example PhD or EngD. Centres may choose to offer all students the same type of qualification or a mixture. Students should also expect that doctoral projects are designed or planned in such a way that (barring exceptional circumstances) they are able to submit their thesis within their 4-year funded period or equivalent
- a formal, assessable programme of taught coursework, which should develop and enhance, for example, technical disciplinary and interdisciplinary knowledge,

as well as broadening skills including entrepreneurship, commercialisation, responsible innovation and environmental sustainability
- an opportunity for students working as a cohort to build the ability to communicate and collaborate with a wide range of stakeholders. In appropriate areas this also could include clinicians, patients and the public. Particularly in areas such as AI, digitalisation and data, engineering, net zero and quantum technologies we expect CDTs to introduce systems thinking to support consideration of the technological, economic, social and environmental aspects of future solutions
- a significant commitment to and support for the training environment by the hosts and partners including appropriate co-creation and co-delivery of the centre
- opportunities for all students to gain experience beyond their doctoral projects
- mechanisms by which students funded through other routes can benefit from the training experience offered by the centre, and for the centre to reach out to the broader research community, user community and wider public
- appropriate user or employer engagement in the research and training
- a diverse and inclusive research environment to support people in achieving world class research

Focus areas

All applicants will need to choose 1 of 3 focus areas for the description and assessment of their proposal.

Meeting a user-need or supporting civic priorities

Users refers to users of research or people skilled in research, in business or more widely in other organisations including government and the third sector. Examples (non-exhaustive) of users:

- universities
- businesses
- public sector organisations, such as public sector research establishments and government at all levels, including devolved administrations
- third sector organisations
- the public
- other key stakeholders across the research and innovation landscape

Proposals addressing a civic priority should aim to deliver benefit to the civic stakeholders in the short and long term. These benefits may include, but are not restricted to:

- local and regional economic growth, skills development, job creation or retention
- increased private investment, including foreign direct investment, in a specific place
- cluster development including through knowledge diffusion, supply chain development, small and medium-sized enterprise growth, generation and growth of spin outs
- development of research, development and innovation infrastructures

Examples (non-exhaustive) of organisations we consider to have a civic role are:

- enterprise, development or skills bodies (such as local enterprise partnerships or devolved equivalents)
- local authorities, councils or combined authorities
- growth, city, and region deals
- devolved administrations and their agencies
- regional or local industrial bodies
- local NHS trusts

Centres must be co-developed and co-delivered with non-academic partners, as well as demonstrating significant co-investment by those stakeholders.

Partnerships must include appropriate representation of stakeholders in the industrial sector or region or nation in question. A minimum leverage of 20% of studentship costs is required. Significant additional cash and added value in-kind contributions up to a total of 40 to 50% of the CDT cost are expected in many applications. These contributions will form part of the assessment at the full proposal stage.

We expect the level of cash and in-kind contributions and model of engagement to be appropriate to, for example, research and development intensity of the sector or size of the companies or other partners involved. We expect that collaboration with small and medium-sized enterprises may need a different approach to collaboration with major international companies.

Examples (non-exhaustive) of added-value in-kind contributions include:

- fully funded studentships or top-up of stipends
- additional training for students
- salaries of staff working on the project (for example, supervisors, project managers, technicians)
- software licenses
- new equipment or equipment produced by the business
- access to equipment and facilities
- provision of data
- refurbishment of facilities

Delivering an EPSRC research priority

The **EPSRC strategic delivery plan 2022 to 2025** has 7 cross-cutting scientific strategic priorities. These priorities have been developed to deliver against the **UKRI strategy 2022 to 2027** to support research and innovation across our remit, and address government priorities. Multidisciplinary and interdisciplinary applications are welcome as long as they are centred in the engineering and physical sciences research and training remit.

3 cross-cutting priorities address discovery research, including:

- physical and mathematical sciences powerhouse
- frontiers in engineering and technology
- digital futures

4 cross cutting priorities deliver mission-inspired research, including:

- engineering net zero
- AI, digitalisation and data: driving value and security
- transforming health and healthcare
- quantum technologies

Further details on these 7 scientific priorities are outlined in EPSRC's strategic delivery plan.

