

EPSRC Centres for Doctoral Training

Call type: Invitation for outlines

Closing date: 16.00 hrs 4 April 2013

Related themes: All

Summary

EPSRC is seeking to invest £350m in Centres for Doctoral Training (CDT). The Centres funded as a result of this call will train the research leaders of the future and equip them with the knowledge, skills and creative approaches the UK requires.

The UK needs strong leadership in research to maintain its global competitiveness and to connect to and influence research activity that happens around the world. It also needs innovative and ambitious business leaders with backgrounds in science and engineering to take advantage of new advances in research and technology. In Government, the complex challenges presented by climate change, an ageing population, energy security and the digital economy will need leaders connected to the latest developments in research and industry.

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Key dates

Activity	Date
Issue call	6 February 2013
Closing date for outlines	4 April 2013
Invite full proposals	mid May 2013
Closing date for full proposals	18 July 2013
Announce grants	December 2013
New CDT cohort starts	October 2014

Aim of the Call

Through this call EPSRC will support centres of excellence in research training which build on acknowledged UK centres of excellence in research. These centres will deliver the next generation of internationally excellent doctoral researchers to meet the needs of academia, industry and other employers.

In particular we aim to:

- fund a balanced portfolio of CDTs that are aligned to identified skills needs for the UK in the Engineering and Physical Sciences, in partnership with others including other Research Councils;
- 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 training environments led by robust leadership teams to train internationally competitive doctoral students through a cohort training approach.

These aims build on EPSRC's 2010-2015 Delivery Plan goals (<http://www.epsrc.ac.uk/about/plans/deliveryplan/priorities/Pages/skilledresearchers.aspx>).

CDTs are one of the three main ways by which EPSRC provides support for Doctoral Training. The other routes are the Doctoral Training Grant (DTG) and Industrial Case Studentships (ICASE). We anticipate that much of the need for doctoral students in many areas will continue to be met by the DTG and ICASE.

The call will be run in **two stages**. An outline stage and full proposal stage (including an interview panel). Details of successful outline proposals will be published to enable wider engagement with the user community ahead of the full proposal stage.

We are aiming to announce funding decisions by December 2013 so that successful Centres can begin their preparations for student recruitment in 2014.

The Priority Landscape

Priority areas

(<http://www.epsrc.ac.uk/skills/students/centres/2013cdtexercise/Pages/priorityareas.aspx>) have been identified as part of the call, and new and existing centres should address these priorities. The priority areas were the outcome of an

engagement exercise with Universities, Strategic Partners, other stakeholders and an open web engagement(<http://www.epsrc.ac.uk/SiteCollectionDocuments/funding/CDT2013BackgroundInformation-Nov2012.pdf>)

There are many ways in which a proposal might draw on the priority landscape. For instance, a CDT's scope could cover just a subset of issues identified in a particular priority or it might attempt to address the whole priority. Similarly, CDTs can address more than one priority, pulling out their key elements in order to build a cohesive scope which meets many challenges.

Priority areas have been identified where there is a skills need. Our intention is to deliver a balanced portfolio of both underpinning and targeted skills. EPSRC remit spans a wide range of research themes, each with its own characteristics, challenges and community and the approach to developing the priorities was tailored for that theme. Consequently the rationale or purpose for the identification of the priority and skills needs can vary and the granularity or scope of the resultant priorities can vary. Applications will need to articulate the purpose of the centre within this context, for example:

- an identified future need for core underlying skills or capability;
- a strong user pull;
- a translational challenge within a particular topic;
- a new research challenge requiring the development of a new set of skills;
- to encourage culture change in the way a specific priority is addressed.

Many of the priorities proposed are multidisciplinary (both within EPSRC and with other Research Councils) and many address more than one of the purposes identified above. Nevertheless, all of these priority areas are considered to address vital skills needs that will enable the UK to deliver the next generation of internationally excellent doctoral researchers to meet the needs of academia, industry and other employers. Some of the priority areas are of interest to other Research Councils and we have highlighted those priorities where co-funding has been agreed. The priority descriptions provide further details.

EPSRC may not have sufficient funds, or there may not be bids of sufficient quality, to support a centre covering each priority area. We will also seek to ensure that the CDT portfolio is not overpopulated in specific priority areas. If there are a large number of high quality proposals covering one priority area it is possible that some will be unfunded in order to maintain a balanced portfolio.

