Institutional repositories

Alma Swan

Institutional Repositories

Dr. Alma Swan
Enabling Open Scholarship
Key Perspectives Ltd

What are institutional repositories?

• Digital collections
• Most usually institutional
• Sometimes centralised (subject-based)
• Interoperable
• Form a network across the world
• Create a global database of openly-accessible material
• Currently >2000 in total

Source: OpenDOAR: www.opendoar.org
Repository types

- Institutional (universities, research institutions)
  - Collect directly from institutional authors
- Centralised (PubMed Central, arXiv, RePEc, OpenAIRE)
  - Collect directly from authors
  - Harvest from institutional repositories

Technical notes (1)

- Operate in compliance with OAI-PMH
- Thus interoperable
- Mostly open source software (e.g. EPrints, DSpace)
Technical notes (2)

- Repository services:
  - Institutional (e.g. usage statistics, author profiles, publishing)
  - National or global (ROAR*, OpenDOAR**, ROARMAP***, national search services)
- Google and other Web search engines

* Registry of Open Access Repositories: http://roar.eprints.org/
** Open Directory of Open Access Repositories: http://opendoar.org/
*** Registry of Open Access Repositories Mandatory Archiving Policies: http://roarmap.eprints.org/
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Repository models (3)

Institutional repositories
Central subject repositories
Readers
Authors
Harvesting

One of the most important services that have been built over the repository space

Institutional repositories

• Potential for growth in numbers is large
• Fulfil a number of functions
• Main function to date is to provide Open Access
• Benefits for:
  – Institution
  – Authors
  – Research
  – Wider society

Institutional roles of repositories

• Maximise the visibility of research outputs
• Showcase the institution
• Collect and curate the digital scholarship of the institution
• Provide research monitoring and assessment tools
• Support data-intensive research
• Support collaborative or multi-disciplinary research
• Support teaching and learning activities
• Provide space for work-in-progress

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What they contain

<table>
<thead>
<tr>
<th>% repositories</th>
</tr>
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<tbody>
<tr>
<td>0  10  20  30  40  50  60  70</td>
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<tr>
<td>Journal articles</td>
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<tr>
<td>Thesis &amp; dissertations</td>
</tr>
<tr>
<td>Unpublished reports and working papers</td>
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<tr>
<td>Conference and workshop papers</td>
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<tr>
<td>Books, chapters and sections</td>
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<tr>
<td>Multimedia and audiovisual material</td>
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<tr>
<td>Other special items</td>
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<tr>
<td>Learning objects</td>
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<tr>
<td>E-Book, e-reference</td>
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<tr>
<td>Datasets</td>
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<tr>
<td>Software</td>
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<tr>
<td>Patents</td>
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</tbody>
</table>

Levels of OA in repositories by subject

% literature that is OA

Data: Yassine Gargouri and Stevan Harnad

Benefits to institutions

- Fulfils a university's mission to engender, encourage and disseminate scholarly work
- Provides a complete record of its intellectual effort
- Provides a permanent record of all digital output
- Is a research management tool
- Is a marketing tool for universities
- Provides maximum Web impact for the institution
Benefits to authors

- Visibility
- Usage
- Impact
- Personal profiling and marketing

Visibility and usage through repositories

<table>
<thead>
<tr>
<th>Repository</th>
<th>Full-text items</th>
<th>Downloads per month</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORBi (Univ Liege, Belgium)</td>
<td>40,000</td>
<td>45,000</td>
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<tr>
<td>USIR (Univ Salford, UK)</td>
<td>1,500</td>
<td>25,000</td>
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<tr>
<td>School of Electronics &amp; Computer Science (Univ Southampton, UK)</td>
<td>6,000</td>
<td>30,000</td>
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Author testimony (1)

“Self-archiving in the PhilSci Archive [an open access repository for philosophy] has given instant world-wide visibility to my work.

As a result, I was invited to submit papers to refereed international conferences/journals...”
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Author testimony (2)

"...ePrints [university repository] provides access to research from a global audience...

I have received many queries from researchers in countries where the research agenda is less well developed, seeking information about my research."

Author, Queensland University of Technology, Brisbane, Australia

Impact

% increase in citations for OA articles compared to non-OA articles

<table>
<thead>
<tr>
<th>Category</th>
<th>0</th>
<th>50</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>250</th>
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<tr>
<td>Physics</td>
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<td>Biology</td>
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Range = 36%-250%
(Data: Stevan Harnad and co-workers)

Personal profiling
Benefits to research

• Researchers spend less time finding and accessing information:
  – For their own research
  – For peer review
  – For writing

• Interdisciplinary research is facilitated

• Research moves faster and more efficiently

• New technologies enable new kinds of knowledge creation

Benefits to wider society

• Professional communities

• Practitioner communities

• Patient advocacy groups (and patients!)

• Small and medium-sized businesses (SMEs)

• ‘Other curious minds’ (e.g. citizen scientists)
Which kinds of businesses could benefit from Open Access repositories?

- Healthcare services
- Civil engineers
- Construction companies
- Accountancy firms
- Archaeology services
- Horticulturalists
- Social service firms
- Consultancies

Author testimony (3)

“QUT ePrints has allowed me to discover new research partners, or contacts in the community. Just last week, the General Manager of Sustainable Development from an Australian rural industry called me – based on reading one of my research papers in ePrints. He loved what he read ... and we are now in discussion about how we can help them measure their industry’s social impacts.”

Author, Queensland University of Technology, Brisbane, Australia

Author testimony (4)

“...a few weeks ago X was contacted by a firm of solicitors in Melbourne. They are representing ... a number of Aboriginal people.

The lawyers had seen our article on ePrints and asked X if he would give expert evidence to a hearing in the Federal Court this month.”

Author, Queensland University of Technology, Brisbane, Australia
Business issues (1)

- Making the business case in an institution

The business case

<table>
<thead>
<tr>
<th>Business reasons</th>
<th>Institutional payoffs</th>
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<tbody>
<tr>
<td>Visibility of research</td>
<td>Improved visibility for institution</td>
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<tr>
<td>Free access to research</td>
<td>Greater impact</td>
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<tr>
<td>Collection and preservation of outputs</td>
<td>Marketing and showcasing</td>
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<tr>
<td>Research management</td>
<td>Secure, trusted archive</td>
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<td>Support collaborative research programmes</td>
<td>Easier assessment of the institution’s research activities</td>
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<tr>
<td>Support data-intensive research</td>
<td>Facilitation of collaborative research</td>
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<tr>
<td>Develop special/legacy collections</td>
<td>Secure storage for research datasets</td>
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<td>Support teaching and learning</td>
<td>Facilitation of workflow for researchers</td>
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<td></td>
<td>Securing the historical record</td>
</tr>
</tbody>
</table>

Business issues (2)

- Make the business case in an institution
- Set up a pilot (optional)
- Establish the repository
- Build or link to services that support it
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Business issues (3)

• Develop a policy and advocate it to authors
• Put in place evaluation systems/processes
• Plan for sustainability
• Plan for change

The future I: supporting openness

• File formats
• Licensing issues

The future II: research data

• Open data
• Data management

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Thank you

Two resources for more information:
Enabling Open Scholarship (www.openscholarship.org)
OASIS (www.openoasis.org)