

Institutional repositories for research management and assessment: A Briefing Paper

Why use your repository for research management?

To ensure the long term sustainability of an institutional repository it is important that the repository is fully embedded in the strategy and culture of the institution. In a research-intensive institution, performing well in national research assessments like the UK or Australian research assessment exercises is mission critical. If the repository has a role in play in this key activity the management and development of the repository further aligns itself to the heart of the institution's purpose; from the core values and strategic aims through to the delivery of essential services. As research assessment methods move to embrace bibliometrics and other metrics, the need to maximise usage and citation impact will become even more important. There is, therefore, a growing case for repositories to be used as part of the research management infrastructure of the institution.

Benefits of a repository containing the institution's research outputs

- ✿ Integrated research management infrastructure
- ✿ Model of repository sustainability
- ✿ Enhanced research communication network
- ✿ Key stakeholder engagement
- ✿ Comprehensive institutional research profile

Research management groups and networks in the institution

Institutional-level research assessment and research management

The repository is a useful tool in day to day research management activities. Once research outputs are stored in the repository they can be used by departmental research managers as the definitive source of information for promotion panels and appraisals. Using the repository for any form of research assessment will help bring together research expertise across the institution. It is part of a network, both formal and informal, which links the creators of research outputs to institutional services that collate and analyse what is being created. This should lead to information-rich collaboration, effective decision-making and successful research activity.

The repository manager has an important role in decision making process and can:

- plan for required software development
- advise on required internal targets and timescales
- assess changing resource requirements and manage workflow
- interpret assessment policies and ensure consistent practice
- co-ordinate user training and response to enquiries
- help ensure external targets are met

National-level research assessment procedures

In a large institution there may be more than one institution-wide committee devoted to the various aspects of research management. Departmental bodies may also be involved. There is usually a specific group tasked with the co-ordination of submission to a national research assessment exercise. This group works most effectively if all the key stakeholder groups are represented. Membership may therefore include the Head of Research, the Head of Planning, the Deans of Research and the managers of key systems (e.g. human resources), IRMS and the institutional repository.

Integrating research management and Open Access

National research assessment exercises (for example, those in the UK and Australia) have primarily tended to use the final published version of journal articles, sourced by using the DOI (Digital Object Identifier) to locate the original published version, or by institutions providing a copy of the published article. These are mostly restricted-access articles. In some cases, institutions have used the repository as a collecting point for such articles if they are available from authors within the institution, but as the articles are restricted access using the repository for this activity does not immediately benefit the open availability of research. Nonetheless, using the repository in this way helps to get researchers into the habit of depositing some information about their work because they need to supply the metadata about the articles collected. This then helps to encourage them also to upload their own peer-reviewed versions of papers ('postprints').

As research assessment starts to include citation analysis (for example, future national research assessment exercise in both the UK and Australia will be based on metrics developed to provide a quantitative measure of research impact), the Open Access role of the repository will also have a key part to play in the assessment process since Open Access enhances citation impact.

Using the repository for research assessment will also require the repository to reflect the total research output of the institution. This will of necessity include some metadata-only records, particularly for books. Nevertheless, if all research outputs need to be represented then the case for an institutional mandate to deposit these is strengthened, and this can include the requirement to make outputs Open Access where it is possible to do so.

Developing the technical infrastructure

Many institutions have some form of institutional research management system (IRMS, sometimes called a CRIS – Current Research Information System) which draws together key information from the all main IT systems. It will take data from the finance office for research income, information on staffing from the human resources database and details of postgraduate numbers from the student records system. The IRMS can be linked to the repository so that it can access all the bibliographic data and research outputs. Using the central repository in this way can lead to resource efficiencies across the institution. Without this arrangement the information about research outputs may otherwise need to be gathered from several individual departments or research groups.

The institution can also exploit the benefit of having bibliographic experts, often based in the library, checking the data that go into the repository. The quality assurance procedures of repository workflow provide the consistency and accuracy which is so important for research management and assessment. There will be decisions to make as to whether some functionality should best sit in the IRMS or the repository – for example, the ability to run reports that assign outputs to assessment units. But wherever these functions sit it is crucial that the repository is linked to the institutional records via LDAP (Lightweight Directory Access Protocol) or similar system so that each output can be mapped to a unique author identifier for each author or co-author.

It is also important that the repository is included in any technical resilience assessment. During any research assessment an institution is vulnerable to key staff leaving so sufficient technical support for the repository is a requirement.

Critical success factors

- ✿ Repository manager must be part of the research assessment management team
- ✿ IT resilience (the IT systems involved must be robust and able to fulfil future demands)
- ✿ Use of unique author identifiers to obviate author misidentification
- ✿ Quality assurance procedure and workflow must be able to cope with a high volume of activity
- ✿ Effective engagement with researchers across all disciplines

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