

Kiwi Research Information Service

Research repositories briefing paper

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The Kiwi Research Information Service (KRIS) aims to promote open access to publicly-funded research by showcasing the research held in research repositories in New Zealand through the nzresearch.org.nz website. KRIS and the website were developed by the National Library with a large group of collaborators mostly from New Zealand's universities and polytechnics.

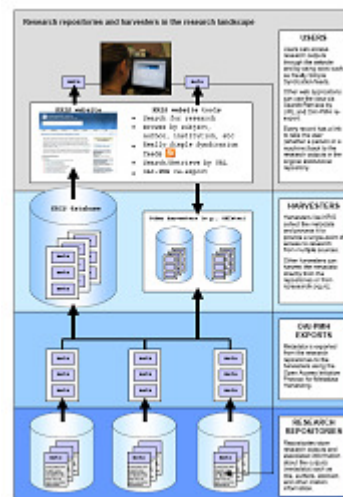
This paper is aimed at organisations and people working with research outputs who are exploring options for implementing a research repository. It sets out the role of KRIS in the research landscape and describes some of the issues involved in working with repositories.

What KRIS does

KRIS harvests information (or *metadata*) about research from research repositories around the country and makes that information available for access in one central place. None of the research is stored by KRIS; the documents and other research outputs themselves are retained in the research repository. KRIS helps people find out what is available, and how to get access to it.

The information is harvested using a method called the Open Access Initiative Protocol for Metadata Harvesting (OAI-PMH). Repository software automatically generates a feed of OAI-compliant metadata about its contents. Once nzresearch.org.nz knows where to find the OAI-PMH feed for a repository, information about all its content will appear in KRIS.

For a better idea of how it works see the diagram at the end of this paper.



Getting started

To participate in the Kiwi Research Information Service, organisations need:

- Research outputs that meet the definition of research adopted by KRIS:

Research and development is defined according to the OECD Frascati Manual as "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of [humanity], culture and society, and the use of this stock of knowledge to devise new applications." (<http://www.stats.govt.nz/statistical-methods/classifications-and-related-statistical-standards/anzsrc/Definition.htm>)
- Existing sources of metadata about the documents and other research outputs, or the resources to create metadata according to the KRIS metadata guidelines.
- A commitment to sustaining a research repository or contributing to a shared repository service that is stable and accessible, and that can export metadata using the OAI-PMH protocol (or equivalent).
- Staff with responsibility for managing an institutional repository, or access to a shared repository service with appropriate staffing, and a commitment to the ongoing addition of new content to the repository, as well as the provision of a point of contact for any issues.

Benefits

Collecting your organisation's research in a repository provides several benefits:

- Researchers at your organisation can easily find your research and you'll know that it is safely backed up and can be preserved for future use.
- Researchers at other organisations can find your research through its exposure to services like KRIS, Google Scholar, OAIster and OpenDOAR.
- Making your organisation's research available saves other researchers time and money as they can build on and cite the research rather than duplicate it.

- All of which increases exposure to the world of your research activities, enhances your organisation's reputation and boosts the potential impact of your research.
- Maintaining accurate metadata means that researchers will be able to find your research. The KRIS site automatically generates Metadata Quality Reports that assess the quality of the metadata harvested by <http://nzresearch.org.nz/>.

Establishing and maintaining a repository

Choosing and installing repository software is only the first challenge in the process of developing a research repository. Further challenges are making the repository part of your research publishing workflow, convincing your researchers to use it, ensuring that documents in the repository are properly described, and finding the resources to maintain it, year on year.

A useful starting point for any organisation considering implementing a research repository would be to:

- analyse how many research outputs currently exist
- establish how many on average are created during any year
- consider how to support a repository on an ongoing basis.

That information can inform decisions as to whether a repository is the right solution, and whether your organisation builds its own repository or works on a shared solution with other organisations.

DigitalNZ and the Shared Research Repository

DigitalNZ (<http://digitalnz.org>) is an initiative, managed at the National Library of New Zealand, that aims to make New Zealand digital content easy to find, share and use. This includes content from government departments, publicly funded organisations, the private sector, and community groups. Virtually all KRIS content is also referenced in DigitalNZ.

