GOOD PRACTICE IN INFORMATION DISSEMINATION

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Construction Committee
Science and Engineering Research Council

Topics covered by this guide

Information

Initially, news and up-dates about the progress of your research activities: subsequently, the results arising out of your research

Dissemination

Initially, making others aware of your research activities: subsequently, broadcasting the results of your research to all those who could benefit from them

Application

Making sure that the results of your research are not just heard about but taken up and applied in an effective manner, in whatever contexts it is appropriate to do so

Exploitation

Ensuring that the value of your research activities, and any results or products arising from them, are realised – often (but not necessarily) measured in material or economic terms

Collaboration

United labour or co-operative work done in conjunction with others, both academics and industrialists

Prepared for

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by
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Who is the advice in this guide intended for?

You may find this guide useful if:

- you are thinking of applying to SERC for research funding for the first time
- you have just been awarded your first grant by the Research Council
- you are an experienced grant holder curious about other researchers' dissemination practices
- you are about to undertake your first collaborative research project with industrial partners under SERC-funding, or
- you are looking for ideas about how to apply or exploit the results arising from SERC-funded research.

First-time applicants should also read ***SERC RESEARCH GRANTS ...a beginner's guide.***

Where does the advice in this guide come from?

It is distilled from a critical examination of the dissemination practices of academics across a variety of university departments. Research projects undertaken by twenty grant holders have been monitored as part of the ***Design Monitoring Initiative*** of the Construction Committee of SERC over the past five years.

This guide draws together elements of good practice illustrated by these grant holders and by a dozen others, previously funded by the Building Sub-committee, who were studied as part of a 'backwards look' conducted at the start of the Design Monitoring Initiative in 1988.

Who is responsible for disseminating information arising from SERC-funded research?

The ***Royal Charter*** of 1965 sets out the objectives of SERC. The first of these is:

(a) to carry out research and development in science and technology

and the last is:

(e) to disseminate knowledge concerning science and technology.

So information dissemination is a key part of the remit of the Research Council. However, as SERC's 1989 ***Corporate Plan*** made clear, prime responsibility for dissemination is placed on individual grant holders.

In practice, then, if you gain research funding from the Construction Committee, you will be held primarily responsible for disseminating information arising from your own work. And the clarity of your statements about how you intend to disseminate, apply and exploit your research results will be one of the criteria which the Committee uses to assess your research:

- first when your application for funding is received

and then, if you are chosen for funding,

- again when the final report of your research is submitted.

No specific funds are allocated when SERC grants are made to cover dissemination activities, except perhaps attendance at national/international conferences – if these are demonstrably essential for the development of your research.

Nevertheless, dissemination is a critical part of your research activities. It needs to be planned explicitly, from the outset, just like any other part of your proposed programme of work.

How does the Construction Committee help?

Detailed advice on how to apply for funding and on how applications are assessed is contained in the yellow book, ***SERC RESEARCH GRANTS*** (October 1991 issue). Copies of this should be available in your department. They may also be held centrally by your university's Registrar or by the Research Grants Officer. Personal advice is also available, especially for first-time applicants, from the Secretary of the Construction Committee. Applicants can discuss their proposals in draft with the appropriate Monitor, see appended ***Contacts List.***

Once funded, grant holders whose research projects are placed in the portfolios of the Design and the Construction Management and Operations Monitors receive direct advice on dissemination, application and exploitation as part of the two ***Monitoring Initiatives***.

Each year the Construction Committee publishes ***Summaries of Research Reports*** which contains one page summaries of all completed research projects.

Descriptions of selected projects are also published in ***Building and Civil Engineering Research Focus***. This newsletter is sponsored by a large number of public and private sector organisations in the Construction Industry and has a wide circulation to both academics and industrialists.

The Construction Committee is testing the use of Building Research Establishment publications and its distribution facilities as a means of disseminating the results of SERC-funded research.

When should you undertake your dissemination activities?

Ideally these should start as soon as you begin drafting your application.
Write to interested parties whose endorsement or support your work will need, or who may wish to collaborate with you. Attach letters from them as an appendix to your application.

