

How to Implement an Institutional Repository

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by

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<https://scholarsbank.uoregon.edu/dspace/handle/1794/2484>

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How to Implement an Institutional Repository: Part I

Rationale and Planning

Scholars' Bank

<https://scholarsbank.uoregon.edu/>

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University of Oregon Scholars' Bank >

Scholars' Bank news

09 April 2006: [New service for UO Alumni!](#)

06 April 2006: [Over 2200 items now available in Scholars' Bank](#)

06 April 2006: Check out the [UO Channel Streaming Media Archive](#)

31 January 2006: [The Oregon Quarterly is now available online!](#)

[Open Access News...](#)

Search

Enter some text in the box below to search Scholars' Bank.

Go

Communities in Scholars' Bank

Select a community to browse its collections.

- [Arts and Administration Program](#)
- [Center for the Study of Women in Society](#)
- [Clark Honors College](#)
- [Community Service Center of Oregon](#)
- [Dodd Research Institute](#)



OAIster
...find the pearl

Repositories in other academic institutions

Search in OAIster:



[About Scholars' Bank](#)

[Resources for Faculty](#)

[Resources for Students](#)

Scholars' Bank is an open access archive for University of Oregon research, publications, and supporting materials in digital form. For more information, consult the [Scholars' Bank FAQ](#).

Check the library's [home page](#), including the catalog of [digital collections](#), for other research materials available to you.

Rationale and planning

- Why do it?
- What's your timeline?
- Who will be involved?
- Can you afford it?
- How will you measure success?
- How flexible is your vision?

Definition

- Digital collections capturing and preserving the intellectual output of a single or multi-group community
- Set of services for the management and dissemination of digital materials
- Not just for universities!

Scholarly communication crisis

- Prices rising faster than inflation
- Movement from paper to electronic
- New pricing and access models for electronic content
- Scholarly output increasing
- Libraries able to provide access to smaller percentage of total scholarly output

Scholarly communication crisis

- Serials cancellations
- Campus discussions on scholarly communication
- Consortial purchases
- Broader sharing of collections
- Cataloging of e-journals
- Promotion of open-access journals
- New management tools (SFX, ERM, etc.)

Change scholarly communication

- How to do this?
- IRs and Open Access
 - Open access: allows all members of society to freely access relevant cultural and scientific achievements, in particular by encouraging the free (online) availability of such information

Berlin Declaration on Open Access

<http://www.zim.mpg.de/openaccess-berlin/berlindeclaration.html>

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MAX-PLANCK-GESELLSCHAFT

Program OA Conference
Program Committee
ECHO Meeting

Berlin Declaration Declaration Signatories
Press Release & Statement

Participants List
Snapshots

Links OA Resources
Media Coverage

Conference on
Open Access to Knowledge in the Sciences and Humanities
20 - 22 Oct 2003, Berlin
Berlin Declaration