The Ministry of Research, Science and Technology (MoRST) have established a repository for use by organisations publishing publicly funded research so that the research outputs can be stored and made accessible. DigitalNZ host and manage this service on behalf of MoRST. Research stored in the Shared Research Repository will be accessible through KRIS and DigitalNZ. Organisations in need of a repository to house their research outputs may wish to contact the DigitalNZ Team, info@digitalnz.org.

Copyright issues

Research outputs, especially in the PBRF (Performance Based Research Fund) sense, have usually already been published, often in peer-reviewed journals. Many publishers allow pre-print or post-print versions of an article to be included in an institutional repository although copyright status must be determined before the research outputs are added; full citation information also needs to be included. NISO standard RP-8-2008 provides a clear definition for an Accepted Manuscript which is the preferred version of a copy of an article for loading into a repository, ie the author's final manuscript as accepted for publication at the completion of the peer review process.

Access issues

Some organisations will be concerned about limiting access to research that is confidential, restricted or embargoed. There are ways to manage this using repository software as you can put this research in a repository and limit access to it, or not include information about it in the metadata export. Alternatively, if the metadata export includes information about access rights, KRIS can harvest the records and let users know about the access restrictions.

More information

- Contact the Digital Services Team at the National Library, digital-services@natlib.govt.nz
- For more information about the Shared Research Repository, visit <http://digitalnz.org/contributor/faq/shared-repository-faq/>.
- Join the NZ Institutional Repositories mailing list nzir-l@natlib.govt.nz for discussion and advice; sign up at <http://lists.natlib.govt.nz/mailman/listinfo/nzir-l>
- For background on the project and technology in use, see the website 'About' pages: <http://nzresearch.org.nz/index.php/about/>
- For information on metadata standards used by KRIS see <http://nzresearch.org.nz/index.php/about/metadataHarvesting> and the standards documentation at

<http://www.natlib.govt.nz/catalogues/library-documents/national-research-discovery-service-metadata-guidelines>.

