Summary

The Economic and Social Research Council (ESRC) is pleased to announce a call for a Centre for Doctoral Training (CDT) in the area of new forms of data. The methodological area of focus for the CDT will be on real-time data analysis, data linkage and interoperability of data from different sources. The substantive focus is on 'new forms of data' in a broad sense and on the opportunities provided by these data to study social processes as they unfold. The particular thematic approach and data sources to be drawn on can be determined by the applicant.

Funding will be for three cohorts of students supporting at least 10 students per annum, of which eight will be funded by ESRC. We will require the CDTs to be developed in collaboration with non-academic partner(s) and for at least 20 per cent of the funding to be supported by non-academic partner(s).
Please note it is expected that students will be recruited from a range of scientific backgrounds, though each studentship must be at least 50 per cent within the social sciences.

We invite proposals from applicants who are proven research leaders in the field, can demonstrate excellence in the delivery of postgraduate training and meet the stated Research Excellence Framework (REF)-based metrics threshold.

This call specification must be read in conjunction with our Postgraduate Training and Development Guidelines 2015 (hereafter known as the guidelines) (http://www.esrc.ac.uk/skills-and-careers/studentships/doctoral-training-centres/postgraduate-training-guidelines/) which sets out our detailed expectations for research training.

ESRC will be partnering with the Digital Catapult (https://digital.catapult.org.uk/) to help deliver these goals. The Digital Catapult will work with the successfully funded CDT to identify further routes and activities to generate impact.

All applicants must submit an Expression of Interest by 16.00 on 30 October 2015 to pgtframework@esrc.ac.uk setting out which institutions and users are involved in the application and what the methodological area of focus and substantive area of enquiry will be. The EoI will only be used to help plan the peer review process.

Deadline for proposals: 16.00 on 4 February 2016.

CDT Directors will be interviewed as part of the Commissioning Panel process on 5 or 6 July 2016. Funding decisions will be announced in September 2016 and the first cohort of students will start in October 2017.

Background and scope

A crucial role for the ESRC is to enhance social science capability and build capacity in priority areas. We recognise that social science increasingly requires collaborative and interdisciplinary approaches, and we want to enable the development of students with these skills. Interdisciplinary research does not mean that a student cannot be firmly based within their discipline; it just enables them to draw in and use relevant research knowledge and practice to enrich their research.

Historically, social science research has been centred on the pursuit of theories via data (qualitative, quantitative or both) which have been collected specifically for research purposes. However, the new data that are being created by all the new technologies, connections and processes are rapidly emerging as important to supplement, enhance and in some cases replace datasets collected by traditional means. Such data include:

- internet data, derived from social media and other online interactions (including data gathered by connected people and devices, eg mobile devices, wearable technology, Internet of Things)
- tracking data, monitoring the movement of people and objects (including GPS/geolocation data, traffic and other transport sensor data, CCTV images etc)
- satellite and aerial imagery (e.g., Google Earth, landsat, infrared, radar mapping etc).

Some of these new forms of data, notably social media, arrive as a live stream and are processed in hours, minutes or even seconds. Analysis on a real-time or ‘near real-time’ basis can reveal phenomena as they unfold, prospectively informing decision-making, as well as potentially enabling timely response and immediate influence. Data integration and the potential to enhance traditional datasets by linking, calibrating and interoperating them with ‘new’ data offers opportunities for researchers to gain new insight and perspective on existing research challenges, and to investigate new questions in the context of an increasingly connected and digital world.

In our Strategic Plan we committed to exploring the potential of new forms of data (both qualitative and quantitative). This type of ‘near real time’ analysis brings distinct new computational requirements, requires new skills, and makes new demands on the ease of use and capability of the national e-Infrastructure. The New Forms of Data CDT will focus on the potential for near real-time analysis and the potential for linkage and interoperability of data from different sources, and will therefore offer the possibility of studying social processes as they unfold.