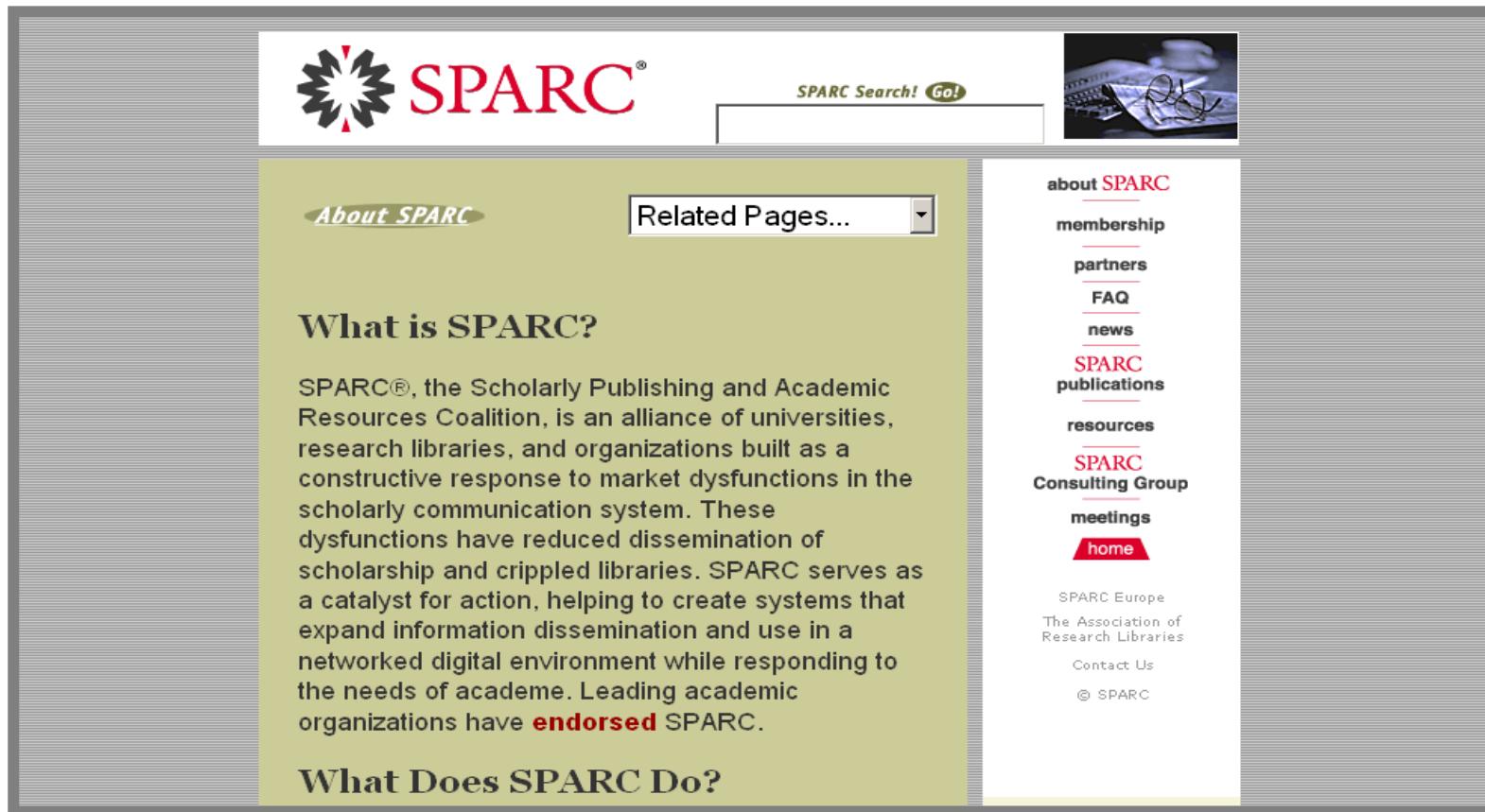
Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities

Preface

The Internet has fundamentally changed the practical and economic realities of distributing scientific knowledge and cultural heritage. For the first time ever, the Internet now offers the chance to constitute a global and interactive representation of human knowledge, including cultural heritage and the guarantee of worldwide access.

We, the undersigned, feel obliged to address the challenges of the Internet as an emerging functional medium for distributing knowledge. Obviously, these developments will be able to significantly modify the nature of scientific publishing as well as the existing system of quality assurance.

SPARC



The screenshot shows the SPARC website homepage. At the top left is the SPARC logo, which consists of a stylized red flower-like icon followed by the word "SPARC" in a bold, red, sans-serif font. To the right of the logo is a search bar with the placeholder text "SPARC Search! Go!" and a small search icon. To the right of the search bar is a photograph of a hand holding a pen over a keyboard. Below the header, there are two main content areas. On the left, under the heading "About SPARC", is a section titled "What is SPARC?". It contains a detailed paragraph describing SPARC's mission and role in addressing market dysfunctions in scholarly communication. To the right of this is a "Related Pages..." dropdown menu. On the right side of the page is a sidebar with various links: "about SPARC", "membership", "partners", "FAQ", "news", "SPARC publications", "resources", "SPARC Consulting Group", "meetings", and "home". At the bottom of the sidebar are links to "SPARC Europe", "The Association of Research Libraries", "Contact Us", and "© SPARC".

About SPARC

Related Pages...

What is SPARC?