Supporting an innovative approach to CDT delivery

This focus area provides an opportunity to design a new cohort-based approach to doctoral education. To encourage innovative approaches we are not providing detailed examples. However the approach may relate to the recruitment and support for a diverse student community, the research and training environment including integration into wider training initiatives, support for a diversity of career paths and support for entry and exit to doctoral work or alternative doctoral qualifications.

Selecting a focus area

We expect that many CDT applications will address more than 1 of these focus areas and that is welcome, but you will need to select the most appropriate focus area to be used in the assessment process.

User engagement

EPSRC encourages user co creation and engagement across the entirety of its doctoral training portfolio. The extent of that engagement varies according to the nature of the research and training and may also vary with the size of the business or other user organisation.

We encourage all forms of user engagement and contributions where this is beneficial to the research and training provision. This may include models such as funding studentships, industrial placements and co-created workshops.

The appropriateness of the support offered will vary depending on both the area, sectors, and type of partner (for example, business, public sector, third sector). This should be demonstrated and will be assessed based on the added value of the engagement.

Centre delivery and enhanced training provision

Impact and translation

CDTs will support students to maximise the impact of the research they undertake, by providing them with an understanding of how research projects can be designed to include considerations of impact from the start. Depending on the nature of the CDT, impact training may cover knowledge exchange and maximising academic, environmental, societal and economic impacts from research.

Students should understand the research and innovation lifecycle in which they are participating, including translation of research and consideration of end-use. Where

appropriate, training should develop people who are able to work with and across industry sectors, and who can foster new innovative approaches.

In some areas, training could provide understanding of intellectual property, entrepreneurship and commercialisation. Others may require understanding of regulatory and policy considerations. For research of relevance to the healthcare sector, applicants must consider the **impact and translation toolkit** as part of CDT bids.

Wider training experience

Enabling EPSRC-sponsored research students to benefit from research experience outside their home laboratory can contribute to the wider training experience possible through a CDT. This can be in the form of industrial experience, entrepreneurial training, public engagement activities, or a period of time spent in an overseas academic collaborator's laboratory for example.

Funding for international placements, policy and industry secondments and **Creativity@home** activities can be included in CDTs. If placements or secondments are proposed, plans for ensuring the experience is beneficial to the research training of the individual should be clearly articulated in the full proposal.

Responsible research and innovation, equality, diversity and inclusion, environmental sustainability, trusted research and student wellbeing

All CDTs are expected to implement responsible research and innovation (RRI), environmental sustainability , equality, diversity and inclusion , trusted research approaches and support for student wellbeing to the highest standard in the design and operation of their CDT. We expect centres to promote a culture and ethos of responsible research and innovation, equality, diversity and inclusion, environmental sustainability, trusted research and student wellbeing and embed this thinking in all they do. CDTs must also provide appropriate training for their students and, where not covered already, for other centre participants.

You need to make some initial outline plans and resource provision for activities and processes to address these issues in your CDT to ensure they can be embedded. However, we are not asking for these plans to be included in the outline or full proposals. Instead, to reduce the burden of proposal development and assessment and to enable CDTs to work together in collaboration rather than in competition, we will ask the CDTs selected to be funded to work together with us and experts in the field to develop detailed plans for EPSRC approval.

Facilities and research tools

To carry out cutting edge engineering and physical sciences research, researchers need to be able to access and use a wide range of equipment, facilities and e-infrastructure (software and high performance computing etc.).

CDT students will therefore need to be trained in how to use the essential tools for their research. Students should benefit from the environment and accessibility of infrastructure at CDT hosting institutions and partners. Existing access to the

necessary infrastructure is good evidence of the suitability of the bidding institution as a host for the CDT.

If appropriate to their research, students should also have access to large facilities and EPSRC national research facilities.

[Find an EPSRC facility or resource](#).

It is not expected that centres will create bespoke training courses in the use of essential research tools if access to existing courses is available. Funding for students to attend these courses can be included in applications.

EPSRC expects applicants to liaise with the appropriate contacts throughout the development of their application to secure commitment from the facility or trainer. Centres requiring significant interactions with facilities should describe how they will ensure the students receive and excellent grounding in the experimental techniques for their research.

