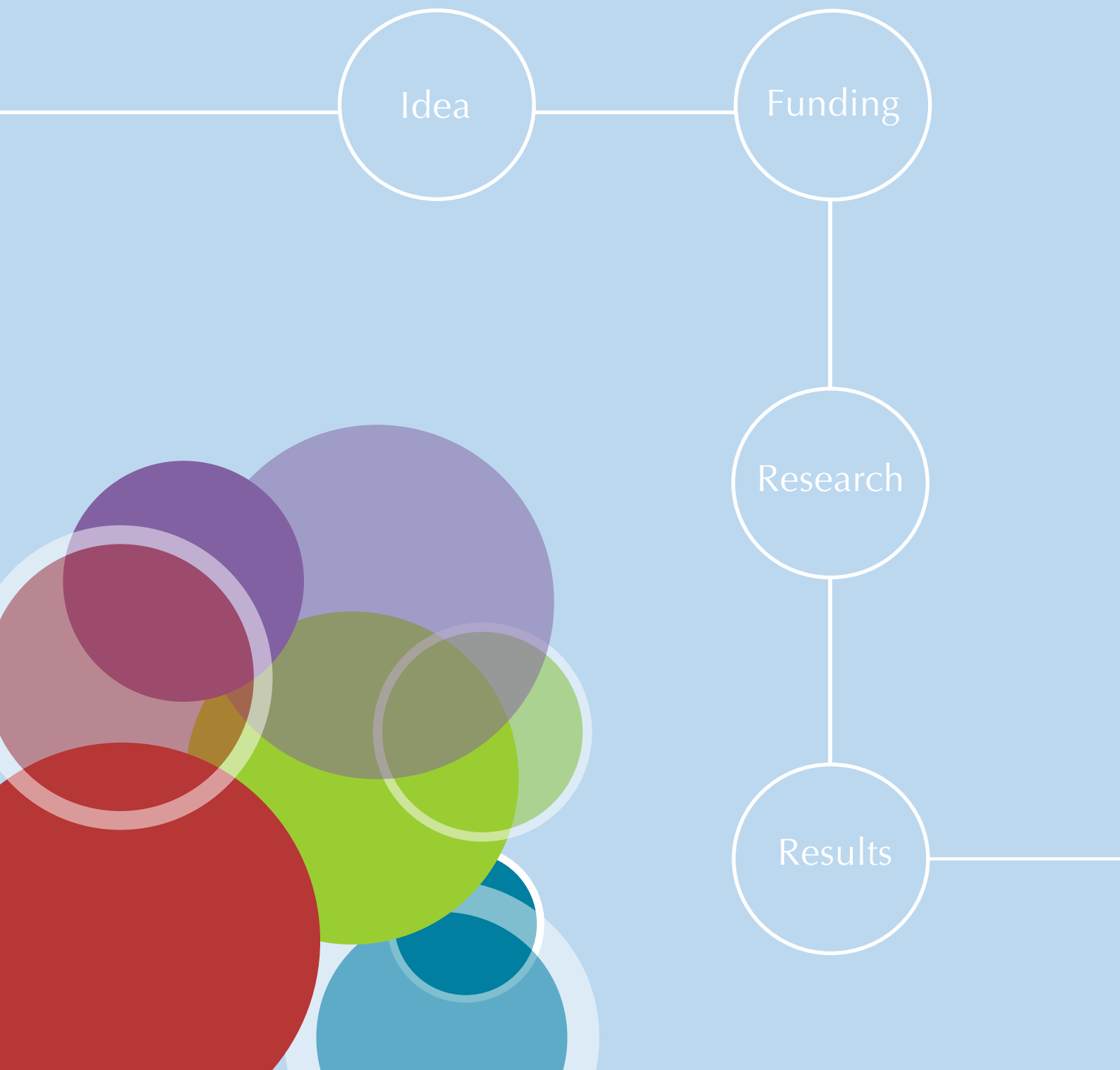


Research Support Services in UK Universities

A Research Information Network report

October 2010



Acknowledgements

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We would like to thank the case study participants for being so generous with their time and expertise.

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1. Introduction

The search for improvements in research performance is a powerful influence on all universities. Success in research is a major component in the various indicators of overall university performance. Hence universities are increasingly interested in how they can improve their competitive position in attracting, supporting and promoting the work of high-quality researchers. In times of financial stringency, however, they are also seeking to ensure that support and other services operate both efficiently and cost-effectively.

In that context, this study reports on both the provision and the use of information-related support services for researchers in four research-intensive universities in the UK: Leicester, University College London (UCL), Warwick and York. It is one half of a pair of studies commissioned by the Research Information Network (RIN) in the UK and by the Online Computer Library Center (OCLC) in the US.¹ Both studies set out to investigate what kinds of information-related services are available to support researchers through the research lifecycle, and how those services are used and valued by researchers. Both studies are limited in scope, and are subject to the limitations of small-scale case studies. Nevertheless, we hope that they offer some insights into the nature of the services provided to support researchers in their work, and the extent to which they meet researchers' expressed needs.