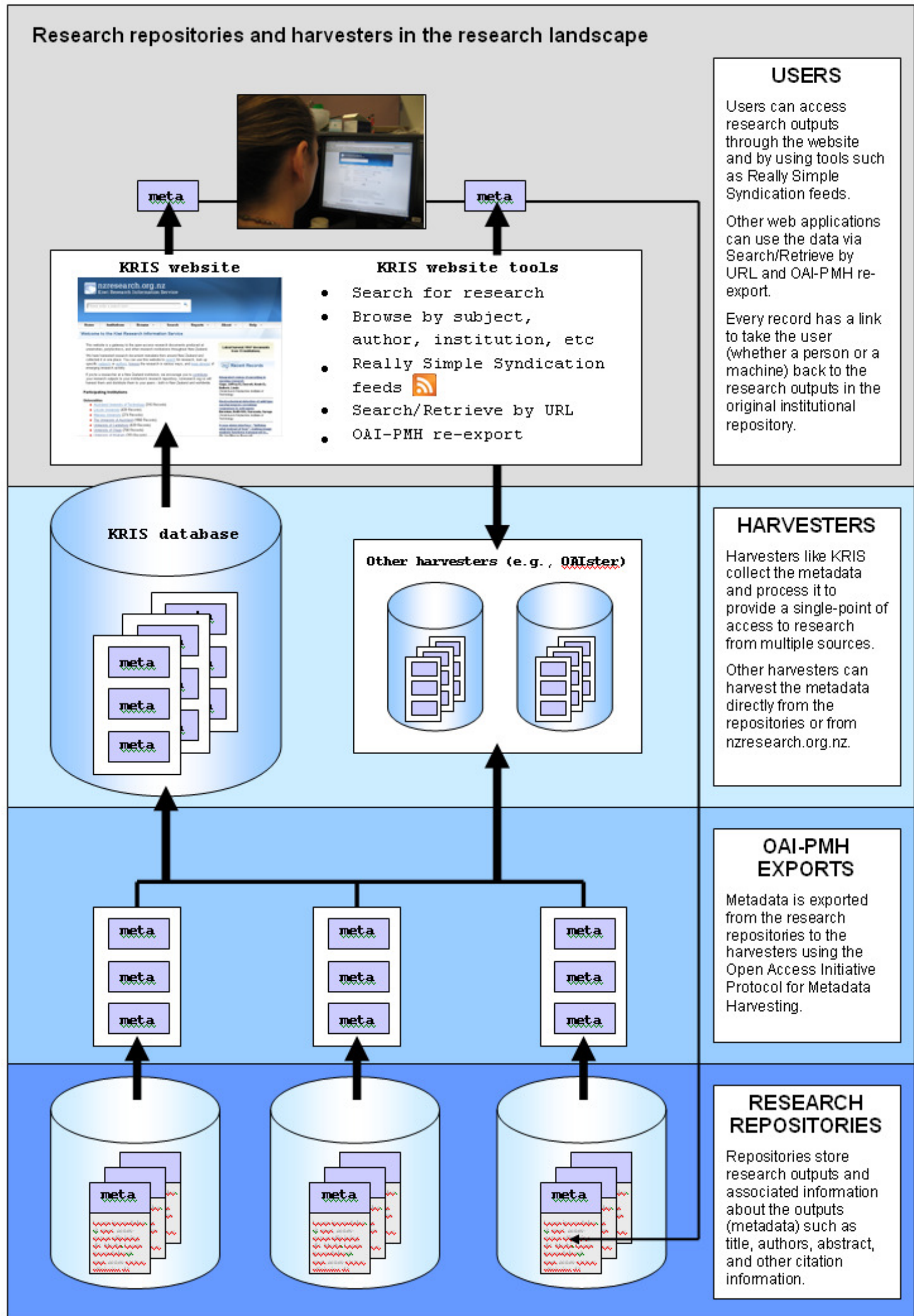
- Further discussion of the New Zealand landscape is available at the OARiNZ Knowledge Base wiki: <http://www.oarinz.ac.nz/oarinzwiki/>
- NISO standard RP-8-2008 provides a simple, practical way of describing the versions of scholarly journal articles that typically appear online before, during, and after formal journal publication: <http://www.niso.org/publications/rp/RP-8-2008.pdf>

Repository software in use in New Zealand

The following repository software is currently in use in New Zealand by KRIS participating members.

Software	Details	Used by	Repository links
DSpace	http://www.dspace.org/ Free open-source software	Auckland University of Technology	http://aut.researchgateway.ac.nz/
		Lincoln University	http://researcharchive.lincoln.ac.nz/dspace/
		Massey University	http://muir.massey.ac.nz/
		The University of Auckland	http://researchspace.auckland.ac.nz/
		University of Canterbury	http://ir.canterbury.ac.nz/
		University of Waikato	http://waikato.researchgateway.ac.nz/
		Victoria University of Wellington	http://researcharchive.vuw.ac.nz/
Eprints	http://www.eprints.org/ Free open-source software	University of Otago	http://ourarchive.otago.ac.nz
		Waikato Institute of Technology	http://researcharchive.wintec.ac.nz/
Fedora	http://www.fedora-commons.org/ Free open-source software	Christchurch Polytechnic Institute of Technology	http://repository.cpit.ac.nz/
		Open Polytechnic of New Zealand	http://repository.openpolytechnic.ac.nz/
		MoRST Shared Research Repository	

Research repositories and harvesters in the research landscape



USERS

Users can access research outputs through the website and by using tools such as Really Simple Syndication feeds.

Other web applications can use the data via Search/Retrieve by URL and OAI-PMH re-export.

Every record has a link to take the user (whether a person or a machine) back to the research outputs in the original institutional repository.

HARVESTERS

Harvesters like KRIS collect the metadata and process it to provide a single-point of access to research from multiple sources.

Other harvesters can harvest the metadata directly from the repositories or from nzresearch.org.nz.

OAI-PMH EXPORTS

Metadata is exported from the research repositories to the harvesters using the Open Access Initiative Protocol for Metadata Harvesting.

RESEARCH REPOSITORIES

Repositories store research outputs and associated information about the outputs (metadata) such as title, authors, abstract, and other citation information.