Key features of CDTs

CDTs should provide a training environment that incorporates the following features:

- support for a cohort of students (around 10 per year) on a 4-year doctorate course or equivalent, via a critical mass of supervisors (around 20-40) of internationally recognised research excellence;
- all students should expect to undertake a significant, challenging and original research project leading to the award of a doctorate level degree;
- students should undertake a formal, assessable programme of taught coursework, which should develop and enhance technical interdisciplinary knowledge, as well as broadening skills. Innovative methods of delivering

the coursework and integrating it with the students' research activity are particularly encouraged;

- significant University commitment and support to the training environment and the research area;
- students should benefit from the cohort approach to training through peer-to-peer learning;
- to develop awareness and breadth of knowledge, students should be exposed to other activities within the wider research area of the Centre and receive training in transferable skills, including outreach/public engagement;
- Centres should have appropriate user engagement in the research and training;
- additionally there should be 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 and user community.

Institutional Support

Universities will need to confirm their commitment to CDTs for the lifetime of any award and beyond, including alignment to the University strategy and investments, and the availability of appropriate supervisors.

Any university that is thinking of developing proposals should consider carefully which centre(s) to put forward bearing in mind the degree of commitment that hosting a centre over a period of about 10 years will entail.

User engagement

EPSRC encourages user engagement in all of its doctoral training. The extent of that engagement varies according to the nature of the research and training and may also vary with the size of the company or user. The priority descriptions give indicative anticipated levels of industrial engagement.

At the outline stage, **statements of support** will be required from key partners involved in the co-creation of the Centre proposal to:

- outline the benefits the user hopes to achieve from participating in the Centre;
- demonstrate how the user involvement will take place and detail how they have been involved in the development of the bid, give an indication of the level of resource they are willing to put into the Centre, how their involvement enhances the quality of the Centre and the training provided, and where appropriate, how they are engaged in current doctoral training provision.

At full proposal stage, where there is user involvement each centre application must have a statement of support from each user (or cluster of users if this is more appropriate).

Formal Industrial Doctorate Centres (IDCs) would be welcome where appropriate and some priority descriptions indicate that a formal IDC arrangement is desirable or compulsory. These user-oriented Centres provide the same training environment and features as CDTs whilst also incorporating a stronger industrial

focus. We expect such centres that emerge to be a true reflection of a joint collaborative vision.

Students studying at Industrial Doctorate Centres are expected to spend around 75% of their time working directly within their specific collaborating company. Packages of training courses are tailored to their needs in order to enhance professional development including management skills as well as specialist technical subjects. This taught component is formally assessed and forms an integral part of the degree. Projects are designed jointly by the academics and the co-operating company, who jointly supervise the student.

The research projects undertaken through an IDC must be the equivalent of a PhD level project and must demonstrate innovation. The work should also aim to make a significant contribution to the performance of the company. Sponsoring companies and organisations must have a UK research base.

Enhanced student 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 (as described above), public engagement activities, or a period of time spent in an overseas academic collaborators laboratory. Funding for international placements, policy and industry secondments and creativity@home (see below) activities can be included in CDTs, for example, support for additional accommodation and travel. 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.

Further information on enhancing the student training experience can be found in Annex 2 including details regarding Large facilities, computation and data-driven research, Creativity@home and responsible innovation.

How to apply

Please ensure that you read this section carefully and have included, with your application, all of the sections listed in the submission checklist (Annex 3). Incomplete or incorrect submissions will be rejected, without further recourse.

Principles for the call

A two stage process will be used for this call: an Outline Proposal stage followed by a Full Proposal stage.