1. For the US study, covering Cornell, Ohio State, Washington and Vanderbilt universities, see Susan Kroll and Rick Forsman, *A Slice of Research Life: Information Support for Research in the United States*, OCLC 2010. Available at <http://www.oclc.org/research/publications/library/2010/2010-15.pdf> [accessed 19 October 2010]

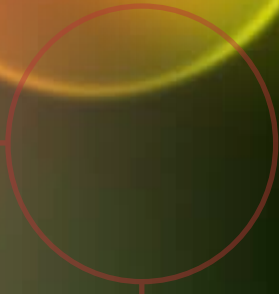
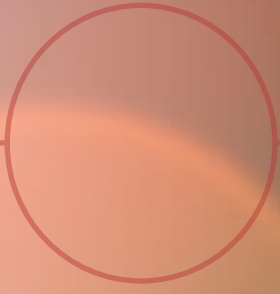
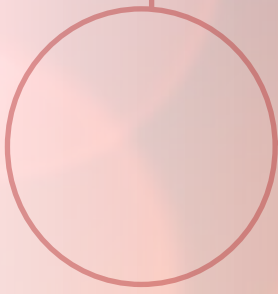
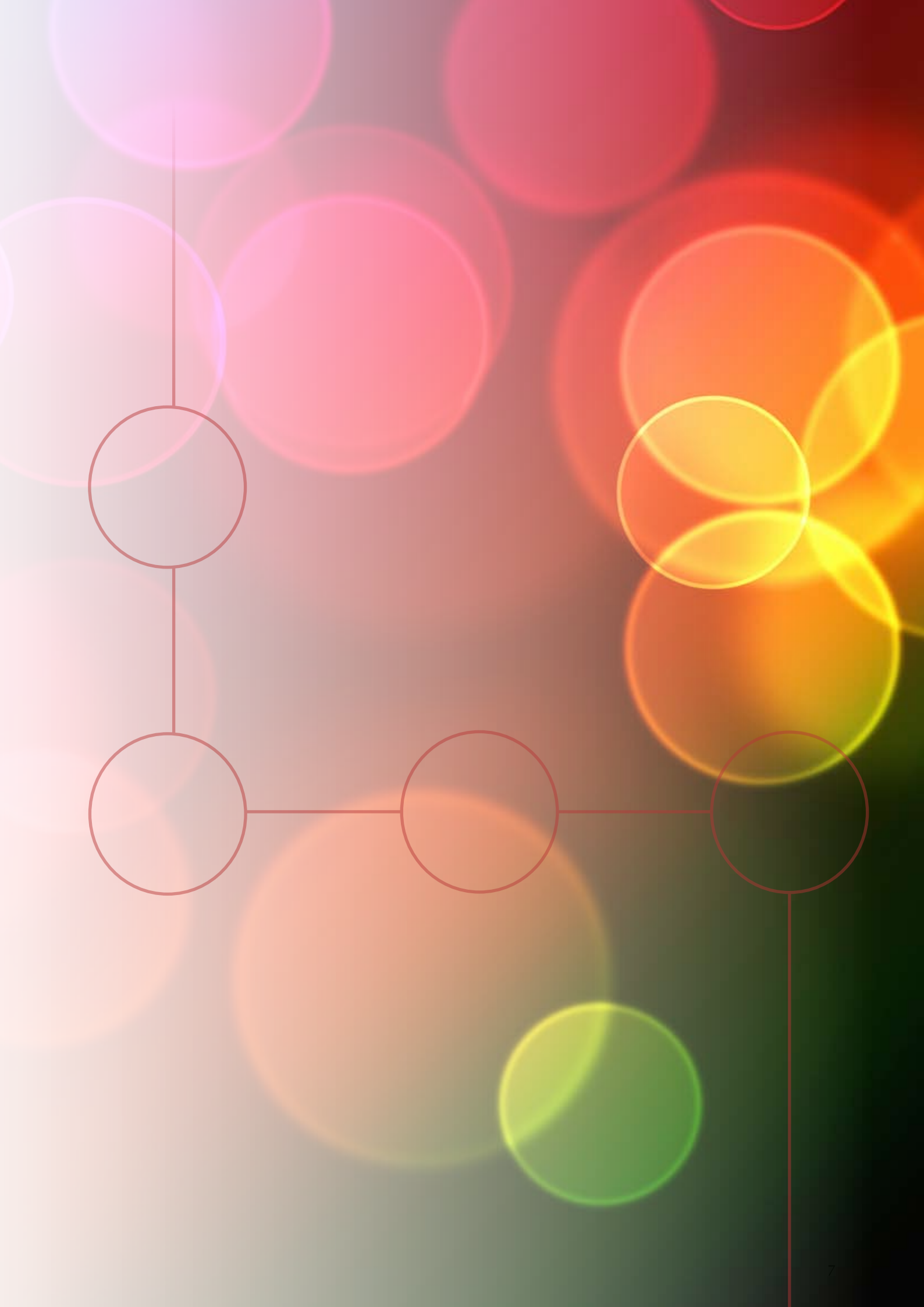
2. Scope and methodology