Once given a grant, signal your funding via a convenient newsletter. If one doesn't exist, place a letter announcing your research in the relevant journals or papers, inviting those interested to contact you. Consider starting your own newsletter to keep these people informed, at least during the life of the research project.

Think of using these contacts:

- to help clarify your research objectives
- to examine the efficacy of your data collection methods
- to provide venues for data collection
- as an expert group from whom to elicit specialist knowledge
- as a steering group to guide the progress of your work
- as test beds for evaluating interim research results
- as distribution channels for disseminating your final results or the products of your research.

Programme your dissemination activities carefully. Stage them to take place, as appropriate, throughout the life of your grant. Many, but not necessarily most, will occur once your grant is over and your research is completed. Some, like making and maintaining contact with other interested researchers or industrialists, can only properly happen during the grant period if they are going to have a significant impact on the course and direction of your work.

Writing a final report to SERC and then just publishing a couple of academic papers is unlikely to be an adequate dissemination strategy. Both your reputation as a researcher – and the effective take-up and application of your research results – depend on how good your dissemination activities are.

What should you do first?

Your first task comes when you start putting your research application together. At this point, you need to think 'downstream'. At the end of your research, ***what*** will you want to communicate to ***whom***. There are two separate questions you need to consider here:

- what form are the results of your research likely to take

and

- who will you need to influence for them to be taken up and applied?

By working through the answers to these two simple questions, you can begin to formulate a ***dissemination plan***. You can then refer to this in your application for research funding.

When developing your plan, keep an open mind. Different parts of your research need to be disseminated to different audiences, e.g.:

- a detailed analysis and comprehensive description of results for your own research community
- a digest of your findings for the wider scientific community
- a simple executive summary for managers in the construction industry
- a concise set of guidelines for manufacturers or practitioners.

Repackaged properly, the same information can be delivered to a variety of audiences, each with different needs and understanding.

Think laterally and look beyond the confines of your own specialism.

- Could your results be of interest to people in other disciplines, even outside the construction industry?
- Can your research methods, or the measuring instruments you have developed, be applied in other engineering or design contexts - ship building or automobile engineering - or in materials science, for instance?
- Do you need to address yourself to those who teach designers or engineers?
- Or do you need to influence client organisations, those who manage construction organisations, or those who determine the legislative framework in which they operate?

Who are the target audiences for your research?

The results of work funded by the Construction Committee can legitimately be targeted on a wide range of different people. Here is a checklist, derived from the target audiences of grant holders examined by the ***Design Monitoring Initiative***.

Are the people you need to influence listed here?

European Community

Government departments, e.g. DoE

Government research agencies, e.g. BRE, FRS

Regulatory bodies, e.g. Health & Safety Executive

Standards organisations, e.g. BSI, CEN, ISO

Professional institutions, e.g. RIBA, RICS, CIBSE

Client organisations

Trade associations, e.g. Steel Construction Institute

Local government depts, e.g. building control, planning

Housing associations

Private developers

Architects

Engineers

Surveyors

Specialist design consultants

Building contractors

Specialist sub-contractors

Product manufacturers

Materials suppliers

Training providers, e.g. CPD

Students

Academics, e.g. lecturers

UK research communities

International research communities

What channels of communication can you use to reach them?

Once you know your target audiences, then you have to identify the most effective ways of reaching them.

Are any of these methods appropriate for reaching your audiences?

Books
Papers in refereed journals
Conference papers
Exhibition presentations/posters
Articles in professional press
Articles in trade papers
Design manuals and guides
Items in specialist newsletters
TV/radio broadcasts
Committee membership
Direct correspondence
Informal advice, e.g. to clients and designers
Formal consultancy
Seminars
(Continued Professional Development) courses
Lectures
Teaching modules
Videos or audio/slide packs
Databases (printed or on disc)
(Commercial or experimental) software
Demonstration projects

Some methods, e.g. books and refereed papers, carry more academic prestige. But this doesn't necessarily mean they are effective forms of dissemination, especially to non-academic audiences. Construct a ***dissemination matrix*** charting your audiences v methods. Use this to match the most promising methods to each of your audiences.