Computational and data-driven research

Alongside experiment and theory computational and data driven research cuts across the whole science and engineering remit, CDTs should consider provision of:

- access to appropriate training on computational and data techniques. This should enable students to confidently undertake such research in a manner that is correct, reproducible and reusable including consideration of data curation and management (this may need to include data protection and regulation)
- for students who are required to adapt, extend, or develop software as part of their research we expect them to be given training in basic programming and software engineering skills, including working collaboratively on code development, testing, automation, and revision control
- centres requiring students to undertake computational research should set out a programme of training, tailored to meet the needs of the centre students, and explain how this training will be provided. There is a significant amount of training available and centres should contact potential providers, as they may be able either to provide the training required, or to help with 'training the trainers' so that material can be delivered locally and at the most appropriate time

Computational research training would be expected to include at least 1 of the following:

- fundamentals of computing
- basic data analysis
- numerical analysis and algorithm development
- how to apply computational techniques and data analytics as research tools, in particular the design of experiments and the interpretation of results
- targeted training in applying and using the standard codes for the particular research area of the CDT
- matching problems with available and new hardware (desktop, cloud, high performance computing, graphics processing units etc.) and scaling up beyond the desktop

Funding available

Up to £324 million funding is available for this opportunity. Once indexation is applied to successful awards, we expect this to support approximately 40 CDTs.

Funding will be available from AHRC and MRC for successful interdisciplinary or multidisciplinary CDTs with research in their remits and aligned with their strategic delivery plans. Funding may also be available from other research councils for interdisciplinary or multidisciplinary CDTs.

EPSRC's contribution to eligible costs will be funded at 100%. Estates and indirect costs will not be funded on these awards.

The duration of the grant should be no more than 102 months (8.5 years) or the equivalent if students are part-time, to cover a maximum of 5 cohorts of 4-year studentships and to include initial preparation time.

Costs that may be requested from EPSRC include:

- studentship costs (fees, stipends and appropriate research training support (RTSG)) for the equivalent of 40 students over 5 cohorts. This can be used flexibly but must support individual students at a minimum of 50% of their studentship costs. Additional support must be provided from non-UKRI sources to achieve the minimum required student numbers (50 students). RTSG covers items such as travel and consumables
- tuition fees and stipend above the **minimum rates published by UKRI**. However, EPSRC will not cover additional college fees. Fees charged to UKRI cannot be higher than the fee charged by the university for home non-research council funded students on similar programmes. For further details check the **international eligibility implementation guidance**.
- stipend enhancement should be justified in the context of the area of training and UK skills need
- centre delivery, coordination (including between a centre and other parties if justified) and management staff costs can be requested. Costs associated with student supervision may not be included
- start-up costs will only be paid for new centres. Existing centres will already have the necessary infrastructure in place and will have carried out much of the preparatory work required for a successful CDT

All costs (including stipends and fees) requested in applications should be calculated at current rates with no addition made to consider inflation over the length of the funding period. EPSRC will include all allowance for this indexation at the final funding stage.

Costs should not be included to support students outside the CDT cohorts who are part of the centre but supported by funding from other sources (aligned students). Where a central cost is incurred by the CDT (for example in developing a new training course principally for the CDT students) these 'aligned' students can benefit. However, additional 'per student' costs such as conference fees, facility access fees, travel, and subsistence for these students should not be included. UKRI expects such support to be provided from the source of the student's support

for example, the Doctoral Training Programme (DTP) or an industrial sponsorship award.

Further guidance on costing CDTs is available in the 'Supporting information section of this funding finder page.

[Additional information form (XLSX, 21KB)](#)

Additional support and leverage

Applicants are required to leverage cash support from non UKRI sources. Leverage must include:

- a minimum 20% cash contribution towards the total studentship costs (stipends, fees, and research training support grant) from non-UKRI sources. EPSRC will contribute no more than the studentship costs equivalent to 40 students
- this additional support must include the fee (equivalent to 10 students' fees for 4 years and stipend costs (equivalent to 10 students' stipend for 4 years). It cannot be solely for RTSG
- the leverage will normally be achieved through support from the applying institutions or collaborators and project partners
- applicants can use the additional studentship costs flexibly. This could be by providing full support for some studentships annually within a 10-student cohort or spreading the funding to partially support all the students in the cohort

Additional cash and appropriate in-kind leverage appropriate to the CDT is expected in many cases and is particularly important for the user need or supporting civic priorities focus area.