Call details

This call specification needs to be read in conjunction with our Postgraduate Training and Development Guidelines 2015 which sets out our detailed expectations for research training. This specification describes our particular requirements relating to the new forms of data CDT and we expect applicants to provide demonstrable evidence to support their case.

Proposals will need to meet the RCUK Statement of Expectations for Doctoral Training (http://www.rcuk.ac.uk/media/news/130617/) which sets out common principles for the support of all Research Council funded students. Successful proposals will be awarded a training grant and subject to RCUK terms and conditions as well as any specific ESRC conditions.

Eligibility

All UK-based research organisations (including Northern Ireland) that are eligible to receive Research Council funding for research, have the infrastructure in place to deliver doctoral training and meet the stated metrics threshold will be eligible to submit a proposal for a CDT. However, as these centres are in strategically focused areas we expect the CDT Director to demonstrate that they are a research leader in the field.

Research organisations can only submit one proposal for a New Forms of Data CDT. Proposals can come from both single research organisations and consortia. There is not a limit on the number of ROs which can be involved in consortia arrangements, but applicants must ensure that there is a number of students at each RO and they can interact together as a cohort.

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1 The current RCUK terms and conditions can be found at http://www.rcuk.ac.uk/skills/frameworks/. The current ESRC Postgraduate Funding Guide can be found at http://www.esrc.ac.uk/skills-and-careers/studentships/docurrentar-training-centres/guidance-for-dtcs/. Both are subject to annual review.
**Metrics threshold**

REF-based metrics will be used as part of the assessment criteria to ensure that we support consistently high quality training. Units of Assessment (UoA) which do not meet the threshold set out below will not be eligible for inclusion.

The CDT must consist of REF UoA which meet all of the following criteria:

- A greater than or equal to 50 per cent REF output (3*+4*)
- A greater than or equal to 50 per cent REF environment (3*+4*)
- A greater than or equal to 50 per cent REF impact (3*+4*)
- A research volume equivalent to a minimum of five FTE staff with output at 3* or 4* (calculated by number of FTE staff submitted to REF2014 ‘multiplied by’ percentage of REF output at 3* or 4*).

New staff, staff not included in the REF submission and staff who were submitted to different UoAs may still contribute to the supervision and training of students, but the training must be in the area where the UoA has met the threshold.

The threshold requirement for each UoA to have a minimum of 5 FTE staff with an output at 3*+4* applies at the institution level and not consortia level; in other words, this staffing level is required from each RO within a consortium. This is so that we can ensure the training will be sustainable over the course of the accreditation and there will be the capacity to provide supervision for students at the ROs within which they are registered.

Applicants will be required to submit an attachment detailing the REF data for each UoA relating to the CDT. These will be checked at the submission stage, and the proposal will be returned through Je-S if any ineligible UoAs are included so they can be removed before the proposal is sent out for peer review.

To ensure that there will be sufficient expert supervisory capacity within the CDT, applicants will need to list the supervisors who will be involved in the CDT, indicate whether they have previously supervised or are currently supervising a student, and state which disciplinary area the students worked/are working in. Therefore, in addition to the research volume equivalent to a minimum of five FTE staff with output at 3* or 4*, we would also expect to see five or more supervisors who have previously or are currently supervising doctoral students working within each disciplinary area.

**Funding**

Funding will be for three cohorts of students supporting at least 10 students per annum, of which eight will be funded by ESRC. We will expect the CDTs to be developed in collaboration with non-academic partner(s) and for at least 20 per cent of the funding to be supported by non-academic partner(s). Applicants will need to provide evidence of the sources for additional funding for the additional two (or more) studentships.

**Institutional/consortia strategy and vision**

Applicants are required to set out how the vision for the CDT fits within their institution(s) strategy for doctoral training provision and how the doctoral training strategy fits within the institution’s overall vision and goals, particularly the strategy for social science research.
Applicants are also required to set out their future strategy for promoting and developing the focus area of the CDT including how the learning from the CDT will be sustained and taken forward after the final cohort of students have started.