SPARC®, the Scholarly Publishing and Academic Resources Coalition, is an alliance of universities, research libraries, and organizations built as a constructive response to market dysfunctions in the scholarly communication system. These dysfunctions have reduced dissemination of scholarship and crippled libraries. SPARC serves as a catalyst for action, helping to create systems that expand information dissemination and use in a networked digital environment while responding to the needs of academe. Leading academic organizations have **endorsed** SPARC.

What Does SPARC Do?

SPARC Search! Go!

SPARC

about SPARC

membership

partners

FAQ

news

SPARC publications

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The Case for Institutional Repositories

<http://www.arl.org/sparc/IR/ir.html>

The Case for Institutional Repositories: A SPARC Position Paper

Prepared by Raym Crow, SPARC Senior Consultant

The Scholarly Publishing & Academic Resources Coalition
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www.arl.org/sparc

ACRL Scholarly Communication Initiatives

 Association of College & Research Libraries
A Division of the American Library Association

contact us search ACRL sitemap home join ACRL
50 East Huron Street • Chicago, Illinois 60611
Telephone: 800-545-2433, ext. 2523 Fax: 312-280-2520

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Publications
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College and Research Libraries
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Academic Library Statistics
Books/Monographs
RBM
White Papers and Reports

Home → Publications → White Papers and Reports

Principles and Strategies for the Reform of Scholarly Communication¹

Scholarly Communication Defined

Scholarly communication is the system through which research and other scholarly writings are created, evaluated for quality, disseminated to the scholarly community, and preserved for future use. The system includes both formal means of communication, such as publication in peer-reviewed journals, and informal channels, such as electronic listservs. This document addresses issues related primarily to the formal system of scholarly communication.

One of the fundamental characteristics of scholarly research is that it is created as a public good to facilitate inquiry and


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Why do it?

- Change scholarly communication
- Increase institutional visibility
- Highlight individual achievement
- Improve access
- Make connections to other resources
- Preserve materials
- Increase collaboration

What's your timeline?

- Are there external pressures?
- When do you want to go public?
- How long do you have to plan?
- Are you in this for the long haul?

Can you afford it?

- Will you absorb the work?
- Can you hire new people?
- Do you have the needed hardware and software to support it?

Who will be involved?

- Library staff?
- Computing center staff?
- Faculty? Students?
- Campus administrators?
- Community partners?
- Sister institutions?
- Professional marketers?
- Academic or commercial publishers?

How will you measure success?

- Numbers of items collected?
- Use of materials?
- Income generated from it?
- Numbers of participants?
- User studies or surveys?

How flexible is your vision?

- Target group
- Criteria for submission
- Model for submission
- Subsidiary services
- Long-term preservation and access

How to Implement an Institutional Repository: Part II

Technical Issues

Technical Issues

- Technical expertise
- Hardware and software
- Metadata support
- Interoperability
- Version control and revision
- User Interface
- Digital preservation

Technical expertise

- Knowledge of operating systems and servers
- Knowledge of database structure
- Ability to troubleshoot
- Ability to install patches and updates
- Ability to pull together pieces from variety of sources
- Knowledge of standards

Hardware and software

- Open source
- Purchased or licensed
- Locally mounted or hosted externally
- Adequate server space
- Robust backup mechanisms

Software review

- Dspace
- E-prints
- GnuPrints
- ProQuest
- ContentDM

Software requirements

- Permit the easy creation, use, and administration of digital objects distributed over the Internet
- Facilitate the creation of collections of materials in different disciplines or categories

Software requirements

- Support any type of file
- Carry out searches based on standard metadata
- Flexible metadata capture, edit, and display

Software requirements

- Plug into your local authentication system
- Be constructed using components and technologies that are standard and non-proprietary
- Easily integratable

Software requirements

- Customizable user interface
- Modular
- Flexible system administration
- Granular authorizations

Software requirements

- Scalable
- Manage licenses and permissions
- Recoverability
- Ease of managing underlying database
- Statistics and reports

Software requirements

- Flexible egress
- Flexible ingest
- Already implemented in other institutions
- Easy to set up
- Affordable

Metadata support

- Underlying metadata structure
- Ease of modification
- Global change capabilities
- Controlled lists of terms

Interoperability

What's the objective?