Who can apply

- Centres may be single or multi-institutional provided the choice is appropriate for the topic and training. Centres of excellence able to contribute to the priority landscape are encouraged to participate. Where Centres are collaborative between universities, the applicants must demonstrate how the collaboration will be beneficial to the students and how the cohort will be developed and sustained;
- proposals will only be accepted from UK Research Institutions that can demonstrate a critical mass of high quality training activity, for example, by demonstrating access to a critical mass of supervisors who are undertaking internationally excellent research in the area of the Centre (experience of current centres suggests that a cohort of 50 students would require 20 to 40 supervisors). Other UK research institutions may be included as collaborators on applications;
 - for information on the eligibility of organisations and individuals to receive EPSRC funding, see the EPSRC Funding Guide: <http://www.epsrc.ac.uk/funding/guidance/fundingguide/Pages/fundingguide.aspx>;
 - EPSRC's statement of expectation sets out the expectations we have for the way in which our students should be supported in their doctoral training and can be found here: <http://www.epsrc.ac.uk/skills/students/help/Pages/expectation.aspx>
- each centre application must have a separate statement of support from each University involved. This should include the University's commitment to the Centre for the lifetime of the award and beyond, the alignment to the University strategy and evidence of strategic investment by the University in the priority area. At the full proposal stage, EPSRC will expect to see these management approaches described from Universities submitting multiple bids. At this stage, Universities submitting multiple bids must describe how they will coordinate/support the Centres, should all bids be successful;
- Centres should link and derive value from other research investments/activity (EPSRC and other funders) relevant to the research/priority area(s).

What can be applied for?

- priority areas have been identified as part of the call, and new and existing centres should address the priorities;

- EPSRC (and other co-funding Research Councils) will provide funds for up to 6 to 8 doctoral students per year but the costs of additional students **must be provided from other sources** (not from other Research Council sources, such as DTG or ICASE although these can be aligned to the Centre);
- EPSRC's expectation is that there should be a **minimum cohort of 10** doctoral students per year, with **five annual intakes**;
- no capital equipment should be requested (i.e. equipment at or greater than £10k). Where possible, researchers are asked to make use of existing facilities and equipment, including those hosted at other universities. Existing access to the necessary infrastructure is good evidence of the suitability of the bidding institution as a host for the CDT;
- existing Centres are expected to cost less than new Centres as they will have much of the necessary infrastructure in place and will have carried out much of the preparatory work required for a successful CDT. Start up costs will only be paid for new Centres.

Submitting an outline application

You should prepare and submit your proposal using the Research Councils' Joint electronic Submission (Je-S) System (<https://je-s.rcuk.ac.uk/>).

When adding a new proposal, you should select:

- Council 'EPSRC';
- document type 'Outline Proposal';
- scheme 'Outline';
- on the Project Details page you should select the 'Centres for Doctoral Training' call.

Note that clicking 'submit document' on your proposal form in Je-S initially submits the proposal to your host organisation's administration, not to EPSRC. Please allow sufficient time for your organisation's submission process between submitting your proposal to them and the call closing date.

EPSRC must receive your outline application by 16:00 on 4 April 2013.

Guidance on writing the outline application

For general advice on writing proposals see:

<http://www.epsrc.ac.uk/funding/guidance/preparing/Pages/proposal.aspx>

The following information and documentation will need to be submitted:

- **Je-S Outline application form** for the relevant call;
 - the names of Centres must be prefixed by "EPSRC Centre for Doctoral Training in ...";
 - the summary section should contain an overview of the research area of the centre, the need for the doctoral scientists or engineers that the centre will produce, and the approach that will be taken;
 - the duration of the grant should be **102 months** (8.5 years), to cover five cohorts of 4-year studentships plus six months preparation time;

- in the “summary of resources required for project” section, place a “0” in the “directly incurred”, “directly allocated” and “indirect costs” and **put the total requested from EPSRC under “exceptions”**. Total contributions from project partners should be completed. The **financial annex below must be completed** and attached to your application.
- **Outline Case for Support** – no more than four sides of A4 using 11 point san serif font. The case for support should cover all aspects of the assessment criteria below. Please ensure that all documents are easily readable;
- **Cover letter** – no more than 1 side of A4 to **include the priority area(s)** being addressed, in order of relevance, and whether the proposal spans **another Research Council’s remit**;
- **Statement of support from the University (ies)**. This is **one** letter representing all Universities involved in the Centre and should include:
 - the University (ies) commitment to the Centre for the lifetime of the award and beyond;
 - the alignment to the University strategy;
 - evidence of strategic investment by the University in the priority area;
 - an indication of the potential supervisors for the Centre.
- **Statement(s) of support from key partner(s)** - Where there is user involvement each centre application must have a statement of support from each key partnership (or cluster of users if this is more appropriate) involved in the co-creation and co-design of the centre to:
 - outline the benefits the user hopes to achieve from participating in the Centre;
 - demonstrate how the user involvement will take place and detail how they have been involved in the development of the bid, explain how their involvement enhances the quality of the Centre and the training provided, and where appropriate, how they are engaged in current doctoral training provision;
 - include an indication of the level of resource they are willing to put into the Centre.
- **Financial statement** (see annex 1 for form and guidance).
 - an estimate of the resources required (see Financial Annex below). This should include resources associated with:
 - funding for 30 – 40 students, through five annual intakes;
 - start up/set up costs;
 - the organisation and running of the centre;
 - full proposals will need to be within +5% (or less if further leverage has been secured) of the cost requested at the outline stage.