Leverage may be staggered (ramped up over time, but the average must still come to at least the minimum requirement) if:

- it is a new centre
- an innovative training model
- an emerging science area or challenge where there is a need to build capacity

Even if successful at the outline stage, applications will be rejected at later stages if it is found that these minimum leverage requirements have not been met. To ensure that CDTs support at least 50 students over their lifetime, institutions must underwrite the minimum cash support needed, over and above the funding sought from EPSRC, to deliver these, irrespective of the proposed source.

Ministry of Defence (MOD) funding

The MOD is offering to fully support a CDT seeking transformational developments and training in interdisciplinary research that will uniquely and profoundly take forward the Defence and Security of the UK in the 25 year timeframe. More details on support from the MOD will be provided at the full proposal stage. See the additional information section for further details.

Equipment

Equipment over £10,000 in value (including VAT) is not available through this funding opportunity. At the full proposal stage, smaller items of equipment (individually under £10,000) should be in the 'Other Costs' heading.

EPSRC approach to equipment funding.

Where possible researchers are asked to make use of existing facilities and equipment, including those hosted at other universities.

Investigators and supervision

The investigators named on the Joint Electronic Submission (Je-S) system application form should represent the core management team of the centre. We would generally expect no more than 10 investigators to be named. A strong justification will need to be provided for a larger core management team. Any requested funding for investigator time should reflect commitments to centre delivery and should not include individual student supervision related to research projects.

Applications will need to provide evidence of a suitable pool of potential supervisors, taking into account the interdisciplinary focus of the CDT. You should not record supervisors on the Je-S application form.

International collaboration

We also welcome CDT proposals which include elements of international engagement where they add value to the proposed centre. Support requested might include travel, subsistence and consumable costs for UK-based students undertaking training or research visits to overseas centres of excellence (including student exchange programmes) or for leading researchers to visit the UK to contribute to the students' training experience.

Where a formal, joint training partnership is proposed, the UK component must be able to stand on its own merits. Students registered at international institutions will not count towards the minimum cohorts, nor will the additional funding count towards the minimum additional support requirements of the funding opportunity.

Applicants planning to include international collaborators on their proposal should visit Trusted Research for **guidance on getting the most out of international collaboration while protecting intellectual property, sensitive research and personal information**.

Further information on EPSRC's work around international engagement and partnerships can be found on our **international funding pages**.

UKRI-Research Council of Norway (RCN)

The **UKRI-RCN Money Follow Cooperation Agreement** does not apply to this funding opportunity. As such CDT grants cannot include a Norway-based co-investigator.

How to apply

The CDT 2023 funding opportunity will have 2 stages, outline and full proposals. The outline and full stages will be hosted on the research councils' **Joint Electronic Submission (Je-S) system**.

Only 1 Je-S application will be accepted for each CDT, including for multi-organisation proposals. The Je-S application must be submitted by the lead eligible organisation.

Outline stage

Your host organisation will also be able to provide advice and guidance.

You should ensure you are aware of and comply with any internal institutional deadlines that may be in place. You should prepare and submit your proposal using the research councils' **Je-S system**.

Submitting your outline application

When adding a new proposal, you should go to documents, select New Document, then select:

- 'Create New Document'
- council 'EPSRC'
- document type 'Outline Proposal'
- scheme: 'EPSRC Outline'
- on the Project Details page, you should select the 'EPSRC 2023 Centres for Doctoral Training' call

The Je-S outline application form must contain the following information:

- the names of centres should be prefixed by "EPSRC Centre for Doctoral Training in"
- the summary section must contain an overview of the research area of the centre, the need for doctoral scientists or engineers that centre will produce, and the proposed approach to provide this training. To facilitate engagement, note that all outline proposals invited to submit a full proposal will have their Je-S summary section, principal investigator name and proposed CDT title published on the EPSRC website
- no partner information should be provided on the Je-S form at this stage
- the duration of the grant should normally be 102 months
- The 'summary of resources for the project section' please put '0' in the directly incurred, directly allocated and indirect cost fields. In the Exceptions field please put the total cost requested from EPSRC

After completing the application you must 'Submit document' which will send your application to your host organisation's administration.

