Practices and Patterns in Research Information Management

Findings from a Global Survey

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Some (not so) Random Examples
How much are we spending for Open Access?

From *The Shadow Acquisitions Budget: APCs and Open Access Publications at a Research University*
William H. Mischo & Thomas H. Teper (UIUC) – CNI Meeting, December 2018
https://youtu.be/mqm7siVBGe4

### UIUC Gold OA 2013-2018 Top 16

<table>
<thead>
<tr>
<th>Title</th>
<th>Articles</th>
<th>APC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLoS One</td>
<td>388</td>
<td>$1,495.00</td>
<td>$580,060.00</td>
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<tr>
<td>Journal of High Energy Physics</td>
<td>243</td>
<td>$0.00</td>
<td>$0.00</td>
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<tr>
<td>Scientific Reports</td>
<td>205</td>
<td>$1,675.00</td>
<td>$343,375.00</td>
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<tr>
<td>European Physical Journal C, Zeitschrift fur Physik C-Particles and Fields</td>
<td>191</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, Physics Letters B</td>
<td>186</td>
<td>$0.00</td>
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<tr>
<td>Nature Communications</td>
<td>164</td>
<td>$5,200.00</td>
<td>$852,800.00</td>
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<tr>
<td>Optics Express</td>
<td>74</td>
<td>$1,400.00</td>
<td>$103,600.00</td>
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<tr>
<td>Nucleic Acids Research</td>
<td>54</td>
<td>$2,670.00</td>
<td>$144,180.00</td>
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<tr>
<td>BMC Genomics</td>
<td>53</td>
<td>$2,245.00</td>
<td>$113,685.00</td>
</tr>
<tr>
<td>Journal of Veterinary Internal</td>
<td>42</td>
<td>$1,700.00</td>
<td>$71,400.00</td>
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<tr>
<td>Medicine</td>
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<td>GCB Bioenergy</td>
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<td>$2,500.00</td>
<td>$97,500.00</td>
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<td>eLife</td>
<td>38</td>
<td>$2,500.00</td>
<td>$95,000.00</td>
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<td>Atmospheric Chemistry and Physics</td>
<td>33</td>
<td>$1,300.00</td>
<td>$42,900.00</td>
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<tr>
<td>RSC Advances</td>
<td>33</td>
<td>$958.00</td>
<td>$31,614.00</td>
</tr>
<tr>
<td>Frontiers in Human Neuroscience</td>
<td>31</td>
<td>$2,490.00</td>
<td>$77,190.00</td>
</tr>
<tr>
<td>Frontiers in Plant Science</td>
<td>31</td>
<td>$2,490.00</td>
<td>$77,190.00</td>
</tr>
</tbody>
</table>
University of Arizona
How can we unlock all the data in faculty CVs?

From Research Information Management: Libraries Leading the Way
Bryant, Fransen, Oxnam, and Rauh – ACRL 2019, Later this week!
How can we show the impact of equipment and facilities?

From University of Minnesota Libraries: RIM Use Cases website
https://z.umn.edu/RIMUseCases
State of Ohio

How can we connect Ohio businesses with university expertise?

From Ohio Innovation Exchange
https://www.ohioinnovationexchange.org/
How can we prepare for REF 2021*?

What do I need to do?

Make sure your work can meet institutional and REF requirements by uploading your Author Accepted Manuscript* in Pure as soon as possible along with the date of acceptance. *This is your full text version of the manuscript after peer review and including any final changes, but before publisher typesetting or copy-editing by the publisher. Please do not upload final publisher versions, or typeset proofs.

Log in to Pure and upload your paper as soon as it is accepted, with the date of acceptance – the Library will take care of the rest.

Crucial actions for researchers:

- Acknowledged funders in publications, including grant number(s)
- Deposit your author accepted manuscript in Pure at the point of acceptance, along with the date of acceptance – the Library will then be able to see all the details, complete the record, and can give appropriate advice
- Link publications with the relevant grant in Pure
- Send any queries with details of your accepted manuscript to openaccess@st-andrews.ac.uk

*REF 2021 is the Research Excellence Framework. See https://www.ref.ac.uk/ for more information.

From University of St Andrews Library website
https://www.st-andrews.ac.uk/library/services/researchsupport/openaccess/
What do these examples have in common?
RIM Systems are used to collect the scholarly output of an institution.

And allow it to be combined with other information collected on campus.