- Facilitate sharing based on common standards
- Link digital archives around the world
- Provide access to metadata – and files

Interoperability

What's the solution?

- OAI-PMH
- Consistent interface
- Minimal implementation
- XML representation of Dublin Core metadata set

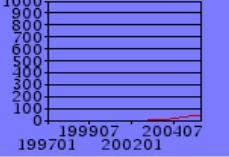
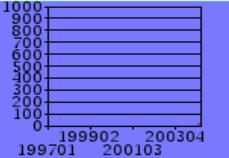
OAI Registries

Registry of Open Access Repositories (ROAR)

[Home](#) [Browse](#) [Analyse](#) [Register an Archive](#) [About](#) [Login](#) [Register](#) [Institutional Self-Archiving Policy](#)

Any Geographic Country Any System Software Any Content Type Sort by Name Filter

[Prev](#) Page 1 of 66 (657 archives) [1 [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#)] [[View All](#)] [Next](#)

Name	Summary Graph	Thumbnail
<p>1) //ask23 //archivsystem k23 Other softwares (various) (OAI) Germany Other ask23 is an electronic, webbased plattform for publishing and archiving digital media with a focus on artistic and scholarly work, publication and research. ask23 is a project of the Laboratory of Arts and Sience, Academy of fine Arts Hamburg, Germany. ask23 ist eine Archiv- und Publikationsplattform für die künstlerische und wissenschaftliche Arbeit, zur Veröffentlichung von Textproduktionen und der Abfrage von digitalen Ressourcen sowie des analogen Archivs in Raum k23. Total OAI Records: 42 50% freely accessible fulltext (* estimate)</p>  		
<p>2) 11th Joint Symposium on Neural Computation GNU EPrints (OAI) United States e-Journal/Publication info:other:archives.eprints.org:import Total OAI Records: 30 100% freely accessible fulltext (* estimate)</p>  		

Version control and revision

- Correct identification
- Security
- Revision

Public user interface

- Submission
- Searching
- Reuse of content

Digital preservation

- Ensuring the long-term maintenance of a bitstream (the zeros and ones):
 - backing up files and keeping a copy at an offsite location
 - running checks to track the deterioration of storage media, files or bitstreams

Digital preservation

- Providing continued accessibility of the contents:
 - *viability* - making sure that information is intact and readable from the storage media
 - *renderability* - making sure that information is viewable by humans and able to be processed by computers
 - *understandability* – making sure that information is able to be interpreted by humans

Digital preservation strategies

- Bitstream copying
- Refreshing
- Durable/persistent media
- Digital archaeology
- Analog backups
- Migration
- Emulation