Your host organisation's administration is required to complete the submission process. You should allow sufficient time for your organisation's submission process between submitting your proposal to them and the funding opportunity closing date. You should ensure you are aware of and follow any internal institutional deadlines that may be in place.

You can save completed details in Je-S at any time and return to continue your application later.

Outline deadline

EPSRC must receive your application by 7 March 2023 at 4pm.

You will not be able to apply after this time.

In addition to the Je-S application form, the following documents must also be submitted:

Outline case for support (maximum 3 pages)

The case for support should clearly cover all aspects of the outline funding opportunity criteria

Additional information (other attachment)

An Excel spreadsheet and guidance on how to complete it is included in the supporting information section on this funding finder page. EPSRC only requires contributions in the form of cash to be included in the 'additional information form'. Applicants may provide details of any in-kind contributions in their 'case for support' document.

Applicants are required to complete and submit the form provided. The information provided in this document will not be seen by reviewers. It is to provide EPSRC with details of the predicted costs of CDTs and additional information for the balancing portfolio activity which will take place following the outline panels. Please note that letters of support are not permitted at the outline stage.

EPSRC and UKRI AI CDT funding opportunity 2023 additional information (PDF, 139KB)

EPSRC CDT additional information form (XLSX, 21KB)

Further guidance on costing CDTs is available in the 'Supporting documents' section of this funding finder page.

1 completed form must be included in all CDT applications and submitted though Je- S. The document type should be 'Other attachment'.

It is not possible to submit a cover letter through Je-S for this funding opportunity. However, if applicable, where the proposal spans the remit of other research councils or applicants have any information EPSRC should be aware of with respect to their application, please forward this by email to **students@epsrc.ukri.org** with the specific subject heading of 'EPSRC CDT call:

cover letter information'. The deadline for these emails is 7 March 2023 at 4:00pm. Note this information will not be seen by the panel.

[Advice on writing proposals for EPSRC funding](#).

Formatting and attachment guidance

All attachments must be completed in single-spaced typescript in Arial 11 or other sans serif typeface of equivalent size, with margins of at least 2cm. Arial narrow and Calibri are not allowable font types.

Text in embedded diagrams or pictures, numerical formulae or references can be smaller, as long as it is legible. Text in tables and figure labels not within embedded diagrams or pictures should be at least 11 point.

We recommend that all attachments are uploaded into Je-S as Adobe Acrobat files (PDF) as uploading word documents can result in layout changes to the document. Also, as Je-S does not support all Microsoft Office Word font types, unsupported fonts will be replaced, possibly resulting in layout changes to the document.

Converting to PDF can alter the formatting and result in layout changes: for example, converting from LaTeX to PDF can add small serifs or alter font size. You should ensure documents converted to PDF still meet the formatting guidelines outlined before submission.

EPSRC will reject before the outline panel all proposals which do not conform to these formatting rules.

Full proposal stage

Only applicants successful at the outline stage of this funding opportunity will be invited to submit a full proposal. All other applications will be rejected.

There should not be substantive changes from the centre described at the outline stage.

This page will be updated with specific information about how to apply, guidance, and details of full proposal assessment criteria after assessment of outline proposals.

Full proposal deadline

EPSRC must receive your application by 12 September 2023 at 4pm.

You will not be able to apply after this time.

Successful applications will be required to develop detailed plans and processes for EPSRC approval for essential elements of a CDT such as:

- equality, diversity and inclusion
- responsible research and innovation
- trusted research
- environmental sustainability

Ethical information

EPSRC will not fund a project if we believe that there are ethical concerns that have been overlooked or not appropriately accounted for. All relevant parts of the 'ethical information' section must be completed.

[Guidance on completing ethical information on the Je-S form](#).

EPSRC guidance can be found under 'additional information' section of the funding finder page.