The study does not seek to replicate recent studies of how researchers themselves locate, evaluate, organise, manage, transform and communicate scholarly information content in the course of their research. Rather, it focuses on the tools and services researchers make use of in the course of the research lifecycle, including those that:

- alert researchers to new and forthcoming grant opportunities from a range of funding bodies and help them locate potential collaborators;
- facilitate collaborative management of documents and data; provide tools for analysis of large aggregations of text and data; and curate and preserve research data;
- help to develop skills in information handling;
- support researchers in finding the most effective vehicles and channels through which to disseminate and publish their work, including advice on protecting their intellectual property rights;
- manage and preserve preprints, publications, and post-prints;
- help researchers and their institutions to investigate their standing within their field, including the management of citations and citation analysis.

The aims were to investigate how effective such tools and services are in meeting researchers' needs, and whether there are unmet needs and to identify intersections and gaps among services provided by various on-campus entities, consortia and commercial bodies.

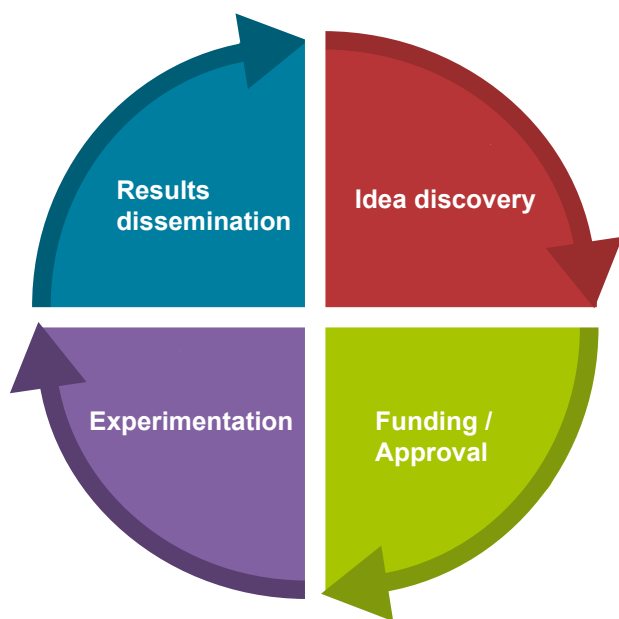
Data for the study was gathered through desk research, with detailed investigations of the websites and intranets of the four universities, and through semi-structured interviews and focus groups with researchers, research managers and the providers of support services.



3. Support across the research lifecycle

For the purposes of this study, a simple four-stage model of the research lifecycle was used, in order to investigate how researchers are supported at different stages of their activities when they are:

- i. generating and developing new ideas and projects, and research proposals;
- ii. seeking, securing and managing funding;
- iii. experimenting, carrying out the research itself;
- iv. disseminating and publishing their findings.



All four universities provide information-based support services for researchers across all these stages of the lifecycle, but the services are organisationally, functionally and physically scattered. Moreover, as we shall see, the focus of support is on the initial stage (for example, identifying grant opportunities) and then the final stages of the cycle (for example, knowledge transfer and realising commercial potential). In between – where the intensive research effort takes place – there is less evidence of support. This may be in part because intermediaries lack the expertise to provide effective support to researchers operating at the frontiers of knowledge.

There have been moves in recent years, however, to develop new and more integrated services to support researchers at all stages of the lifecycle. Significant amounts of investment have been devoted at national level by the Joint Information Systems Committee (JISC) to the development of ‘virtual research environments’ (VREs).² These are defined as sets of online tools, systems and processes interoperating to facilitate the research process within and across institutional boundaries. VREs may thus cover a range of activities during the stages of the research lifecycle as defined above, including administration, resource discovery and access management, data gathering and analysis, collaboration and communication, dissemination and publication, and curation and preservation of research outputs. The concept of a VRE is still evolving, and this study revealed no evidence that VREs are being created or adopted as yet in any of the four universities.