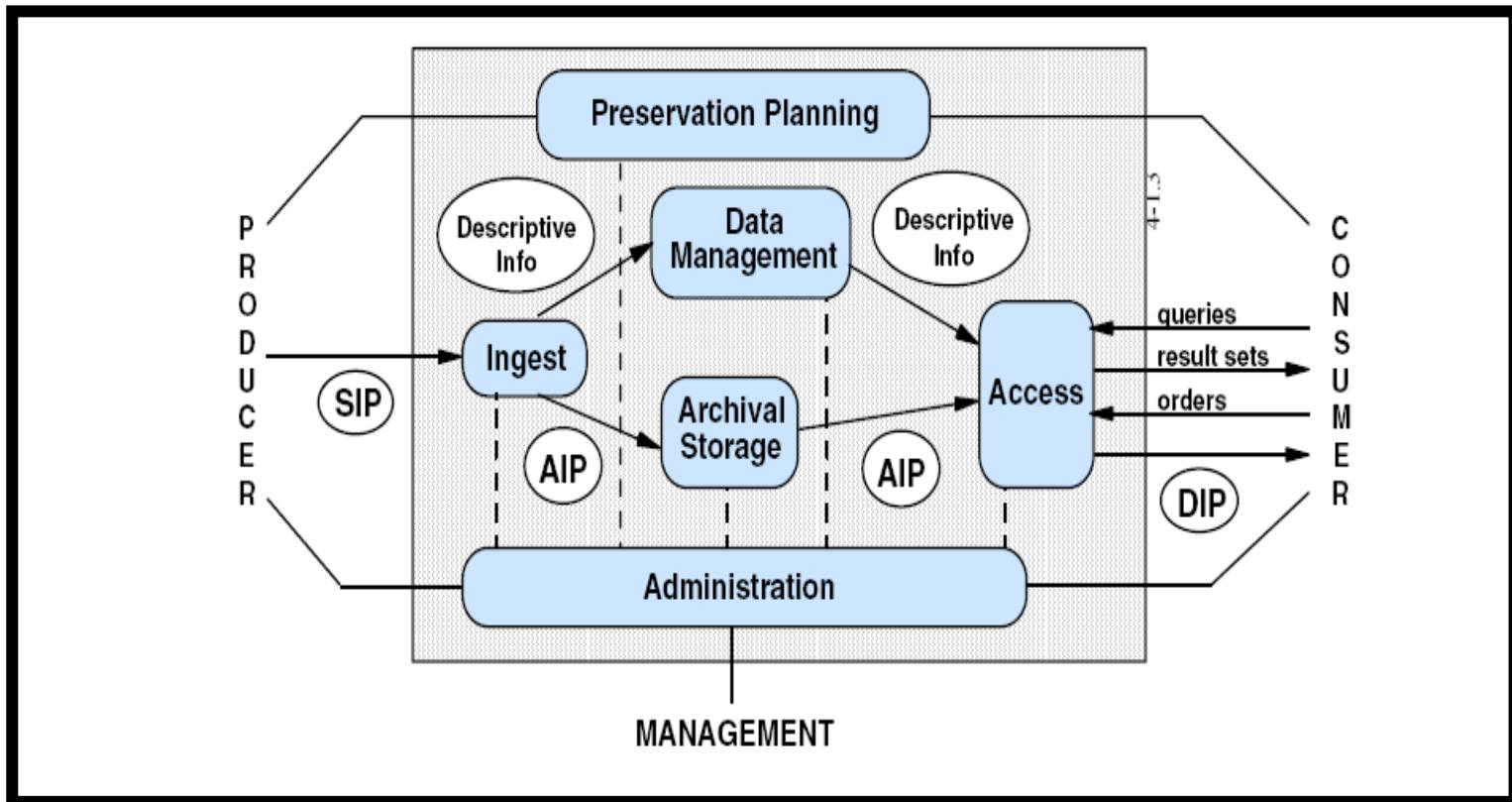
Digital preservation components

- Metadata registry
- Format registry
- Checksum verification
- Backup procedures
- Persistent identifiers

Attributes of a Trusted Digital Repository

- Administrative responsibility
- Organizational viability
- Financial sustainability
- Technological and procedural suitability
- System security
- Procedural accountability
- OAIS compliance

OAIS Reference Model



How to Implement an Institutional Repository: Part III

Resource Issues

Develop a business plan

- Easier said than done
- What do you take into account?
- How far and how long are you willing to subsidize the IR?

Staffing needs

- Who will be involved?
- How much service will you provide?

How much service will you provide?

- Assist with or handle submissions?
- Convert files on ingest?
- Clean up or review metadata?
- Digitize hard copy?
- Develop supplemental pages or web forms?
- Develop customized search interfaces?
- Assist with copyright investigation?

How much service will you provide?

- Provide use statistics?
- Provide current awareness services?
- Integrate with other services?
- Develop marketing tools?
- Set up focus groups?
- Long-term preservation of files?
- User support and problem resolution?

Can you afford it?

- Will you absorb the work?
- Can you hire new people?
- Will you use volunteers?