Guidance for project partners

Outline stage

At this stage statements of support are not required. Instead, where appropriate, applications will need to detail the co-creation of the bid by significant partners (within and between organisations, and with project partners as appropriate) as part of the case for support. Applicants will not be able to record project partner details on the research councils' Je-S system form at this stage.

Full proposal stage

More guidance on the expectations for project partner statements accompanying full proposal applications will be provided at a later date but brief information about requirements are indicated below.

At the full proposal stage, project partner commitments should be detailed on the Je-S form and reflected in statements of support from each partner. Statements of support should detail the importance of the research and training provided by a CDT to the partner as well as how the involvement of the partner benefits the training experience of the students.

If you commit to being a project partner at full proposal stage on more than 1 proposal and those CDTs are successful, then we expect that all partnership commitments will be honoured and supported.

How we will assess your application

Funding opportunity process

A 2-stage assessment process will be used for this funding opportunity. Only applicants successful at the outline stage will be invited to submit a full proposal.

Portfolio balancing

At both the outline and full proposal stage, the EPSRC Science, Engineering and Technology Board (SETB), with additional input as required, will provide advice on the selection of a balanced CDT portfolio from the highest quality proposals. The final funding decisions will be made by EPSRC.

The process of considering the portfolio balance will start by using the 3 focus areas set out in the scope (meeting a user-need or supporting civic priorities, delivering an EPSRC research priority or supporting an innovative approach to CDT delivery).

SETB will then consider the distribution over:

- the 7 scientific priority areas in the EPSRC strategic delivery plan
- the balance within each individual delivery plan priority area
- geographic distribution (based on the anticipated location of students)
- other landscape diversity, if needed, such as the balance of institutions and sectors

Stage 1: outline proposals

Panel meetings to consider outline proposals are scheduled for mid May 2023. Applicants will be informed of the outcome of the panels before the full funding opportunity opens.

Panel members will be drawn from the academic and user base within the UK and internationally, from disciplines and sectors across EPSRC's remit and more widely when appropriate for the proposals being considered.

Outline proposals will be assessed against the criteria detailed in the outline assessment criteria section. Proposals will be ranked into bands of proposals of similar quality. Proposals will be tensioned across the various panel meeting lists to ensure those invited to submit a full proposal are of similar quality.

Following the panels, EPSRC will consider the balance of applications alongside the panel outcomes, as described in the Portfolio Balancing. While considering the balance, EPSRC may decide to progress an application banded or ranked lower than another providing a quality threshold is met.

Successful applicants will be invited to submit a full proposal. We anticipate that we will invite no more than 3 times as many full proposals as we expect to fund.

Stage 2: invited full proposals

Full proposals will undergo expert peer review.

Applications successful at this stage will be invited to interview.

Further information about the assessment of full proposals will be published after the assessment of outline proposals.

It is expected that interviews will take place in November 2023. Interview panels will include members with a range of backgrounds and expertise.

Full details of the interview process will be sent to applicants who are invited to submit a full proposal.

Outcomes of the interviews will be announced in December 2023.

Outline proposals assessment criteria

Outline applications will be assessed against the following criteria. These are equally weighted and proposals will need to be assessed at a high standard for each criteria to progress to the full proposal stage:

Strength of vision and expected outcomes

This includes:

- articulating a compelling vision for the CDT, defining achievable outcomes and outlining the need for the CDT within the broader research and innovation system.
- evidence that the cohort model is the most appropriate way to deliver this vision and the training experience proposed is genuinely different from an individual studentship, appropriate for the CDT area with the training provision running throughout the studentship

Fit to 1 of the 3 focus areas for this CDT opportunity (note: applications will only be assessed against one of these, based upon the focus area selected by the applicant)

This includes:

- meeting a user-need or supporting civic priorities: evidence that the CDT vision and plans for leadership and delivery are co-created by business, civic or other user organisations, are aligned to relevant stakeholders' needs, and will be supported by appropriate partnerships and cash or appropriate in kind contributions from those partners
- delivering an EPSRC research priority: demonstrates an outstanding opportunity for students to work together in a cohort to progress an exciting research area centred in EPSRC's portfolio
- sets out a highly innovative approach to CDT delivery: a clear explanation of the need for the new model, where it fits in the landscape, and how it achieves the desired impact; with evidence of how the approach is substantively different to current practice or will address specific gaps or barriers, and how it has been developed to address opportunities and risks in the proposed area

