Engineering and Physical Sciences Research Council





Data Management

Engineering and Physical Sciences Research Council





Centres for Doctoral Training: Student Reporting

Dr Jim Fleming, Building Leadership

Student reporting

Category	RCUK funded CDT students	CDT Incorporated Student*
Description	All CDT students that meet the harmonised T&Cs	Students that would be considered to be a core part of the CDT cohort but that do not meet the full requirements of the harmonised Ts&Cs
Reporting mechanism	Je-S SDP as EPSRC Centre for Doctoral Training Student - CDT	Je-S SDP as EPSRC CDT Incorporated Student

*New category

Students that do not form part of the core CDT cohort but benefit from the Centre could be 'aligned' to the Centre. **'CDT aligned'** students may be RCUK funded through other sources and should be reported via those routes on the Je-S SDP (e.g. DTP or ICASE students). They are not part of the 'core cohort'. EPSRC Centre for Doctoral Training Student - CDT – any student who is at LEAST 50% funded from EPSRC

 Example: Cohort of 10; 7 funded by EPSRC, 3 funded by Others
 7 100% EPSRC: 3 100% Other = 7 EPSRC + 3 Incorporated
 10 70% EPSRC: 30% Other = 10 EPSRC
 5 100% EPSRC: 4 50% EPSRC: 50% Other: 1 100% Other = 9 EPSRC + 1 Incorporated

- 6 100% EPSRC: 2 50% EPSRC: 50% Other: 2 100% Other = 8 EPSRC + 2 Incorporated
- All EPSRC & Incorporated have to be reported through JeS
 → outcomes on Researchfish





Only 3 possible options on JeS for CDTs

- **EPSRC**
- III Incorporated
- IDS

Please input student details as soon as possible

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Student Data

Kate Reading, Building Leadership

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- To demonstrate how investments through training grants are being used to support high quality doctoral training
- To monitor people and organisations: for example the diversity of students and co-funding of doctoral training
- **II** To inform policy development
- **II** To satisfy auditing requirements
- **II** Reporting to BIS and other requests for information





117 CDTs to 33 Research Organisations – 1,100+ students a year
 40 DTPs to 40 Research Organisations – 1,100+ students a year

III Industrial CASE - 200 students

DTP funding may also be used for:
Vacation Bursaries (up to 15 a year)
Doctoral Prize (up to 10% of the DTP)

Mostly positive: asked for right kind of information and we should do it again

- Reassurance about thoughtful processes
- **II** Reflected steer to improve visibility of DTPs and accountability
- Particularly welcomed forward-looking elements

Noted some themes:

- III Alignment with research grants
- Prioritising student excellence
- Many gave some priority to new/recent academic staff
- Many used a "top-slice" for priorities
- **II** Flexibilities welcomed: perhaps especially open eligibility for 10%

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EPSRC Research Areas:

- Subject groupings
- Balancing the portfolio

JeS Student Details

- Student and supervisor details
- RO and project partners
- Scheme
- Project details
- Dates
- Financial information

Research Fish – new from 2016

- Publications, awards & recognition
- Collaborations, partnerships & engagement
- IP & spin-outs
- Influence on policy & practice
- Research tools, methods, databases & models

Student information

Training-grant level

- CDT applications
- CDT annual reporting
- Other offline reports (VBs, DP, CASE) conversions
- DTP Statements of Intent

Student surveys

- HESA: Destinations of students 6 months after graduation
- Longitudinal DLHE

Student Details EPSRC Investing in research for discovery and innovation

Common issues with Student Details

Missing or incomplete records

- Submit details for all students within a month of their start date
- Keep records up to date and particularly where main project is decided at the start of year 2

Project details appear to be out of EPSRC remit

- Project details should reflect what the student will be doing
- We need to see the novel EPS content

Submissions and Destinations

- We monitor the information
- We match against HESA data
- Currently looking into why fewer records than expected

Incomplete or incorrect use of project partner section

- All CASE students should have a non-academic project partner
- Other students may have project partner

Duplicate records

Where a student starts their programme in one RO and then moves, the ROs must agree who will enter/maintain details.