Other costs

- Server capacity
- Operating system
- Database set-up
- Licenses and certificates
- Registration with other services
- Marketing expenses and supplies
- Attending meetings and conferences

How to Implement an Institutional Repository: Part IV

Policy Issues

Policy issues

- Division of responsibilities and clarification of roles
- Structure of the archive
- Definition of communities, collections, and users
- Control of content
- Submission and withdrawal
- Metadata standards
- Institutional commitment
- Copyright, permission, and access
- Going it alone or multi-institutional

Division of responsibilities and clarification of roles

- Your target group and users can help with:
 - Identifying and submitting content
 - Verifying copyright
 - Serving as advisers
 - Letting you know of service problems

Structure of the archive

- Depends on software and technical support
 - Communities, collections, titles, files
 - Direct or mediated submissions
 - Need for local modifications
- Depends on your definition and resources
 - Target group
 - Name
 - Type of content

Structure: software implications

- Communities
 - Sub-communities
 - Collections
 - Titles
 - » Files

Definition of the repository: UO

- Somehow affiliated with the UO
- Academic content, or in support of the academic mission
- Cumulative and perpetual
- Open access
- Interoperable

Definition of communities, collections, and users

- Definition of community
- Limits on the number and type of collections?
- Different rules for different groups?
- Commercial use permitted or not?

Limits on the number or type of collections

- Will you limit?
- Who makes the decision?
- What are the determining factors?

Types of collections

- Informational
- Administrative
- Primary resources for research or study
- From the faculty
- From students
- Groups only or individuals also

Different rules for different groups

- One set of rules and services for students
- Another set of rules and services for faculty
- Other groups

Control of content

- Who sets the standards for the content?
- What type of material is acceptable?
- Who owns the content once deposited?
- Will you restrict access to any content?

Submission and withdrawal

- Mediated submission
- Author self-submission
- Review of submissions
- Replacement of files
- Withdrawal

Policies for submission and withdrawal: UO example

- Every community determines the specific submission policies for its collections
- Someone, whether from the library or the community itself, will revise new submissions to make sure the content is appropriate for the collection where they were submitted
- Authors may submit their own work or they may ask the library for assistance

Policies for submission and withdrawal: UO example

- At the start of every new collection, someone from library reviews first few submissions
- Library reserves the right to remove content in cases of copyright violation
- Library reserves the right to withdraw content and return it in the event that the repository cannot be maintained
- Library reserves the right to change its guidelines without telling users

Revision or replacement of files

- Will you permit the replacement or revision of files?
- If so, in what circumstances?

Withdrawal of content

- Will you withdraw submissions to your IR?
- If so, in what cases?
- Will you leave any markers or placeholders for that missing content?

Metadata standards

- Based in Dublin Core or some other standard
- Determined by software limitations
- Mediated versus self-submission
- Controlled vocabulary issues
- Whatever is necessary to find, organize, and display the files appropriately
- It's not cataloging

Institutional commitment

- Permanence of the archive
- How to guarantee the integrity of the files
- How to guarantee the stability of the archive

Copyright, permission, and access

University of Oregon

PERMISSION FORM FOR STUDENT SUBMISSIONS TO SCHOLARS' BANK

(BEFORE filling out this form, please be sure you have consulted the [Student Options for Submitting Dissertations, Theses, or Class Projects to Scholars' Bank page](#))

* Your name:

* Your email address:

* Title of your dissertation, thesis, or class project:

* Class or program for which your work was done

I grant the University Libraries permission to digitize my dissertation/thesis/class project and make it freely and publicly available in the digital archive known as Scholars' Bank (<https://scholarsbank.uoregon.edu>).

I grant permission: Yes

* Please add the following keywords to my work to help people find it:

[Scholars' Bank Home](#)

What is Scholars' Bank?
• [Overview](#)
• [Scholarly Communication](#)

UO Implementation
• [Community Guidelines](#)
• [FAQ](#)
• [License Agreement](#)
• [Submitting to Scholars' Bank](#)
• [Resource Page for Faculty](#)
• [Resource Page for Students](#)

News & Related Readings
• [DSpace in the News](#)
• [Related Readings or Sites](#)

People
• [Steering Committee](#)
• [Advisory Board](#)

