

# The ARROW Project - creating a sustainable institutional repository

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The ARROW Project is funded by the Australian Commonwealth Department of Education, Science and Training, under the Research Information Infrastructure Framework for Australian Higher Education.

[arrow.edu.au](http://arrow.edu.au)

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



arrow

australian research  
repositories online  
to the world



MONASH  
University



UNSW



## Overview

- What is the ARROW Project?
- What did we set out to achieve?
- What have we got?
- What is the ARROW Community?
- What have we learnt?
- ARROW going forward

## What is the ARROW Project?

- Funded by the Australian Commonwealth Department of Education, Science and Training, under the Research Information Infrastructure Framework for Australian Higher Education.
- Funded 2004-2006, extended to end of 2007
- Initial objectives:

*“The ARROW project will identify and test software or solutions to support best practice institutional digital repositories comprising e-prints, digital theses and electronic publishing.”*

## What is the ARROW solution?

- VITAL software developed in partnership with VTLS Inc.
- Proprietary software built on top of Fedora Open Source architecture
- ARROW Community

## Why have a repository?

- Provides a platform for promoting research output in the ARROW context
- Safeguards digital information
- Gathers an institution's research output into one place
- Provides consistent ways of finding similar objects
- Allows information to be preserved over the long term
- Allows information from many repositories to be gathered and searched in one step
- Enables resources to be shared, while respecting access constraints (when software allows access controls)
- Enables effective communication and collaboration between researchers

## What did the ARROW project set out to achieve?

- Solution for storing any digital output
  - Initial focus on print equivalents – theses, journal articles
  - Now looking at other datasets, learning objects
- More than just Open Access – some things need to be restricted
  - Copyright
  - Confidentiality/ethical considerations
  - Work in progress
- National research discovery service harvesting metadata from a range of repositories

## What did the ARROW project set out to achieve? (2)

- Meeting DEST reporting requirements
  - Research Quality Framework (RQF) has increased the focus on repositories
- Employ Open Standards
  - Making sure the data is transferable in the future
- Deliver Open Source Tools back to the Fedora Community
- Solution that could offer on-going technical support and development past the end of the funding period

# Original vision and implementation

VITAL  
Access  
Portal,  
OAI/PMH,  
SRU/SRW,  
Web  
Exposure



Fedora  
and  
VITAL



Fedora





## **Partnering for success, support and survivability**

- **ARROW needed to partner with a developer who could not only produce the software but could provide ongoing user support and development after December 31, 2006**
  
- **Why VTLS Inc.?**
  - **VTLS wanted to be a development partner**
  - **Had begun work on a repository solution already**
  - **Familiar with library sector**
  - **Willing to produce a combination of a proprietary solution, Fedora and other Open Source software**