2. For an outline of JISC’s VRE programme, see <http://www.jisc.ac.uk/whatwedo/programmes/vre2.aspx> [accessed 19 October 2010]

3.1 Generating and developing ideas, projects and proposals



Ideas for new research projects may typically be generated from previous work, through reading, and through discussions with colleagues, within and beyond the university. They may also be developed in response to opportunities presented by external funders, or as a result of research themes and strategies promoted by the university itself.

In order to support researchers in generating ideas and proposals, it is clearly important that universities should provide through their libraries access to as wide a range as possible of the scholarly literature. Aside from that responsibility (which is outside the scope of this report), the challenge for universities is to ensure that their researchers have easy access and are alerted to the many different kinds of information resources they need which are relevant to their work, and the skills to use those resources effectively.

Information skills

It is critically important for researchers in generating and developing ideas and proposals that they have very high-level skills in seeking, handling and managing information resources of many different kinds. Libraries in all four universities provide training resources and services in various forms – tutorials and seminars, web-based information and instruction, and hard-copy leaflets – to help researchers develop their skills. Some training, from both libraries and IT services, is focused on specific resources or tools. Attempts to integrate such training into more generic or comprehensive programmes of training for early career researchers have had only patchy success.

The researchers interviewed, moreover, showed little interest in making use of information skills training from the library. They are confident in their awareness and understanding of both the generic and the specialist tools that are relevant to their research area, and especially in their ability to identify the references and leads that are relevant to their specific research proposals and projects. They do not wish to delegate such work to library staff, since it often involves a detailed understanding of specialist and technical language.

Funding opportunities and strategies

Most of the researchers interviewed were also confident about their ability to keep up-to-date with the funding opportunities in their research area. In order to do so, however, they rely on the services provided by central and departmental support services, in conjunction with alerting services from learned societies and commercial providers such as research@research and Community of Science.

All four universities provide regular bulletins – in forms such as newsletters, targeted emails, and alerts – about forthcoming funding opportunities. The Research Support Office at Warwick, for example, has a team whose members are responsible for keeping abreast of the various information portals and services, and engaging with them on behalf of researchers.

Alongside central services, there is also a strong role played in some universities by facilitators at faculty or departmental level who assist in the development of projects and proposals through their contacts with the major funding agencies. Such services are particularly valuable in the larger departments, which cover a wide range of research areas. Filtering of information is particularly useful in such departments, but they often have the benefit of having sufficient resources to offer more specialised services.

At UCL, one faculty research co-ordinator has developed a high-level contact network and issues a monthly newsletter on new trends in funding, identifying changes in fashion, and providing summaries of relevant reports from government and elsewhere. This work used to be done by the senior research staff but they now lack the time to do it.

Collaborative networks

Researchers are confident that they know the key people in their field, and particularly those with whom they wish to collaborate. They do not seek, nor do they want, non-specialist advice from the Research Office or any other internal agency remote from the colleagues they work with. Moreover, there is little evidence of the use of other universities' databases of research expertise in order to find potential collaborators, perhaps because such databases are not well-configured for that purpose.

Interdisciplinary research, however, is a prominent feature at all four universities: from an Aztec historian working with botanists and a drug company to narrow the search for plants with potential therapeutic value to an applied mathematician working with aerodynamics colleagues on the potential of rough surfaces for aircraft wings. Despite such examples of cross-disciplinary work, a common concern from research managers and administrators is what they see as the insularity of researchers working in departmental or disciplinary silos. Hence some universities are attempting to break down barriers – not least in response to the thematic priorities and grand challenges being promoted by the Research Councils and other major funders – and to build cultures of collaboration within the university through mechanisms such as 'research speed dating'. At Warwick, a Research Exchange has been established: a physical space in the library designed to facilitate cross-fertilisation of ideas within an informal Ideas Café.

Impact statements

The UK Research Councils now require grant applications to be accompanied by a 'pathways to impact' document setting out:

- those who may benefit from or make use of the research;
- how they might benefit and/or make use of the research;
- methods for disseminating data/knowledge/skills in the most effective and appropriate manner.

Since this is still a relatively new requirement, some institutions provide help to researchers in the form of successful examples of such statements.

3.2 Securing funding



All four universities provide support for researchers in turning ideas and outline proposals into bids for funding for specific projects; providing advice on legal, regulatory, financial, administrative and human resource issues; managing the application process; and managing the funds for successful bids.