 Do not record two records (eg 1 year MRes + 3 year PhD)



Direct includes

- **III** DTP Statements of Intent
- CASE conversion; Doctoral Prize and Vacation Bursaries
- CDT annual reports
- **II** Financial Expenditure Statements
- Researchfish
- Indirect includes

DLHE



- JeS Help the first port-of-call for help with data entry. They will contact individual RCs where appropriate
- You can save a list as a spreadsheet (from the "List Studentships" part of JeS)
- A few copies of the "JeS Student Details Hints and Tips" are available – but the JeS helpdesk would also be happy to send you a copy of the PDF if you would like it
- II DTPs and changes in 2015: Letter from Phil Nelson (May 2015) refers.

epsrcstudentshipqueries@epsrc.ac.uk

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EPSRC (& RCUK) Policy on Research Data Management

Why have these Policies? – do we really need to change?

Nature 530, 27–29 (04 February 2016) (doi:10.1038/530027a)

"No standard mechanism exists to request raw data.

When we were able to access data online, we could quickly confirm suspected errors.

In at least two cases, we requested data from the authors but received summaries of calculations instead.

Sometimes we received no data at all, at which point it was not clear whether journal staff should step in.

One journal did retract a paper when its authors refused to show their data or explain discrepancies that we had identified and alerted the journal to in a letter."





Underpinning Philosophy



- Data is a critical output of the research process which should be shared:
 - to reinforce the integrity, transparency and robustness of the research record
 - to increase its potential value through aggregation
 - to enable new research questions to be addressed
- From a funder's perspective:
 - Iooking after and sharing research data is part of the research process AND a legitimate use of research budgets
 - Data underpinning published research findings should be made available by default

Research Data...

- o is a *Public Good* to be made available responsibly
- has *long-term value* the need for preservation
- should be *Discoverable* and *Citeable*
- is subject to *legitimate constraints* it cannot all be shared equally
- Researchers should have a period of *privileged access* to 'their' data
- Data users should cite their sources and abide by terms of access!

Context (EPSRC)



III EPSRC's Policy Framework on Research Data Management

Launched May 2011 (same as RCUK's)	http://www.epsrc.ac.uk/about/standards/researchdata/							
Based on 7 Principles	Engineering and Physical Sciences Research Council				Search			
	ñ	FUNDING	RESEARCH	INNOVATION	SKILLS	NEWS, EVENTS AND PUBLICATIONS	ABO	
Sets out 9 'Expectations'	About us Service standards policies	About us Home / About us / Service standards and policies / EPSRC policy framework on research data EPSRC policy framework on research					See also Access to resear publications & Related link:	
allieu al Nesealuli	research data	research data Qata					Freedom of Infor 2000 [ICO.]	
Organisations	Principles	This p funde	This policy framework sets out <u>EPSRC</u> 's expectations % concerning the management and provision of access to <u>EPSRC</u> - funded research data. <u>EPSRC</u> recognises that a range of institutional policies and practices can satisfy these expectations, and encourages research organisations to develop specific approaches which, while aligned with <u>EPSRC</u> 's expectations, are appropriate to their own structures and cultures.					
	Scope and benefit	s and e appro						
	Exploitation of rese and collaborative r	of research results The expectations arise from seven core principles % which align with the core <u>RCUK</u> principles on data sharing. Two of the					answers 🗗	
Compliance with Expectations	S Impact, timescales and support Impact, timescales and support timescales and support				that the research process should not be			
due by 1st May 2015!	Responsibility for c	costs with t	The framework was endorsed by the <u>EPSRC</u> Council in March 2011 and implemented from 01 May 2011. It was developed with the benefit of advice from university administrators, from academics, and from research collaborators based in industry.					
	Expectations	Sha	re: 🗾 🕇 <mark>8 in</mark>			•		

EPSRC Policy was <u>one</u> of the drivers of RDM investment across the sector over the past 4 years... others include Royal Society 'Science as a Public Enterprise and Govt. 'Open Data' White Paper, both mid-2012

EPSRC Policy expression - the '9 Expectations'

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Each focuses on the *Institutional* responsibility (– but of course Researchers are responsible too!)