Please note that only the initial submission will be assessed. Revisions cannot be sent in after the proposal has been accepted. This includes statements of support.

Outline Assessment

Assessment criteria and recommended format

Outline proposals will be assessed against the following criteria:

1. The topic of the proposed centre

- fit to the overall CDT priority landscape;
- National Importance as evidenced by the need for the skilled people which the centre will produce. Need for volume of students/absorptive capacity;
- the aim/purpose of the Centre, in terms of addressing an identified training need.

2. Quality of the team and research environment

- quality and research excellence of the team including evidence of significant research activity and their contribution to the global research landscape;
- the level of University commitment to the Centre including alignment to the University strategy and evidence of strategic investment by the University in the priority area(s);
- alignment to appropriate major, internationally leading research activities (EPSRC or other);

3. Quality of the training approach

- evidence of the team's experience of providing a high-quality research environment for supporting doctoral-level research, and a description of what has happened to previous students/people;
- demonstration of an existing critical mass of high quality training activity and the availability of sufficient appropriate supervisors (experience of current centres demonstrates a requirement for 20 to 40 excellent supervisors);

4. Partnership and Engagement

- plans for developing and managing appropriate partnerships (both business and University) - are the key partnerships in place for this centre and how do they enhance the quality of the Centre and the training provided?;

5. Management and delivery

- the suitability and commitment of the Director and senior team;
- management structure and processes for the CDT;

6. Value for money

- added value of training through the Centre approach;
- evidence that the required complimentary funding will be secured - EPSRC will provide funds for up to 6 to 8 doctoral students per year but the costs of additional students must be provided from other non Research Council sources;
- plans for further leverage.

Outline panel process

Sift panels will be held in May to decide which applicants will be invited to submit full proposals. Panel members will be drawn from academia and industry in the UK and internationally. The panels will cover appropriate groupings of priority areas and outlines will be sent to the most appropriate panel, as selected by EPSRC, with representation from co-funding Research Councils where appropriate.

Panels will be asked to consider the alignment of applications to the priority landscape and the balance of applications across the portfolio.

Details of successful outline applications will be published to enable wider engagement with the user community ahead of the full application stage.

Outcomes of the outline process

Following the outline panels selected applicants will be invited to submit a full proposal, and will be sent specific information on how to apply, any additional assessment criteria or specific requirements recommended by the panel, including any specific feedback from the outline panel. The deadline for full applications is scheduled to be Thursday 18 July 2013.

We anticipate that we will invite no more than twice as many full proposals as we expect to fund. Please note that we will not be able to provide feedback to unsuccessful applicants at the outline stage.

Full proposal stage

Factors to be considered in the assessment of full proposals are the same as for the outline stage and will include:

1. The topic of the proposed centre
2. Quality of the team and research environment
3. Quality of the training approach
4. Partnership and Engagement
5. Management and delivery
6. Value for money

All proposals will be sent to expert reviewers for comments. Applicants will have a chance to respond to reviewer's comments. Applicants whose proposals receive sufficient support from the reviewers will be invited to an interview. The Interview Panels will rank the proposals based on their assessment of the above factors. **It is expected that interviews will take place during the week commencing 21st October 2013.**

Applications will be tensioned across the various lists to ensure that those ranked towards the top of each list represent equivalent quality. EPSRC may not have sufficient funds to support a centre in each priority area. We will seek to ensure that the CDT portfolio is not overpopulated in specific priority areas. If there are a large number of high quality proposals in one priority area it is possible that some will be unfunded in order to maintain a balanced portfolio.