We require applicants to set out how the CDT will link to and access wider institutional resources, such as: ESRC and other research council funded doctoral training provision (if applicable), careers service, knowledge exchange services etc. Letters of support are required from each participating RO.

We are releasing a concurrent call for Doctoral Training Partnerships (DTPs) and Biosocial Research CDT. ROs applying to this call are also able to apply to the DTP and Biosocial Research CDT calls, but they must provide an additional attachment setting out how they will co-ordinate/support the centres should all bids be successful, including a suitable governance structure and a strategy for sharing best practice.

Environment for postgraduate training and development

We expect the CDTs to be led by research leaders in the field so that the students are based within a strong research environment. The team need to have experience of maintaining a high quality and coherent infrastructure for the delivery of core and advanced postgraduate training. Applicants will need to provide evidence of the quality and experience of the research team and provide an overview of the research environment.

Cohort building
We expect the CDT to support at least 10 students per annum in order to build critical mass and to enable the students to study as part of a cohort. CDTs are by their nature interdisciplinary so having a cohort of students will enable them to interact together and be exposed to a range of disciplines. Studying as part of a cohort has been shown to be hugely beneficial in terms of the support students receive from one another and also the training opportunities available to them. Applicants are required to outline their strategy for enabling student interaction and developing a cohort identity across all partners and pathways.

Facilities
Applicants are required to set out the facilities which will be available to the students and the mechanisms for communicating opportunities and entitlements to them, ensuring consistency between pathways and collaborating institutions. Our recommendations for the basic student facilities are set out in the guidelines. We recognise that ROs will need to approach all requirements with sufficient flexibility to meet the needs and capacities of students with disabilities.

Content and delivery of postgraduate training

The New Forms of Data CDT and will focus on the potential for real-time data analysis, data linkage and interoperability of data from different sources. The substantive focus is on ‘new forms of data’ in a broad sense and on the opportunities provided by these data to study social processes as they unfold. The particular thematic approach and data sources to be drawn on can be determined by the applicant.

It is expected that students will be recruited from a range of scientific backgrounds, though each studentship must be at least 50 per cent within the social sciences.
Applicants will be expected to set out the importance of the thematic approach, the key skills they are seeking to develop and the types of projects students will be undertaking. They will need to explain the types of methods they will be using and developing as standard methods of analysis may not be suitable for the likely volume of data that many of these new sources will generate. Applicants will need to and set out their plans for interdisciplinary training and identify how students will be supported across disciplinary areas, though shared supervision etc. Any planned connections to the ESRC Big Data Network investments in this area should also be described.

Applicants have flexibility in the content, structure and delivery of training to enable them to develop innovative approaches to training. Funding is based on a four-year studentship however we allow a flexible portfolio of three-, four- and even five-year postgraduate training platforms (detailed in the guidelines). Applicants will need to justify the training platforms they will provide and explain how they will enable delivery of the most effective training for new forms of data.

Details of our expectations regarding methods training can be found in the guidelines. In this we detail the minimum level of skills and competencies in the application of research methods which students are expected to develop. Within the case for support applicants need to indicate how the key elements of ‘core’ training will be integrated throughout an individual programme of study.

Applicants who wish some studentships to be considered for distance learning need to clearly explain how this will operate and how these students will be included in any cohort development activities.

As this CDT is based in an emerging area we expect it to be highly innovative and pump prime the development of new training materials in order to fill any gaps in provision relating to their area of expertise. We will provide some funding through the doctoral training grant to support the development of these resources. We require any new training materials created by the CDT to be made freely available, particularly across the DTP and CDT network.