III NOT required to keep all and every bit of data

- **Researchers have flexibility to decide what (and what not) to keep**
 - subject to the default on data underpinning published research
 avoid saying 'just take my word for it'
- BUT... ...what is kept should be kept properly
 - III quality storage and curation
 - well documented 'metadata'
 - 10 yr term 'since last use'
 - access/downloads logged (helps assess value to others)
 - managed access controls if necessary.
- Everything in the **context** of existing legislation FOI, DPA, EIR...

How EPSRC Policy affects... Research Organisations

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IIResearch Organisations have **primary responsibility** for *ensuring that researchers manage their data effectively*.

IIIThey need establish infrastructure and processes to ensure that:

- retained EPSRC-funded research data is preserved for a minimum of 10years
- ✓ effective data curation is provided throughout the full data lifecycle,
- they know what publicly-funded research data they hold, make it discoverable, and record 3rd party requests to access such data;
- ✓ they notify and justify access restrictions, e.g. 'commercially confidential'
- ✓ their researchers appreciate/make use of relevant law e.g. FOI
- their researchers understand the requirement to comply with research data policies
- ✓ that adequate resources (e.g. from QR/Research Grants) are allocated to research data management



They have a responsibility to understand - and adhere to - our principles and expectations for research data management.

II They need to:

- make their EPSRC-funded research data freely and openly available with as few restrictions as possible
- ✓ comply with the data management policies of their Research Organisation
- ✓ have project specific data management plans in place
- ✓ where relevant, have appropriate agreements in place with non-academic collaborators,
- ensure their published research describes how to access the supporting data (also a requirement of the RCUK Policy on Open Access)
- ✓ be aware of the relevant legislation and the available exemptions which may be used, should the need arise, to justify the withholding of research data

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III Non-Academic Partners in research collaborations need to be aware of:

- ✓ the general principle that publicly-funded research data will be expected to be made freely and openly available with as few restrictions as possible
- ✓ the relevant legal requirements such as the Freedom of Information Acts
- ✓ the need to ensure that issues of commercial confidentiality and data ownership are adequately addressed in the data management plans and collaboration agreements - *before* the start of a collaborative research project.

Data sharing agreements *are likely to be* appropriate



Produced some bizarre comments...

- "The nature of my work is such that it generates no data that doesn't end up in my papers, so I'm unlikely to know about these policies."
- "This is irrelevant to me. I deal with no sensitive data."
- "As I do not work with empirical data I am not affected by RDM."
- "I am on the point of retiring so taking less interest in these things"
- "RDM sounds like a gigantic waste of time and I intend to spend as little time on it as possible"



Data underpinning published research



During Autumn 2105 EPSRC checked a 'random' sample of 185 papers acknowledging EPSRC support and published since 1st May 2015 to assess how easy it was to find the data underpinning the research.

Very approximately:

- 61% easy or very easy to access data
- 25% possible but some effort needed
- 14% impossible
- But 30% of those described as 'easy' or 'very easy' refer to supplementary information, and this is often additional rather than underpinning information.

What funding is available?

- All costs associated with research data management are eligible expenditure of research grant funds, but...
 - no expenditure can be 'double funded' (a institutional service that is centrally supported by the indirect costs paid on all research grants cannot then also be included as a direct cost on a grant)
 - *all* directly incurred expenditure of a grant *must* be incurred before the end date of the grant.

Take Home Messages

- III Substantial progress achieved but much remains to be done
- III UUK Concordat watch this space!
- How you can help your researchers:
 - With new funding applications:
 - III Ensure RDM has been thought through...
 - III Is there a DMP in place?
 - III Are sufficient resources requested?
 - III Will the proposed work result in datasets of value to others?
 - III If so, how (and how fast) will it be shared, and does the application say so?

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With Journal Articles: support provision of unique identifiers for underpinning datasets



Thank You

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