Mid-term Review

Successful centres will be required to undergo a mid-term review following the start of their third studentship round, which will determine whether they receive funding for their last two recruitment rounds.

Some potentially useful observations from the panel which conducted the last such review may be found here:

<http://www.epsrc.ac.uk/newsevents/news/2012/Pages/cdtoutcomes.aspx>

Contacts

We strongly advise that you contact EPSRC to discuss your interest before completing an outline proposal. The contacts for each of the priority areas can be found here:

<http://www.epsrc.ac.uk/skills/students/centres/2013cdtexercise/Pages/priorityareas.aspx>

For any queries on the process, Email: CDT2013@epsrc.ac.uk

For questions relating to using Je-S, Email: JeSHelp@rcuk.ac.uk; Phone: +44 (0) 1793 44 4164.

Change log

Name	Date	Version	Change
Caroline Batchelor	25 January 2013	1	N/A

Annex 1: Financial statement							
All financial figures should be in £		Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	Proposed number of EPSRC supported students in each cohort (6-8 per yr)						
2	Proposed number of students from other sources (Mandatory 2-4)						
3	Estimated stipend value per student						
4	Estimated fees value per student						
5	Estimated other costs per student						
6	Total cost per student						
7	Total student costs sought from EPSRC						
8	Start up/set up and management costs						
9	Other estimated costs for the whole centre						
10	Total non-student costs						
11	Total non-student costs sought from EPSRC						
12	Total funding sought from EPSRC						
13	Funding contribution from University (ies)						
14	Funding contribution from other sources						
15	Total cost of the Centre (estimate)						

Inflation / indexation should **NOT** be factored into any of the proposed costs. This includes stipends, fees and staff salaries. EPSRC will add additional funding (calculated using a standard rate) prior to any award, to cover these costs.

Figures from the 'Total' column should be entered into the corresponding headings on the Je-S proposal form.

Postgraduate training is not currently included in full economic costing. Estates and indirect costs will not be funded on these awards, however, all eligible costs will be paid at 100%.

Please be aware that full proposals will need to be within +5% (or less if further leverage has been secured) of the total sum proposed at the outline stage.

Specific Notes relating to rows in table:

1. The number of students to be funded by EPSRC (max 6-8 students).
2. The mandatory number of students from other sources is 2-4 students per cohort. Any additional students should also be noted.
3. Student stipend costs should not be below the research council minimum (National Minimum Doctoral Stipend for 2013/14 is £13,726 per year. For an IDC student the minimum stipend for 2013/14 is £15226 per year). This figure should be used for the purposes of your application unless you wish to enhance the minimum stipend, which will need to be justified.
4. Tuition fees: Research Councils UK Indicative Fee Level for 2013/14 is £3,900 per year. EPSRC does not provide additional funds for college fees.
5. Other costs include the allocation of funds for the incidental costs of postgraduate training with regard for the nature and complexity of projects and the need for fieldwork, conferences, broadening training and industrial or international work placements.
6. Total cost per student (sum of rows 3, 4 and 5).
7. Total cost of students being sought from EPSRC (row 6 multiplied by row 1).
8. Start up/set up costs: e.g. taught course development, physical hosting (office/lab space) – existing centres should be minimal, if at all.
9. Other costs for the whole centre e.g. delivery, coordination and management:
 - a. Delivery Costs: Include costs associated with the research training of the students and delivery of the taught training. Any funding will need to be justified in the application.
 - b. Co-ordination and management costs: May include centre director, administrative staff support and applicants' time specifically devoted to the direction of the centre. NB: this could be an average figure given that the actual expenditure (on coordination for example) will be distributed over the full duration (i.e. 102 months) of the CDT award.
10. This is the sum of rows 8 and 9 and may include leveraged funds from other sources.
11. The total non-student related funding sought from EPSRC each year.
12. The total student and non-student costs requested from EPSRC (the sum of rows 7 and 11).
13. This could be a cash and / or an in-kind contribution and should be explained in the case for support.
14. This could be a cash and / or an in-kind contribution and should be explained in the case for support.
15. This is the sum of the EPSRC funds requested and the contributions from the University (ies) and other sources.