**Annual training needs analysis**

We require each student to receive an annual training needs assessment (TNA) so that each student can demonstrate clear progression in their training in terms of level and or breadth. Applicants must describe the processes they will put in place to enable annual training needs assessments, including how they will engage with supervisors to ensure that they are aware of the different training opportunities. The applicants will also need to articulate how these processes will enable them to obtain an overarching view of training needs. The ESRC Office will undertake an annual assurance check of a sample of TNA forms.

**Supervision**

Effective supervision is critical to the success of a CDT, and details of our expectations regarding supervisory practice and policy can be found in the guidelines. The supervisory team must be interdisciplinary and needs to have experience of interdisciplinary working. Applicants are required to describe the formal systems that are in place for monitoring the performance of supervisors, for identifying their training and professional development needs (particularly for new supervisors), and for ensuring that these are met.
Ensuring that supervisors are engaged with the CDT is essential to ensure that the student gets the most out of their studentship and the range of opportunities available to them. Applicants must set out a clear strategy for communicating with supervisors and ensuring that they are fully engaged with the aims and objectives of the CDT.

**International engagement**
We are keen to support researchers to develop the capability to operate in a global context. Therefore we will continue to provide support for overseas fieldwork for doctoral students and provide extensions to awards to allow time for language training. We will also provide funding for overseas institutional visits of up to three months to undertake specialist research training and to develop collaborative links.

ROs are encouraged to highlight the international aspects of their training provision in their proposals, drawing particular attention to aspects which develop the cultural and methodological skills required of social science with an international dimension.

**Collaboration with non-academic partners**
We expect the CDT to be developed in collaboration with non-academic partner(s) from the outset, and as this area is of considerable interest to business, public and civil society sectors we expect at least 20 per cent of the funding to be supported by non-academic partner(s). We recognise that in-kind contributions may also be provided in addition to the cash contribution.

Applicants will need to articulate the benefits of the CDT to users, the appropriateness and strength of the partnerships, what the collaborating partner(s) hope to achieve and how their involvement will enhance the quality of training. Signed and dated statements of support will be required from all partners (or clusters of partners if more appropriate) that contribute in some way, or assist in the co-creation and delivery of the CDT.

We expect each student to benefit from the collaborative arrangements, but expect 30 per cent of studentships to be either CASE style, delivering a co-produced research idea, and/or internships which apply social science skills in a practical situation or delivers a focused piece of research. We encourage the development of new and innovative activities and mechanisms.

Applicants are expected to set out a clear strategy for how their students will engage in collaboration, and also their wider approach to knowledge exchange and impact.

**Digital Catapult**
We expect the funded CDT to work in partnership with the Digital Catapult ([https://digital.catapult.org.uk/](https://digital.catapult.org.uk/)). The Digital Catapult has focus areas that are aligned with the “new forms of data” theme they can be a helpful partner for applied R&D or commercialisation aspects. We require applicants to explain how they will engage with the Digital Catapult and the Catapult network more broadly to create routes and activities leading to impact. Mechanisms may include industrial supervision / mentoring for student projects, internships either directly at the Catapult or with associated SMEs, collaborative R&D projects, joint commercialisation activities, showcasing and event opportunities for projects at the Digital Catapult centres, or participation in open innovation activities with industry partners.
Please note the Catapult will neither be receiving nor granting any funding as part of this activity. They will also not provide letters of support for individual bids and will instead work with the awarded Centre.

**Governance, organisation and management**

We expect the CDT to have a governance structure which enables effective engagement and communication with all levels including supervisors and students. We also expect to see high level engagement from senior management within the institution(s) to ensure the CDT links with institutional governance and advice streams and to enable the CDT to access wider institutional resources.

The named Director on the CDT proposal will be interviewed as part of the peer review process. We expect that the Director will remain in place for the duration of the CDT; if they step down the ESRC will be required to approve their replacement. Applicants are required to explain the suitability and commitment of the Director and the senior management team.