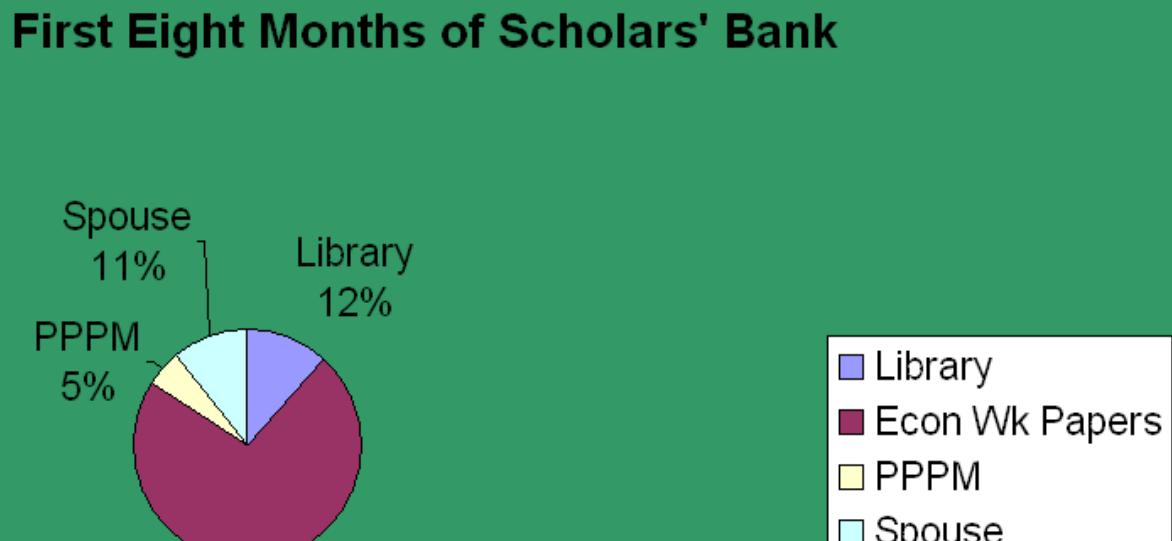
How to Implement an Institutional Repository: Part V

Marketing

Initial vision

- Faculty content
- Self-submission
- Buy-in to open access model

First eight months



Cultural challenges

- Intellectual property concerns
- Authenticity of submissions
- Concern over quality
- Concern over control
- Terminology
- Technophobia

Technical challenges

- Submission template
- Metadata
- Version control and revision
- User interface
- Preservation

Practical challenges

- Time
- Money
- Identification of content and communities
- Acquisition of content

Strategies

- Develop local context
- Explain the broader context
- Obtain a critical mass
- Obtain interesting and attractive content
- Make connections wherever possible
- Publicity – be creative and shameless
- Improve the suite of services
- Borrow ideas from other archives

Local context

- Provide a general overview without jargon
- Personalize the information
- Answer questions of local interest
- Build in redundancy
- Provide varying levels of detail
- Educate on issues and link to broader movement

Broader context

- Link to worldwide movement
- Educate on issues

Obtain a critical mass

- What is the magic number?
 - Different for each institution
 - When existing materials start to draw in other materials without active solicitation

How to obtain critical mass

- Expand vision of the IR: examples
 - Faculty output
 - Individual works and scholarly journals
 - Library collections
 - Electronic records, finding aids, historical materials, etc
 - Campus publications and presentations
 - Newsletters, planning documents, historical publications, streaming video, etc.
 - Student works
 - Theses and dissertations, honors projects, etc.
 - Miscellaneous

Publicity – be creative and shameless

- Promote anywhere and everywhere
- Use subject specialists in the effort
- Share success stories
- Link from the catalog
- Work with known allies
- Never miss an opportunity

Recent improvements to service

- Full text
- Provide use statistics
- Sub-communities
- Create links between collections

Further improvements

- Digitize documents
- Support the investigation of copyright
- Implement Creative Commons licenses
- Modify the user interface and develop searching guides
- Contribute further to code developments

Collaborative opportunities

- Share information
- Share strategies
- Develop federated search of repositories
- Develop shared collections

Challenges for the future

- Get buy-in at the highest institutional levels
- Refine the preservation program
- Keep abreast of changing technology
- Develop self-submission model more fully

Strategies for future growth: UO

- Continue to acquire content
- Continue to promote shamelessly
- Align more closely with instructional programs
- Establish a campus advisory group
- Develop searching guides
- Integrate the IR in the new website design

How do we measure success?

- Expanding access to materials
- Capturing grey literature
- Enhancing instruction
- Highlighting individual achievement
- Increasing institutional visibility
- Integrating different types of content
- Increasing collaboration

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