



## The ARROW Project after 2 years

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### Abstract:

The Australian Government's Department of Education Science and Training (DEST) took the view of institutional repositories as a mission-critical infrastructure component supporting scholarship, facilitating stewardship, and advancing the global recognition of Australian universities as among the world's finest in academia. To that end, the ARROW Project commenced work in February 2004 with the objective of developing best of breed solutions for open access institutional repositories and electronic publishing in Australian universities over three years.

The ARROW consortium consists of *Monash University* as the lead institution, *Swinburne University of Technology*, the *University of New South Wales* and the *National Library of Australia*.

ARROW decided to have the main software modules (VITAL) built on top of Fedora (<http://www.fedora.info/>) written by VTLIS Inc. (<http://www.vtls.com>). ARROW licensed VITAL and has been working with VTLIS to extend the functionality of Fedora by commissioning a series of Open-Source Web Services. This has been a true partnership, with significant transfers of intellectual property in both directions. ARROW is also trialling the Open Journal Systems software (<http://www.pkp.ubc.ca>).

We propose to offer an overview of the progress of the ARROW Project, which has been developed within the following three stage framework:

1. conceptualising and developing an ARROW institutional repository solution comprising software, policy frameworks and implementation strategies,
2. implementing the ARROW repository within the project's partner institutions, and
3. offering the ARROW repository solution to other Australian universities.

We will discuss the decisions the ARROW Project made from the outset and provide a review of those decisions after two years of operation. We will also look forward at ARROW's plans for 2006 and ongoing development work.

### Background:

The original project description (<http://www.arrow.edu.au/docs/download/ARROW%20project>) defined the project as:

The ARROW Project (ARROW) will identify and test a software solution or solutions to support best-practice institutional digital repositories comprising e-prints, digital theses and electronic publishing. A wide range of digital content types will be managed in these repositories. The National Library of Australia will develop a repository and associated metadata to support independent scholars (those not associated with institutions). A complementary activity of ARROW is the development and testing of national resource discovery services (developed by the National Library)

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The ARROW Consortium comprises Monash University [lead institution], National Library of Australia, The University of New South Wales and Swinburne University of Technology.





using metadata harvested from the institutional repositories, and the exposing of metadata to provide services via protocols and toolkits.

This will include a potential path for the redevelopment of the Australian Digital Theses Program metadata repository incorporated into the National Library's national resource discovery services.

Initially ARROW will be tested in four consortium partner institutions, prior to it being offered more widely across the higher-education sector. The solution will be open-standards based, or will support open standards, and will facilitate interoperability within and between participating institutions.

## Current activities:

ARROW has developed a workable institutional repository solution which, with the release of VITAL 2.0, meets many of the requirements for an institutional repository capable of storing a wide range of digital objects. The National Resource Discovery Service is now live and harvesting metadata from Australian repositories, both in and outside of ARROW.

Repositories using the ARROW solution are currently in place at:

Monash University: <http://arrowprod.lib.monash.edu.au:8000/access/>

National Library of Australia: <http://search.arrow.edu.au/>

Swinburne University: <http://researchbank.swinburne.edu.au/>

University of New South Wales: <http://arrow.unsw.edu.au/>

New partners include:

Central Queensland University: <http://www.cqu.edu.au/>

University of South Australia: <http://www.unisa.edu.au/>

University of Southern Queensland: <http://www.usq.edu.au/>

University of Western Sydney: <http://www.uws.edu.au/>

## Current focus and directions:

In 2006 the project is focussing on:

- Continuing development work with VTLS
- Access and authentication issues, including incorporating XACML and Shibboleth
- Metadata interoperability
- Development of support for the DEST Research Quality Framework process
- Improved usability for submitters
- Improved services for repository managers
- Better provision and integration of tools and functionality for both submitters and managers
- Extending harvesting to Google and other search engines
- Establishing a vibrant ARROW community

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The **ARROW project** ([www.arrow.edu.au](http://www.arrow.edu.au)) is funded by the Australian Commonwealth Department of Education, Science and Training, under the Research Information Infrastructure Framework for Australian Higher Education, to identify or develop and test software to support integrated institutional digital repositories comprising multiple content types.

**VTLS Inc.** ([www.vtls.com](http://www.vtls.com)) is a leading global company that creates and provides visionary technology in library solutions. We have three distinct divisions that serve a diverse customer base of more than 900 libraries in over 35 countries. Our VIRTUA division remains focused on ILS solutions. Our VTRAX division focuses on RFID technologies through a partnership with Tagsys and FKI Logistex. Our Digital Asset Creation & Management division provides cutting edge software and services for Digital Libraries. VTLS is also one of the few ISO 9001 quality certified companies within the library industry.

**Fedora™** is a general purpose repository system developed jointly by Cornell University Information Science and the University of Virginia Library. The Fedora Project is devoted to the goal of providing open-source repository software and related services to serve as the foundation for many types of information management systems. The Fedora software is available under the terms of the Educational Community License 1.0 (ECL).

The Fedora Project is based on previous research at Cornell University Computer Science that was funded by DARPA and the National Science Foundation.

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