**Widening participation**

We want to ensure that we support the most talented students whatever their background and regardless of where they undertook their first degree. To ensure that this happens we require:

- selection processes to be open and transparent and enable the potential of the candidate to be assessed whether they are applying on a full or part-time basis, whether they have prior research training or not, and regardless of their demographic
- all studentships to be available on a full or part-time basis and the availability of part-time awards must be clearly set out when advertising funding opportunities. Applicants must indicate within the bid if it is not possible to offer part-time across all pathways and the reasoning for this will be assessed through peer review
- opportunities for ESRC-funded studentships to be actively publicised both within and beyond the host institutions

We expect applicants to think imaginatively and address in their proposals how they will contribute to the widening participation agenda and promote postgraduate research to a diverse base of talented graduate students across the UK.

**Eligible Costs**

Each CDT must support at least 10 students, eight of which will be funded by the ESRC. Applicants must state how many students they intend to support and although funding is based on a four year studentship, they will need to justify the training platforms (+3/ 1+3/ +4 etc.) which they will support them on. Any agreed, or expected, in-kind support or additional funding for supporting additional studentships or activities relating to the CDT should also be specified.

The table below shows the approximate amount of funding which will be provided.
For information about how our postgraduate training funding can be used flexibly, please see our Postgraduate Funding Guide [http://www.esrc.ac.uk/funding-and-guidance/postgraduates/esrc-students/index.aspx](http://www.esrc.ac.uk/funding-and-guidance/postgraduates/esrc-students/index.aspx) (this is subject to annual review).

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<tr>
<th>Core allowances</th>
<th>Cost (£)</th>
<th>Calculation</th>
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<tr>
<td>Stipend</td>
<td>14,482</td>
<td>Subject to indexation and calculated per student. This will paid each year for four years.</td>
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<tr>
<td>Fees</td>
<td>4,175</td>
<td>Subject to indexation and calculated per student. This will paid each year for four years.</td>
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<tr>
<td>Research Training Support Grant (RTSG)</td>
<td>750</td>
<td>Subject to indexation and calculated per student. This will paid each year for four years.</td>
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<tr>
<td>Overseas Fieldwork (OSFW)</td>
<td>450</td>
<td>Subject to indexation and calculated per student. This will paid each year for four years.</td>
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<tr>
<th>Student and cohort development</th>
<th>Cost (£)</th>
<th>Calculation</th>
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<tr>
<td>This funding is to cover activities relating to collaboration, advanced training, cohort development and Overseas International Visits (OIVs).</td>
<td>32,000 (subject to spending review outcome)</td>
<td>Not indexed. Calculated based on 8 students. Paid as a single payment</td>
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<tr>
<th>Additional allowances</th>
<th>Cost (£)</th>
<th>Calculation</th>
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<tr>
<td>London allowance</td>
<td>2000</td>
<td>Only applicable to students studying at a London RO. Subject to indexation and calculated per London based student, paid each year for four years.</td>
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Institutions will be expected to match funding for stipend, fees, RTSG, OSFW and London allowances for all additional students above the core eight supported by ESRC.

In a separate attachment, applicants must set out how they intend to allocate funds from the ‘Student and cohort development’ category which is intended to support the cohort for collaboration, development of new and innovative advanced training materials, cohort development and Overseas Institutional Visits (OIVs). In the attachment, applicants must also set out how they would make savings and allocate funding if the Research Councils receive a constrained spending review settlement and the CDT budget is reduced by 25 per cent.
Enhanced stipends
ESRC will no longer automatically provide enhanced stipends to advanced quantitative methods (AQM) students. Instead, the CDT will be able to use the flexibility of the doctoral training grant and award-enhanced stipends where they experience recruitment difficulties.

Research Training Support Grant (RTSG), and OverSeas FieldWork (OSFW)
The total amount of funding we will provide to the CDTs for the RTSG and OSFW is based on a fixed amount per student per year. We encourage the CDT to consider the total RTSG and OSFW payments as a pot from which to allocate funds. This will be based on student needs and priorities, as well as on CDT strategy and the opportunities for efficiencies provided through economies of scale.