Appropriate team and partnerships

This includes:

- evidence that all the partners involved will contribute to an excellent research and training environment, are the appropriate partners to deliver the vision for the CDT and are the leading organisations in the field or sector
- evidence that the CDT will add value to the applicant partners' existing studentship investments
- evidence of a high quality proposed research and training environment, with appropriate opportunities, expertise and support
- evidence of learning from previous cohort or similar student investments

Full proposals assessment criteria

Full proposals will include assessment of the following:

- feasibility of delivering the vision
- quality of training approach including experience beyond the doctoral research work and training and experience in wider skills for a variety of careers
- team experience and expertise, including excellent research environment, supervisors and teams
- management and governance
- appropriate partnerships and engagement
- value for money
- demand for proposed doctoral education from potential students and evidence this will lead to enhanced opportunities for employment

Feedback

Outline stage

Only where directed to do so by the outline panel will successful applicants receive feedback specific to their application. We will not be able to provide feedback to unsuccessful applicants at the outline stage.

Full proposal stage

Feedback on the full proposals will be in the form of reviewers' comments which will be shared with the applicants prior to the interview panels. Additional feedback may also be provided by the interview panel. This will accompany results notifications where possible.

Confidentiality

The content of applications will only be shared with UKRI staff and panel members.

Outcomes of both outline sift and full proposal interview panels will be shared through EPSRC's public facing investment information systems such as the Grants on the Web (GoW) database and UKRI's Gateway to Research.

For successful outline proposals the named investigator, organisation, and Joint Electronic Submission (Je-S) system summary section information will be published to facilitate engagement with potential additional partners. Other application content and assessment material will be confidential. For unsuccessful outline proposals, the only information that will be shared is the grant reference number.

For successful full proposals, the summary, organisation, project partner, and named investigator information will be shared. Other application content and assessment material will be confidential.

GoW will display the results of the individual interview panels. For unsuccessful grants, the only information that will be shared is the grant reference number and its rank. The content and assessment of unsuccessful proposals will be confidential, including details of the institution(s) and applicants involved.

Where the panel requests for an applicant to receive feedback, this will only be shared with the applicant(s) and the organisations involved.

Unless rejected prior to the panel meeting, the rank order list information is published on the **EPSRC's grants on the web**. Information is published on grants on the web shortly after the panel meeting.

More information can be found in the **UKRI privacy notice**.

Contact details

For help and advice on costings and writing your proposal please contact your research office in the first instance, allowing sufficient time for your organisation's submission process.

Ask a question about the opportunity

Studentships Team, EPSRC

Email: **students@epsrc.ukri.org**

Get help with Je-S

Any queries regarding the submission of proposals through Je-S should be directed to the Je-S helpdesk.

Email

jeshelp@je-s.ukri.org

Telephone

01793 444164

Je-S helpdesk opening times.

Additional info

Background

In May UK Research and Innovation (UKRI) **announced** that we will transition to working in a collective manner across our £2 billion of talent initiatives covering studentships and fellowships. While we work to develop our approach to collective talent investments, we are continuing with planned funding opportunities.

Through this funding opportunity, EPSRC will support centres of excellence in research and doctoral training. Applications must be centred within EPSRC's research and training remit but interdisciplinary and multidisciplinary CDTs extending more widely across the breadth of UKRI are welcome.

These centres will deliver the next generation of internationally recognised doctoral researchers to meet the needs of academia, industry and other employers.