Which dissemination methods should you choose?

Different methods place different constraints on you and offer you different opportunities:

- books, papers and articles limit you, predominantly, to the printed word
- slides and videos allow you to use pictures to put your message across
- video and audio tapes can let the subjects of your research speak for themselves
- photography, videos and computer software permit you to use sequenced stills or animation to illustrate how things perform over time
- computers can also enable your target audience to interact with your material in ways that it may be important for you to exploit
- face to face contact offers opportunities for presentation with an immediacy not available with other methods
- direct correspondence lets you tailor information and arguments to particular people in ways difficult to achieve with other means.

Choose the most appropriate medium for conveying your message, given the audience you are trying to reach, and the funds, equipment and time at your disposal.

Conform to the standards and format requirements of the specific communication channel in which you wish your information to appear. For example, read back numbers of journals and magazines in which you want to place articles. Look at how other authors have presented material similar to your own. Identify what you regard as examples of good and bad practice in relation to the particular publication in question.

In practice, there should be wide variations in how you prepare a paper for a refereed journal and a piece to be carried by a professional or trade paper. How you structure and present your information has to reflect where and how it is going to appear.

Be prepared to provide SERC with a set of slides which can tell the story of your research without other written or spoken commentary. Produce 3 or 4 good press photographs in case your work is taken up by the media.

How should you talk to your audiences?

Your imperative here is to use language, concepts and presentational techniques with which your audience will feel comfortable. If you use new terms, or difficult concepts, introduce and explain them clearly. If necessary, provide a glossary, especially for acronyms.

For example, if your research results have a strong quantitative content, then this needs to be reflected in your dissemination. However, you will have to handle and package statistics differently, depending on the numeracy of those with whom you are communicating.

Fellow researchers in your own discipline are likely to have shared levels of numeracy and scientific literacy. Other groups you are attempting to reach will not. So audiences with different backgrounds have to be approached in different ways. Designers, for instance, often prefer to receive information in graphical form, rather than as text or tables. They tend to shy away from equations and formulae. Others may want to receive output from your research on computer disk, in some form of spreadsheet or database. Some may want a computer program or model. Or a stand-alone training package may be the most appropriate format. Try to think about your audience's needs, not just what is most expedient for you. Understand and respect their preferences and requirements.

When preparing information for a particular audience, build yourself a ***reader profile***. Imagine the ideal person you are trying to influence:

- What characteristics does this person have?
- What previous levels of understanding and background knowledge will he or she possess to help interpret what you are saying?
- What preferences and expectations will they have about form and content, given the vehicle you are using for dissemination?

Try to build a reader profile for each of your target audiences. Wherever possible, ask a member of your target audience to look at a draft of your material and to comment on it critically for you.

Whatever dissemination methods you use, always remember to acknowledge SERC funding - ideally at the front, not just tucked away at the end.

With whom should you collaborate?

SERC seeks to foster inter-disciplinary research and collaboration with industry and commerce, particularly on projects which are of commercial interest or which advance understanding. Likewise, the Construction Committee attaches great importance to collaboration, especially where this adds an international dimension to the research being supported. Collaboration also offers you a very effective channel for direct, small-scale dissemination of your research.

There are two types of collaboration:

- ***formal***, explicitly signalled to SERC before the start of your research project via your application form (***RG2***), and
- ***informal***, developed as your research progresses.

Both may take a number of forms:

- with other academics in your own discipline working at other HEIs
- with other academics in different disciplines working at your own or another HEI
- with 'industrialists' working in a variety of settings such as private companies, public sector agencies, and voluntary organisations.

All of these are valuable but they need to be handled differently.