Databases of applications

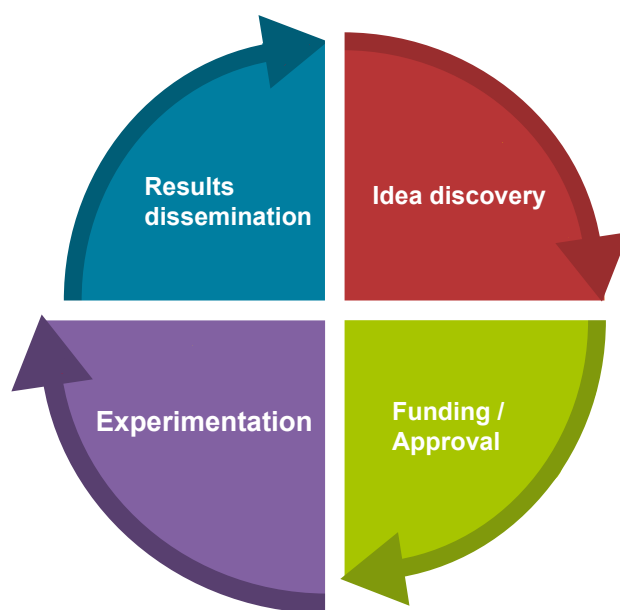
Some departments maintain databases of both successful and unsuccessful applications for funding, along with information that could help future applications to specific funders. Examples of successful and unsuccessful applications can be a useful resource, even for experienced researchers who may be approaching a specific funding source for the first time. Questions of confidentiality may need to be addressed, of course, if applications are to be made widely available to others.

Finance, management and administration

In large science departments, local administrators and finance managers play a key role in producing costings, budgets and financial plans. For the largest-scale projects which cross departmental boundaries, central finance departments may also provide assistance. Researchers in smaller departments may find more difficulty in securing the detailed assistance they need, and there is some evidence that larger universities can provide more effective advice and support, because they can devote more resources to doing so.

Central support is also critically important for researchers in dealing with staff appointments and other human resource issues; with legal and regulatory issues such as health and safety; with purchasing equipment; and with monitoring progress and providing reports where necessary to research funders. The Research Offices at all four universities provide guidance on these and other issues, with Warwick and York doing so in the form of post-award manuals.

3.3 Experimenting, carrying out research



We have already noted that JISC and others are seeking to develop virtual research environment (VRE) tools and services to support the underlying processes of research and to help researchers manage the increasingly complex range of tasks involved in carrying it out. All four universities recognise, however, that they provide less strong support for researchers during the research process itself than at other stages in the research lifecycle. This is in part, as we have again noted, because it is difficult for intermediaries without high levels of relevant subject, domain and research expertise to provide effective support to researchers at this stage. At UCL, however, a project is under way to investigate embedding a scientifically-qualified research information manager within a multidisciplinary research team, to see if the provision of specialist information skills can help to improve the efficiency and effectiveness of research. Key issues include the collaborative management and sharing of documents and data and data curation.

Workflows, collaboration and integration

A number of products are being developed to support research workflows, particularly for researchers working in collaborative teams that cross institutional boundaries. These include Microsoft's Sharepoint, GoogleWave, and the open source Sakai systems, as well as the tools produced by JISC's VRE programme. Although some researchers are making use of services such as GoogleDocs and Dropbox, there is little evidence of the use of these broader collaborative workflow products and services in the four universities, and the researchers interviewed were unaware of them. Similarly, there was little interest in central provision of or support for data analysis tools (which are seen as the province of researchers themselves), or of tools for the analysis of large aggregations of text (probably because text and data mining are still at an early stage of development in most subject areas).

Researchers are concerned, however, that universities have created a range of different systems and points of entry which they find complex and overwhelming as they try to deal with the various aspects of their research work: research students' progress, finance, human resources, publication databases and so on. This is coupled with a strong email culture: email systems are used as a primary mechanism for a wide range of tasks, including managing 'to do' lists, contacts, interactions with colleagues and collaborators, personal information collections and so on. Such mechanisms can work adequately, if not especially efficiently. Integration of information sources and services could bring significant benefits, but researchers will need to see obvious benefits if such systems are to be widely adopted.

One senior manager suggested, however, that the email and laptop culture needs to be challenged, with researchers being encouraged to upgrade their ICT skills and make full use of the opportunities presented by cloud computing, the semantic web and similar developments. This is clearly not simply a matter of skills and training, and how such a cultural shift might be achieved is not clear.

Data management and curation

There is much talk at present about the need to support researchers in managing the data that they gather and create in the course of their research. Librarians in particular are aware of the prospective UK Research Data Service (UKRDS) – a project to assess the feasibility and costs of developing and sustaining a shared data service for the higher education sector.

There is little evidence of active support at present in the four universities, although Leicester is one of the pilot institutions involved in the UKRDS study. The library at UCL is developing plans to collect data sets and lab notes, and Warwick is undertaking a survey to investigate what data is being held in departments, and assessing whether to establish a data archive.

Discussions at the four universities highlighted once more – as has been shown in previous studies – the dearth of expertise in data management and curation. Relatively few researchers have the knowledge or skills to manage their data effectively, and only a small number of people have the specialist data management and curation skills combined with the subject domain expertise often required in order to provide effective support to researchers in the course of their work.