Annex 2 Enhanced student training experience

Centres in research areas enabled by access to Large Facilities

The science enabled by the Large Facilities (ISIS, Diamond Light Source, Central Laser Facility, ESRF and ILL) is strongly aligned to the EPSRC's remit. It is therefore anticipated that a significant number of centre proposals will focus on research areas for which students will require access to these facilities as a core aspect of their research. EPSRC and the facilities are therefore happy to receive centre proposals which require facility work to deliver against the relevant priority area.

In order to train the next generation of high quality facility users, it is desirable that students obtain a broad perspective of the range of techniques available at particular facility or across multiple facilities.

Applicants for centres requiring significant interactions with a Large Facility are required to describe how they will ensure the students receive an excellent grounding in the appropriate experimental techniques and what plans they have to ensure that students are provided with the opportunity to access the relevant facility or multiple facilities where appropriate.

Letters of support from facilities are not required for the outline stage, but details should be included in the outline proposal that articulate the proposer's approach to working with relevant facilities.

You should contact the following people at the facilities for discussion prior to submitting your outline application:

ISIS

Philip King - philip.king@stfc.ac.uk

Sean Langridge - sean.langridge@stfc.ac.uk

Areas of expertise where ISIS could contribute training:

<http://www.isis.stfc.ac.uk/user-office/isis-and-the-epsrc-centres-for-doctoral-training13503.html>

Diamond Light Source

Trevor Rayment - trevor.rayment@diamond.ac.uk

Telephone: 01235-778045

Details of training courses and workshops are currently planned for 2013 can be found at: <http://www.diamond.ac.uk/Home/Science/ESPRC.html>

Central Laser Facility

John Collier - john.collier@stfc.ac.uk

ESRF

Harald Reichert - reichert@esrf.fr or Bauke Dijkstra - dijkstra@esrf.fr

ILL

Andrew Harrison - harrison@ill.eu

Training courses currently available: <http://hercules-school.eu/> - as well as access to some of the training offered ILL-funded graduate students - <http://www.ill.eu/science-technology/phd-students/home/>

Computational and Data-Driven Research

Computational research across the whole of science and engineering is increasingly acknowledged to be the “third leg” of scientific enquiry, alongside experiment and theory. It is therefore a certainty that many of the students being trained through the Centres will be using computational techniques in their projects, and some may have projects aimed specifically at software development. It is essential that they are given appropriate training so that they can confidently use, extend and develop software in a way that supports correct, reproducible and reusable research. The training needs to cover both the tools (“how”) and the methods (“why”), as appropriate, for instance:

- fundamentals of computing;
- basic programming and software engineering skills, including working collaboratively on code, testing, automation and revision control;
- basic data analysis;
- data curation and management;
- 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, HPC, GPUs etc.) and scaling up beyond the desk top.

Applicants are required to set out a programme of training in computational research, explaining how it is tailored to meet the needs of the Centre students, and explaining how this training will be provided. There is a significant amount of training available (for instance, there may be established training at your institution, and other examples are in Appendix 1) and applicants are encouraged to 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. Creating new training that duplicates existing training materials and courses is discouraged.

Creativity@home

CDTs have a key role to play in ensuring that EPSRC sponsored students are encouraged to cultivate and develop their creative thinking skills that will benefit their future, ambitious research endeavours.

EPSRC, working with professional facilitators have set up an initiative to support students and their supervisors, to help generate and nurture creative thinking and galvanise team dynamics that paves the way for individuals and teams to take creativity and radical idea generation to a higher level – the initiative is known as creativity@home.

Objectives for creativity@home include:

- learning a range of creative problem solving tools and techniques and how this might aid creativity in research;
- engaging student researchers in blue skies idea generation;

- learning how to work effectively in teams, understanding different styles of approaching problems and how to influence others;
- exploring the future research vision and cross-disciplinary opportunities in the group/CDT using new facilitation tools and techniques;
- developing a cohort of trained people that have learnt and are applying creative problem solving techniques so that the approaches and culture become embedded within the CDT;

Activities that have taken place previously have included:

- training and subsequent support for CDT project managers and students in creative facilitation techniques enabling them to run mini sandpits and cross-disciplinary idea generation workshops;
- away days for multidisciplinary teams exploring how they might work better/more effectively together;
- Creative Problem Solving training for groups of students that enhances their approach to problem solving in their research;
- professionally facilitated idea generation workshops creating new research directions and people connections.