In particular EPSRC aims to:

- fund a balanced portfolio of CDTs that are aligned to identified skills required for the UK in the engineering and physical sciences, in partnership with others including other research councils
- ensure a forward-looking, ambitious portfolio of research training which makes a positive difference for the UK
- produce highly skilled and talented researchers, and future leaders, by funding world leading innovative centres that are aligned to major research strengths
- support high quality doctoral research training environments led by robust leadership teams to train internationally competitive doctoral students through a cohort training approach
- secure leverage in order to maximise the benefit of public funds

This funding opportunity is an important aspect of **EPSRC's strategic delivery plan 2022 to 2025** where EPSRC has outlined a commitment to providing the research and skills training that will be integral to addressing the challenges highlighted in the **UKRI strategy 2022 to 2027** EPSRC have focused our strategic delivery plans in 3 areas:

- discovery-led research: reaffirming our commitment to the core disciplines of engineering and physical sciences
- mission-driven priorities: driving the translation of breakthroughs in engineering and physical sciences research through to social and economic benefit in net zero, artificial intelligence (AI), digitalisation and data; transforming health and healthcare; and quantum technologies
- maintaining an effective ecosystem for engineering and physical sciences: providing the skills training, partnerships, places and infrastructure required by our community to deliver their ambition

EPSRC currently provides support for doctoral training through 3 funding programmes:

- Centres for Doctoral Training (CDT)
- Doctoral Training Patronship (DTP)
- Industrial Case Studentships (ICASE)

The 3 routes are complementary, and we anticipate that much of the need for doctoral students will continue to be met by the DTP and ICASE.

Ministry of Defence (MOD) additional information

The Ministry of Defence is seeking to fully support a CDT seeking transformational developments and training in interdisciplinary research that will uniquely and profoundly take forward the defence and security of the UK in the 25 year timeframe.

The successful CDT will require multidisciplinary and potentially multi-institutional components and need to be positioned where relevant anticipated breakthroughs

will occur across the science and technology (S&T) landscape. This may lead to consideration of areas of or an approach that stimulates embryonic technological convergence and emergence, as well as to develop or exploit an understanding of these processes by taking a systems perspective. The training element may consider alongside technical elements, components relating to:

- geo-political and socio-technical factors shaping the technology of the future and their relevance in plausible future worlds
- defence and security policy
- the tools required to explore and assess such an uncertain, complex and dynamic scenario
- specific strands of S&T convergence that will create the reality of the future

We are interested in step-change thinking, for example, beyond individual technology domains such as quantum, engineering biology, future computing paradigms; hence the scope of this CDT is not expected to be covered by previous or existing CDTs, and will not include the application or step-wise improvement of current science and technologies.

We are cautious to provide an example since it is difficult to predict or imagine what science and technology will become important in this future timeframe, or what unexpected applications and benefits will be unlocked. Nevertheless, the interconnectedness, interdependency and integration of digital, physical and living human worlds should be thought provoking.

We hope this is a stimulating opportunity for both old and new partners to defence, and for new teaming across academic boundaries, which is aimed to inspire our next generation of talent and new focus areas for the wider MOD S&T portfolio.

Additional security requirements for MOD opportunity

For the MOD supported CDT, all personnel employed on the grant must have undergone basic recruitment checks in keeping with the core principles of the UK government's Baseline Personnel Security Standard screening (BPSS).

Additionally, participation of non-UK nationals, students or researchers and their supervisors in MOD funded research must be authorised by MOD prior to submission of the application outline as in some circumstances additional security screening may be required.

Grant additional conditions

Training grants are awarded under the **standard UKRI training grant terms and conditions**.

Supporting documents

Equality impact assessment form (DOCX, 73KB)

EPSRC and UKRI AI CDT funding opportunity 2023: additional information (PDF, 139KB)

[Additional information form (XLSX, 21KB)](#)

[EPSRC CDT organisation allocations (PDF, 160KB)](#)

[Webinar outputs (PDF, 464KB)](#)

[Webinar slides (PDF, 1.8 MB)](#)

Timeline

○ **29 November 2022 9:00am**
Outline proposal opening date

○ **15 December 2022 10:00am**
Webinar session 1

○ **5 January 2023 11:00am**
Webinar session 2

○ **9 January 2023 2:00pm**
Webinar session 3

○ **7 March 2023 4:00pm**
Outline proposal closing date

○ **May 2023**
Outline panel

○ **End of May 2023**
Full proposal opening date

○ **12 September 2023 4:00pm**
Full proposal closing date

○ **November 2023**
Interview panels

○ **December 2023**
Funding decision

Guidance on good research

[Good research resource hub](#)