Where you enter into formal collaboration, especially where this involves a private company or government department/agency, make sure that this will not unduly restrict your ability to disseminate your research findings before your grant starts. Many grant holders operate with formal collaborators on the basis of an informal '***gentlemen's agreement***'. This is fraught with pitfalls – usually because of differences in understanding about what has been agreed. It is preferable to draw up an explicit ***dissemination strategy*** which all parties can agree in advance so everyone knows their rights and responsibilities. Remember that early dissemination may prejudice your ability to patent.

Even where collaborative arrangements are less formal, clear with your collaborators whether there are any (commercial) restrictions on information or products given to you and, if so, what their implications are for your right to publish or apply the results of your research. If in doubt, consult your university's ***Industrial Liaison Unit*** for advice.

How should you apply or exploit your research results?

Not all research lends itself to direct application or exploitation. The more 'blues skies' your project is, the longer the timescale over which it is likely to find application. However, much research funded by the Construction Committee is highly applied. If yours is, give serious consideration to how, when, where and by whom the results or products arising from your research can be applied and/or (commercially) exploited.

Ideally, develop an ***application strategy*** which you then refer to in your application for funding.

If the outcome of your research is likely to include products – such as software packages, new measurement tools, or even computerised databases – you need to consider the circumstances under which third parties will be able to use them. Your university's ***Industrial Liaison Unit*** may have a policy with which you have to comply here.

Where research results in production of a 'prototype' product, consider how its further development will be funded once the grant has ended. This stage is likely to require funds several times your SERC grant before a product is commercially exploitable. Provide information in your application explaining how this ***development gap*** will be bridged if it is likely to influence the successful application or exploitation of your research results.

If you are involved in formal collaboration with an industrial partner, draw up an explicit ***exploitation agreement*** before your grant begins. Currently, the Intellectual Property Rights to information or products generated with SERC funding are invested in the 'generator'. Your agreement should identify the generator and the respective rights and responsibilities of you and your industrial partner. Again, if in doubt, consult your university's ***Industrial Liaison Unit*** for advice. Both you and the Unit should read SERC's two relevant publications in this area:

- ***IPR*** ... ***a SERC beginner's guide***

and

- ***Innovation and Technology Transfer*** ... ***a SERC beginner's guide***.

SUMMARY ACTION PLAN

Before you make your application

- **o** list who will benefit from your research
- **o** select your primary and secondary target audiences
- **o** identify what they expect and require from your research
- **o** identify how they like to receive information and research results
- **o** use a ***dissemination matrix*** to plan the most effective methods for communicating with them

If you are collaborating with others:

- **o** agree a ***dissemination strategy*** in writing, defining what will be disseminated, how, when and by whom - refer to this in your application

If you are likely to create an exploitable product:

- **o** draw up an ***exploitation agreement***, defining each collaborator's respective rights and responsibilities - refer to this in your application

Once your grant has been awarded

- **o** signal the receipt of your award through appropriate communication channels
- **o** maintain regular contact with your target audiences
- **o** invite feedback by means of interim progress reports, delivered through appropriate communication channels
- **o** keep your dissemination strategy under review, expanding or amending it accordingly

Once your research is complete

- **o** review your matrix to see if your results have any relevance beyond your original target audiences
- **o** reset your priorities for disseminating your results
- **o** tailor the presentation of your results to match the expectations and requirements of your target audiences
- **o** actively promote the application and exploitation of your results until you are satisfied that their take-up has been effective

Contact points

The staff at SERC will be glad to advise on any queries, by letter or telephone. There is a central point responsible for the SERC's Research Grant Scheme and its terms and conditions which is located in the Finance Division.

Enquiries about ***SERC Research Grants*** should be addressed to:

Science and Engineering Research Council
Polaris House
North Star Avenue
Swindon SN2 1ET

Switchboard	0793 411000
General Research Grant Enquiries	0793 411405
Fax	0793 411400

However, most enquiries will be more readily answered, in the first instance, by the Secretariat of the Construction Committee.

Committee Secretary	0793 411353
Committee Admin	0793 411060
	0793 411493
Fax	0793 411020

Both the ***Design Monitor*** and the ***Construction Management and Operations Monitor*** can be contacted, in the first instance, via the Construction Committee's Administration 0793 411060

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