3.4 Dissemination and publication



Researchers are driven by a desire to communicate their findings and to secure credit for them, and there are increasing pressures on them to maximise not only the scholarly but also the social and economic impact of their work. In deciding when, where and how to disseminate and exploit their work, researchers may face a complex set of choices, and seek advice and support on a variety of issues.

Publication channels

Researchers disseminate and publish their work in many different ways: through formal publication in books and learned and professional journals, through conferences and their proceedings, and through a variety of less formal means, now including web-based tools for social networking. Decisions on where and how to publish are driven primarily by disciplinary norms and by a desire to maximise credit by securing publication in a high-status journal. Such decisions can have a major influence on individual researchers' careers, and also on the standing of a department and its rating in the Research Assessment

Exercise (RAE) or the forthcoming Research Excellence Framework (REF). But researchers show little evidence of desire for support or advice from a central university unit. Rather, they make such decisions in consultation with close colleagues or mentors.

Bibliometrics

Most researchers have a reasonably sophisticated understanding of the status of the journals to which they wish to submit their articles. This tends to be based on their own experience (including that on such matters as speed of publication) and discussion with their peers, rather than an analysis of journal impact factors or other metrics. Leicester, however, has recently appointed a professional bibliometrician, based in the library, with the aim of enhancing awareness and understanding of citation and other metrics, and thereby helping to increase the university's ranking. Other universities lack this expertise, and indeed the UK has relatively little capacity in this area.

Intellectual property

Many researchers express confusion and some anxiety over intellectual property issues, particularly copyright. On the one hand, they do not wish to become embroiled in discussions on a range of complex issues, or to prejudice their relations with the publishers on whom they rely for publication of their work and the credit they secure from publication. On the other hand, they express a need for advice and support on issues including:

- whether or not they should assign copyrights to publishers, and the extent to which they retain rights over their own publications for use in teaching and other contexts;
- the use and implications of Creative Commons licensing;
- how to secure control over the use of their materials in blogs and other services on the open web;
- the need for permissions clearances and how to secure them.

All four universities provide advice on these kinds of issues, either through the research office or the library. But the researchers are either unaware of these services, or find the advice complex and confusing. More generally, researchers are confused as to the balance to be struck between openness in presenting the results of their work on the one hand, and the opportunities or the need to protect and exploit intellectual property on the other.

Knowledge transfer

All four universities provide services through their research or enterprise offices to encourage knowledge transfer and the exploitation of intellectual property to generate income through licensing, commercial spin-outs and so on. How the services are configured varies: in some cases the enterprise offices concerned with commercialisation are separate from research support offices, but York is currently developing a new structure which integrates the two functions. In areas such as biomedicine and ICT in particular, researchers seem to be aware of the powerful presence of such services.

All four universities are also seeking to develop more outward-facing services to promote the expertise of their researchers; there is a common feeling that the current offerings in the form of 'databases of expertise' are not satisfactory. But it is not clear to what extent this is driven by a need expressed by researchers themselves to promote their expertise more widely. Some researchers expressed the view that there would be benefits for them, their university and the wider community if they were to receive training in how to communicate their findings through the press, radio, TV or other media channels. But there is little evidence of large-scale support and training for researchers in promoting their work in this way. Such support seems to be provided on a small scale or ad hoc by press offices.

Institutional repositories

Repositories have become a common feature of the landscape of UK universities over the past few years. Persuading researchers to deposit their publications in the repositories, however, has proved a difficult challenge: the proportion of publications lodged in repositories remains relatively small. UCL is the only one of the four universities to establish a requirement that their researchers' publications should be deposited in the repository. But there is as yet no regime of enforcement, the university preferring to rely on encouragement from departmental librarians and others.

Discussions with researchers revealed little enthusiasm or awareness of the benefits claimed for institutional repositories. Rather, they tend to be perceived as another burden creating additional work, even in areas where there are well-established and effective subject-based repositories. Researchers are also confused by the variety of policy and practice relating to the management and deposit of supplementary and other material in addition to e-prints, including lab notes, images, and data. And some researchers remain hostile to repositories, talking of 'further pollution of versions on the web'.

3.5 Institutional management of research

The RAE and the discussions about the REF have led universities to take a more active stance in overseeing and monitoring the research activities and, more particularly, the published outputs of their academic staff. All four universities, in addition to establishing repositories, are seeking to establish systems that will collate information about individual grant applications and awards, doctoral students and their supervision, full text and metadata for research publications, citations of those publications, and profiles of researchers and their expertise. Approaches to the development of such systems vary, from the Institutional Research Information Service (IRIS) at UCL, which provides a web portal which brings together information from various sources to create an 'institutional CV', to Warwick's system that produces reports on research performance from a central data warehouse. Some universities are also making use of services such as Elsevier's SciVal or Academic Analytics as a means of assessing their areas of relative strength and weakness.