It is the CDTs responsibility to ensure that funds are used responsibly, and CDTs should ensure a process is in place for managing RTSG and OSFW that it is responsive to the needs of their students. Students should discuss their needs with their CDT early in their funding.

Overseas Institutional Visits (OIVs)
The OIV Scheme funds an extension to the studentship of up to three months plus travel and subsistence costs. The scheme is open to all students and awards are allocated on a competitive basis. CDTs will have considerable flexibility in administering the funding and must establish their own processes to support the Scheme. Details of the scheme can be found on page 26 of ESRC Postgraduate Funding Guide http://www.esrc.ac.uk/funding-and-guidance/postgraduates/esrc-students/index.aspx

Town Hall meeting
A Town Hall meeting to discuss the detailed requirements of the call will be held on 29 September 2015 at Goodenough College (http://www.goodenough.ac.uk/). Up to two members from each institution are eligible to attend and must register by emailing PGTFramework@esrc.ac.uk. Full details of the event will then be provided.

How to apply
All applicants must submit an Expression of Interest by 16.00 on 30 October 2015 to pgtframework@esrc.ac.uk setting out which institutions and users are involved in the proposals and what the methodological area of focus and substantive area of enquiry will be. The EoI will only be used to help plan the peer review process.

Proposals must be submitted by 16.00 on 4 February 2016 through the Research Council’s Joint Electronic Submission (Je-S) system (https://je-s.rcuk.ac.uk/). See the proposal guidance notes for further details, available on the ESRC website at: http://www.esrc.ac.uk/funding/funding-opportunities/call-for-centres-for-doctoral-training-cdts-in-biosocial-research-and-new-forms-of-data/

If you are not currently Je-S registered and intend to apply, please ensure that you allow sufficient time for registration as no extensions to the deadline will be permitted. Hard-copy, faxed or emailed proposals will not be accepted.
Applicants must be based at a research organisation eligible for research council funding (http://www.rcuk.ac.uk/funding/eligibilityforrcs/) and which has the infrastructure in place to deliver doctoral training.

Once the minimum number of peer review comments required have been received proposals will be sent to the applicant for comment, along with the reviewer assessments. Proposals, along with the reviewer comments and grades and the applicants’ responses will then be assessed by a specially convened commissioning panel on 21 June 2016. This panel will invite the CDT Director of the highest ranked proposals for interview on 5 or 6 July 2016 and the Director will be allowed to invite up to three other members of the team. The panel will then agree final grades and make funding recommendations to the ESRC.

Applicants will be informed of decisions in September 2016 and the first studentships will commence in October 2017.

Assessment criteria

Eligible proposals will be assessed by reviewers and panel members against the following criteria:

- Vision for the CDT and how it fits within institution(s) overall strategy
- Quality of research environment
- Quality of the research team and training approach
- Supervisory practice and policy
- Partnership and engagement, specifically collaboration with non-academic partners engagement and knowledge exchange
- Management and delivery, including governance structure and administrative support
- Value for money

Commissioning timetable

- Call open: September 2015
- **Deadline for Expressions of Interest - 16.00 on 30 October 2015**
- **Deadline for submitting proposals - 16.00 on 4 February 2016**
- Panel assessment, including CDT Director interviews – 5 or 6 July 2016
- Decisions to applicants – September 2016
- First cohort of students start – October 2017

Contacts

Please address any queries relating to the call to:

- Henna Patel
  Email: pgtframework@esrc.ac.uk
  Telephone: 01793 411914

Enquiries relating to technical aspects of the Je-S form should be addressed to:
• Je-S Helpdesk
  Email: jeshelp@rcuk.ac.uk
  Telephone: +44 (0)1793 444164

Enquiries relating to engagement with the Digital Catapult should be addressed to:

• Marko Balabanovic
  Email: marko.b@cde.catapult.org.uk