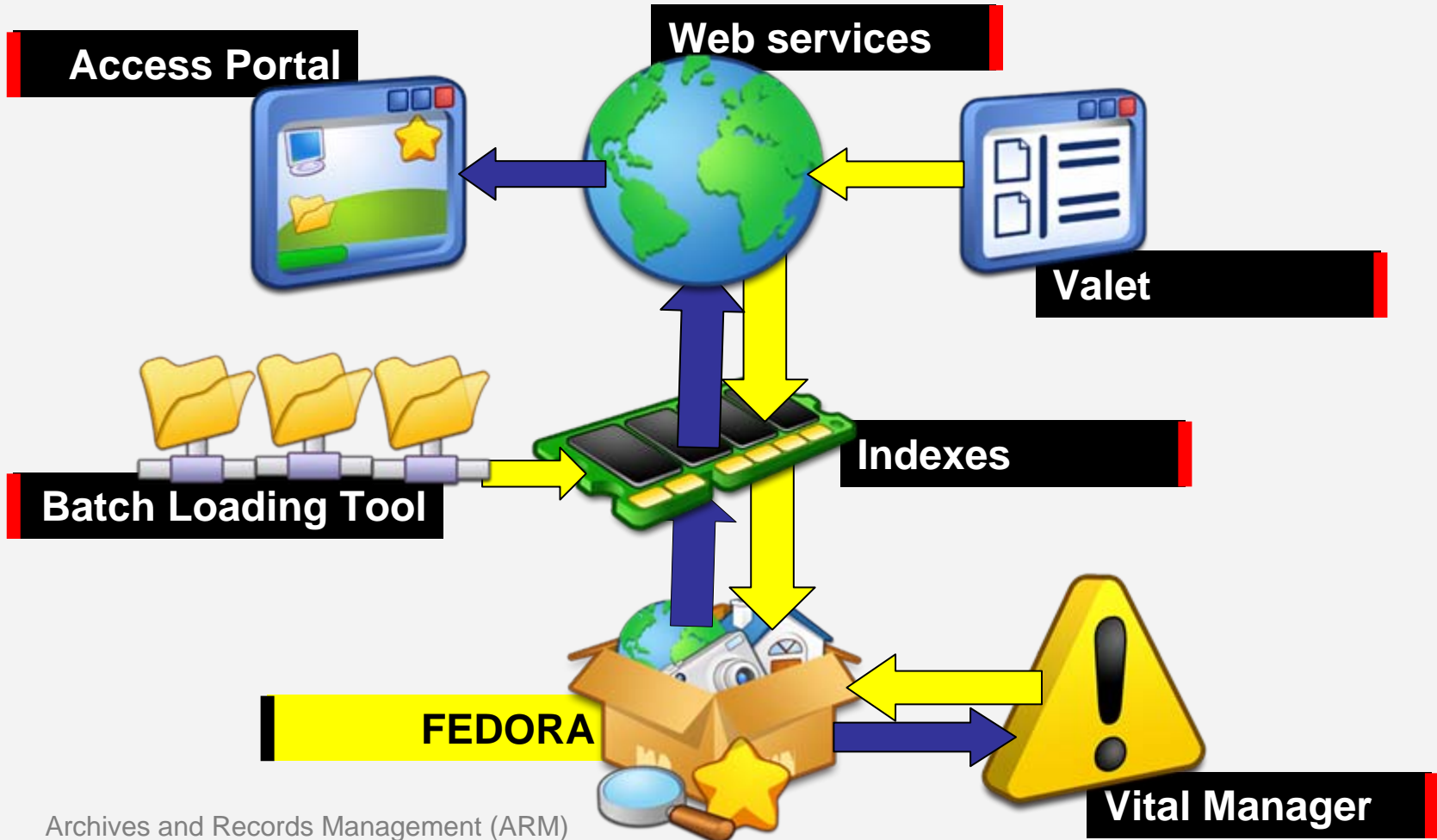
## Other ARROW Partners

- Government:
  - DART/ARCHER (<http://dart.edu.au> / <http://archer.edu.au>)
    - Tools and a repository for research in progress
  - PILIN (<http://www.arrow.edu.au/PILIN>)
    - Persistent Identifiers and Linking INfrastructure
  - MAMS (<http://mams.melcoe.mq.edu.au/>)
    - National Trust Federation
  - APSR (<http://www.apsr.edu.au/>)
    - Other repository strategies
  - RUBRIC (<http://www.rubric.edu.au/>)
    - Repository support for smaller institutions
- Open source development:
  - Fedora (<http://www.fedora.info/>)
- Commercial:
  - VTLS (<http://www.vtls.com>)

## Development Model Overview

- Entered into a partnership arrangement with VTLS Inc. ([www.vtls.com](http://www.vtls.com))
- VTLS provided:
  - Development expertise and staff
  - Infrastructure for future support and development
- ARROW provided:
  - Intellectual property and design specifications - Versions 2 through 4 of VITAL largely based on ARROW input
  - “Real world” use cases, testing and feedback

# VITAL architecture overview



# ARROW Discovery Service

*<http://search.arrow.edu.au/>*

- Provides a national resource discovery service including:
  - providing an appropriate search interface
    - simple search, advanced search, & browse options
  - contributing to other networks
    - OAlster, Yahoo, Google
  - Ensuring appropriate local institutional and national “branding” of the service
    - occurs throughout the ADS interface and the exchanged metadata
  - providing appropriate subject-based access
    - The Australian Standard Research Classification list

## What is the ARROW Community?

- Any institution with the ARROW repository solution is a member
- Designed to:
  - Share knowledge and experiences
  - Share information and solutions
  - Develop Open Source software
  - Coordinate future development of VITAL and other relevant software
  - Promote institutional repositories

## What services does the Community provide?

- GoogleGroup
- ARROW Repository Managers Group
- ARROW Development Group
- Metadata Advisory Committee for Australian Repositories (MACAR)

## Who are the members of the ARROW Community?

- Monash
- UNSW
- NLA
- Swinburne
- South Australia
- Central Queensland
- LaTrobe
- Murdoch
- RUBRIC
- Macquarie
- USQ
- UNE
- Sunshine Coast
- Newcastle
- New England
- Ballarat
- Western Sydney



## What have we learnt so far?

- Multiple partners are good:
  - Sharing of information and experiences
  - Sharing of development work
  - Multiple perspectives on issues
- and bad:
  - Multiple perspectives on issues
  - Scope creep
  - Managing expectations
  - Pressure on the project management team
  - Pressure on development team and partners
  - Deadline conflicts
- Software development feels slow, both commercial and open source
- Development with a commercial partner can be tricky

## What have we learnt so far? (2)

- Flexibility is both a blessing and a curse
  - Yoga, anyone?
  - Decisions, decisions...
- That there aren't enough real standards in this area
- Open versus closed repositories, or information management versus accessibility is an issue
- Repositories are only partly about software - advocacy, policy, institutional engagement and grunt work need equal attention
- Constraints of dealing with copyright

## What is ARROW working on now?

- Supporting the implementation of the Research Quality Framework (RQF)
- Creative development of institutional repositories
- Supporting Australian engagement with institutional repositories
- Building partnerships to further enhance repositories
- Persistent Identifiers and Linking Infrastructure (PILIN)

## General Conclusions

- It's been a fun ride!
- Still very early days for institutional repositories as we all work out how to embed them into our institutional fabric
- ARROW now starting to focus on what to work on (and how) post the project funding

# Thank you for your attention

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