Such systems are driven by institutional imperatives, but they can provide useful information to researchers themselves, and in some cases reduce the burdens that might otherwise fall on them. Thus some universities such as Leicester are setting up systems to integrate data about publications from Thomson Reuters into their publications databases and institutional repositories, thus relieving researchers or others of the burdens of so doing. Automating processes of this kind, however, is complicated by the lack of widely-adopted mechanisms for identifying individual authors consistently and unambiguously. Researchers are aware that effective author identification systems are as yet in their infancy.



4. Conclusions and recommendations

Both universities and researchers have strong interests in maximising their performance in the highly-competitive research world. A key aim of this study has been to investigate the services provided by universities, and how much they are used by researchers, in order to achieve that goal. The picture is mixed on both fronts.

4.1 The services provided

The information-based research support services provided by the four universities tend to focus on the initial and the latter stages of the research process. Help in identifying sources of funding and in the drafting of applications are clearly of critical importance to researchers. Similarly, it is critically important to universities that they should do all they can to enhance the impact of their research, both through effective dissemination and knowledge transfer and by helping researchers to work in ways that maximise their ratings in the RAE and the REF. Thus all four universities are seeking to develop services that will more effectively integrate the collection, analysis and dissemination (internally and externally) of information about their research activities. They all acknowledge that they are some way from that ideal, and the balance between what is to be provided by external service providers (sometimes highly valued by researchers) and from internal resources is not always clear.

As part of their strategies to maximise research performance, some universities are seeking to foster more interdisciplinary research, particularly in areas related to the 'grand challenges' - such as ageing, energy, and environmental change - emanating from public funding bodies. Such challenges involve partnerships across disciplinary boundaries. Support may take the form of seeding the concept, although at York and elsewhere it was stressed that there needs to be strong researcher interest; top-down approaches will not work.

In between the initial and latter stages of the research process, where intensive research activity takes place, there is much less evidence of active support from the institution. This is largely because the research endeavour itself is highly specialised. Those seeking to provide support, even in areas such as data

management and curation which themselves demand high levels of specialist expertise, must convince researchers that they understand the specific demands of the areas in which the researchers are working. Many, if not most, researchers prefer to conduct their research in their own way, with as little institutional advice and support – or interference – as possible. There is, however, a demand for simple tools that facilitate the sharing of documents and data of various kinds with colleagues in other departments and institutions.

Universities should ensure that researchers have access to relevant web-based and other tools to support the sharing of documents and data across institutional boundaries.

A key area of concern for both researchers and institutional managers is the management, curation and preservation of research data. Most researchers receive relatively little support in this area, but there is a growing awareness that much needs to be done. This has significant implications for resources, and also in developing the capability and the capacity to handle all the issues associated with data management and curation, both in the research community and among those who support them.

Universities and funders should review the training provided for researchers to ensure that they are aware of the basic requirements for effective management of research data, including the provisions of the Freedom of Information and Data Protection Acts, as well as other regulatory requirements. Universities and funders should also review their capacity to provide specialist support services for data curation and preservation.

4.2 The configuration of support

This study found some evidence that more support, in more varied forms, is provided in larger centres which can benefit from economies of scale. And many of those interviewed suggested that there is scope for the development of shared services across the higher education sector. Such suggestions come, however, with the strong proviso that any shared services should be customer-focused and capable of adaptation to meet local circumstances and needs.

Even at university level, there is debate about the balance between central services and support, and what is best provided at faculty or departmental level, close to researchers themselves. Among the four universities, Leicester and UCL are adopting an aggregated school or faculty approach, while Warwick retains a decentralised, departmental approach.

Universities should review the configuration of their support services and the scope for the development of shared services within and across institutions, while at the same time ensuring that support is customised and delivered as close to researchers as possible.

Libraries and research offices

In all four universities, it is clear that the library and the research office provide services to researchers from very different perspectives. Staff from the research office tend to be proactive in getting closely involved with researchers in the initial stages of the research process. From the perspective of researchers, library staff are less proactive in reaching out to researchers with customised information support. Thus while libraries provide information skills training to researchers, especially doctoral students, many researchers see them as focused more on collection management, and on services to students, than on serving the needs of the research community in their institution.

Information training and support for researchers may use a variety of tools and techniques, including web-based learning resources, workshops and face-to-face tutorials. IT services and IT specialist librarians may provide training on specific software, but this tends to be of the kick-start variety, rather than providing a sustained programme of support and improvement.

Many researchers thus suggest that libraries could do more to promote their services, in particular the benefits of repositories. A minority view, on the other hand, is that libraries have more than enough to do already.