For creativity@home, you and the CDT students are the key resource. Your group will be given access to professional facilitators and the aims and objectives are left up to you and your group to decide. The professional facilitators will work in partnership with you throughout the initiative - the timescale and all facilitation activities will be planned in consultation with you. The facilitators will focus on the process enabling your group to think freely and explore new tools and exciting research directions.

Funding for creativity@home will be accessible via your CDT award and is to pay for facilitator time, travel & subsistence and basic facilitator materials.

Creativity@home will typically cost circa £20,000 (80% fEC) for 3 days FTE for professional facilitators. Creativity@home is a flexible resource. For example, 3 days FTE may be split into six 0.5 days or two 0.5 days and a two day ideas generation workshop. How best to use the resource is up to you to decide when exploring options with your chosen facilitators. There is no maximum value that you may apply for.

If your application is successful EPSRC will provide you with a list of facilitation companies that you may contact. Of course, you may already work with a facilitator; in this case, EPSRC is pleased for you to continue your engagement.

How do I apply for creativity@home?

If you are interested in working with professional facilitators to enhance the student experience at your CDT then you should request resource to cover this in the outline application stage. At the full proposal stage, applications will need to include:

- Je-S form – applicants should include appropriate resource to cover the creativity@home activity under the heading Other Directly Incurred Costs;
- Justification of Resources – justify why you believe that the creativity@home initiative will enhance the experience of the students and strengthen your CDT. Broadly outline what type of activities you are interested in pursuing and the associated need for the resource.

As part of their overall considerations, the interview panel will assess the benefit of the creativity@home activity to maximising the potential of your students throughout the life of your CDT.

For more information regarding creativity@home and to read about the experiences of other researchers please see the news article "[Creative thinking in research](#)"

(<http://www.epsrc.ac.uk/newsevents/news/2010/Pages/creativethinkinginresearch.aspx>), and also the front page feature article entitled 'Meeting of Minds' in Connect issue 80 (PDF)

(<http://www.epsrc.ac.uk/SiteCollectionDocuments/Publications/connect/Connect80.pdf>).

Responsible innovation

Science and innovation not only produces understanding, knowledge and value, but it can result in unintended impacts, questions, and ethical dilemmas and, at times, unexpected transformations in social life. In EPSRC we recognise that we have a duty of care to promote approaches to "responsible innovation" which will initiate ongoing reflection about the potential ethical and societal implications of the research that we sponsor on behalf of the taxpayer and to encourage and train our research community to do likewise.

As a research sponsor, our aim is to build capacity within our research community to discuss and consider social and ethical questions. A key element in building awareness and capacity will be through appropriate multi-disciplinary training embracing aspects such as social science and ethics. However, we feel we should not be prescriptive about such training but rather students and their supervisors should be allowed to be imaginative and develop and discuss what is appropriate within a broad framework.

EPSRC would like to encourage training around the concepts of responsible innovation. In doing so you may wish to seek to consult and work with others outside of the EPS sphere e.g. social scientists, ethicists and public engagement experts.

Documents	Must include:	✓
Je-S form	Title pre-fixed by 'EPSRC Centre for Doctoral Training in...'	
	Summary section including overview of centre, skills needs of students and training approach to be taken.	
	Grant duration is 102 months	
	Costs listed under the 'exceptions' heading only	
Cover letter	Highlighting priority areas being addressed, in order of relevance	
	Potential interest to other Research Council identified (where relevant)	
Case for support	4-page A4 document,	
	11 point san serif font	
	All assessment criteria addressed:	
	o Topic of centre;	
	o Quality of the team and research environment;	
	o Quality of the training approach;	
	o Partnership and engagement;	
	o Management and deliver;	
o Value for money.		
Statement of support from University (ies)	One letter	
	University (ies) commitment identified	
	Alignment to University (ies) strategy	
	Evidence of strategic investment	
	Indication of potential supervisors	
Statement of support from key partners	Letters from partners involved in co-creation	
	Identified benefits to partner	
	Identified benefits to students	
	Any contributions/commitments highlighted	
Financial statement	Costs calculated according to guidance	

Proposals must be submitted before 16.00hrs on Thursday 4th April