Libraries should work together with Research Offices to review their provision of support for researchers, and in particular the scope for embedding information specialists, with relevant subject-based research experience, in departments and research teams.

4.3 Researchers' perspectives

Researchers are focused on research, not the ancillary things that surround it. Many of them regard budgets, standards, regulatory requirements, financial and progress reporting and so on as at best necessary evils and at worst bureaucratic obstacles that get in the way of their work. Seen from this perspective, the most useful thing that research support services can do is to overcome such obstacles. Adding to the obstacles by introducing new requirements is not helpful.

That is the context in which many researchers respond to the development of institutional repositories. Many are sceptical about their value, and reluctant or unwilling to deposit, since they do not believe that it will provide them with the credit from which career rewards flow. Such reluctance is noticeable among some researchers even in areas well-served by subject-based repositories. Many researchers are also concerned about issues such as the proliferation of versions and copyright infringement, and many are especially worried about the implications of any requirement to make their data freely accessible over the web.

The researchers interviewed for this study were thus strong supporters of the current publishing system, but their support was accompanied by an acknowledgment that they use informal exchange of journal articles to overcome any barriers to access that they encounter. Researchers are also confused about copyright and related issues, including the rights they retain when they publish articles, and when they can or cannot post the full text on their personal websites. They are also confused as to universities' and funders' policies as to the balance to be struck between openness in publication on the one hand, and the protection and exploitation of intellectual property on the other.

Universities should ensure that active steps are taken to inform researchers about copyright, other intellectual property rights and licensing as they affect their own work and the work of others, and that they review their guidance on when researchers should publish openly, and when they should work with the university to protect and exploit any intellectual property they have created.

Despite such confusions and uncertainties, however, researchers tend to be self-confident and self-reliant. Younger colleagues are inculcated into disciplinary and institutional cultures from an early stage in their careers, and soon develop their own established networks of collaborators, friendly editors and so on. In such an environment, research support services can seem somewhat marginal: necessary, but best kept in the background. Thus although there are elements that may be less than optimal in the services provided at each university, the key requirement from most researchers' perspectives is for services which are there when they need them, but do not interfere with the creative work at the heart of the research process.

4.4 Institutional monitoring and management of research

In a highly-competitive research environment, universities are likely to continue their development of systems to monitor and manage the performance of their researchers, in order to help maximise not only their RAE and REF rankings, but also their ranking in international league tables. The aim of integrating currently separate sources of information, together with powerful analytical tools, has many attractions. It offers the prospect of reducing administrative effort, and providing new user-friendly services for researchers, as well as powerful management information. It is important that new research information systems should be developed and implemented in consultation with researchers, so that they provide visible benefits over current systems, rather than imposing new burdens.

Universities should seek to ensure that new research information systems offer visible benefits to researchers, reduce the administrative burdens on them, and do not interfere with the creative work that is at the core of the research process.



4.5 Summary of recommendations

1. Universities should ensure that researchers have access to relevant web-based and other tools to support the sharing of documents and data across institutional boundaries.
2. Universities and funders should review the training provided for researchers to ensure that they are aware of the basic requirements for effective management of research data, including the provisions of the Freedom of Information and Data Protection Acts, as well as other regulatory requirements. Universities and funders should also review their capacity to provide specialist support services for data curation and preservation.
3. Universities should review the configuration of their support services and the scope for the development of shared services within and across institutions, while at the same time ensuring that support is customised and delivered as close to researchers as possible.
4. Libraries should work together with Research Offices to review their provision of support for researchers, and in particular the scope for embedding information specialists, with relevant subject-based research experience, in departments and research teams.
5. Universities should ensure that active steps are taken to inform researchers about copyright, other intellectual property rights and licensing as they affect their own work and the work of others, and that they review their guidance on when researchers should publish openly, and when they should work with the university to protect and exploit any intellectual property they have created.
6. Universities should seek to ensure that new research information systems offer visible benefits to researchers, reduce the administrative burdens on them, and do not interfere with the creative work that is at the core of the research process.

About the Research Information Network

Who we are

The Research Information Network has been established by the higher education funding councils, the research councils, and the national libraries in the UK. We investigate how efficient and effective the information services provided for the UK research community are, how they are changing, and how they might be improved for the future. We help to ensure that researchers in the UK benefit from world-leading information services, so that they can sustain their position as among the most successful and productive researchers in the world.

What we work on

We provide policy, guidance and support, focusing on the current environment in information research and looking at future trends. Our work focuses on five key themes: search and discovery, access and use of information services, scholarly communications, digital content and e-research, collaborative collection management and storage.

How we communicate

As an independent voice, we can create debates that lead to real change. We use our reports and other publications, events and workshops, blogs, networks and the media to communicate our ideas. All our publications are available on our website at www.rin.ac.uk

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