“RIM Metadata” by OCLC Research, from Research Information Management: Defining RIM and the Library’s Role (doi.org/10.25333/C3NK88), CC BY 4.0
RIM Systems are used to collect the scholarly output of an institution. And allow it to be combined with other information collected on campus.

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Is this a trend?

Learning more…
• Devoted to challenges facing libraries and archives since 1978
• Community resource for shared Research and Development (R&D)
• Engagement with OCLC members and the community around shared concerns
• Learn more
  ▪ oc.lc/research
  ▪ Hangingtogether.org blog
OCLC Research publications on Research Information Management

Research Information Management: Defining RIM and the Library's Role

Convenience and Compliance: Case Studies on Persistent Identifiers in European Research Information Management

Practices and Patterns in Research Information Management: Findings from a Global Survey
RIM = The aggregation, curation, & utilization of metadata about research activities
The aggregation, curation, & utilization of metadata about research activities

RIM =

Overlapping terms:

- CRIS (Current Research Information System)
- RIS (Research Information System)
- RNS (Research Networking System)
- RPS (Research Profiling System)
- EFS (Expert Finder System)
- FAR (Faculty Activity Reporting)
Practices and Patterns in Research Information Management: Findings from a Global Survey

Rebecca Bryant, PI, OCLC Research
Pablo de Castro, Strathclyde University and euroCRIS
Anna Clements, University of St. Andrews and euroCRIS
Annette Dortmund, OCLC EMEA
Jan Fransen, University of Minnesota, Twin Cities
Michele Mennielli, DuraSpace and euroCRIS

Plus a number of valuable collaborators at OCLC
Results we’ll be talking about

- Incentives for RIM Adoption
- Functions/Uses of RIM
- Interoperability
- RIM Stakeholders
- Use of Persistent Identifiers
Methodology and Promotion

- Online survey data collection: Oct 2017 – Jan 2018
  - English and Spanish versions

- Survey promotion through:
  - OCLC and euroCRIS communications channels and events worldwide
  - Communications by RIM vendors and user communities
  - Listservs, social media, and announcements to research & library organizations
RIM Survey responses: geographic overview

381 survey respondents from 44 countries

Respondents by Region (n=381)*

- **EMEA, 152, (40%)**
- **APAC, 32, 8%**
- **AMER, 90, 24%**
- **Unknown,**, 107 (28%)

- **UK** 39 (10%)
- **Italy** 28 (7%)
- **Germany** 14 (4%)
- **Netherlands** 10 (3%)
- **Portugal** 7 (2%)
- **Poland** 6 (2%)
- **Spain** 6 (2%)
- **Belgium** 5 (2%)
- **Ireland** 5 (2%)
- **South Africa** 4 (1%)
- **Andorra** 3 (1%)
- **Finland** 3 (1%)
- **India** 3 (1%)
- **Austria** 2 (0.5%)
- **Bahrain** 2 (0.5%)
- **Denmark** 2 (0.5%)

*1 respondent from each of the following countries:
Afghanistan, Albania, Azerbaijan, Barbados, Belize, Brazil, China, Croatia, Egypt, Kyrgyzstan, India, Iran, Iraq, Lebanon, Liechtenstein, Luxembourg, Malaysia, Mexico, Namibia, Netherland, Nigeria, Pakistan, Portugal, Qatar, Romania, Saudi Arabia, South Africa, Sri Lanka, Sweden, Turkey, Ukraine, United Arab Emirates and Uruguay

**107 respondents did not provide a country
Research Information Management Systems

Well over half (58%) have a live RIM System

Respondents by RIM Status (n=381)
Note: 29 respondents did not provide their RIM system

- EMEA 26%
- Americas 8%
- APAC 7%
- Unknown 17%
- Exploring 12%
- Procuring 4%
- Not considering 13%

RIM Systems in Use by Survey Respondents (n=193)
Note: 29 respondents did not provide their RIM system

- Pure (Elsevier) 30%
- Developed in-house 28%
- Elements (Symplectic) 12%
- DSpace-CRIS (Open source) 10%
- Converis (Clarivate Analytics) 10%
- VIVO (Open source) 4%
- Profiles (Open source) 1%
- Other 36%

Practices and Patterns in Research Information Management: Findings from a Global Survey (DOI:10.25333/BGFG-D241), CC BY 4.0
“Please indicate the importance of the following reasons for pursuing RIM activities”

- Managing annual academic activity reporting
- Supporting expertise discovery
- Supporting institutional compliance (e.g., funder mandates, national assessment exercise like REF or ERA, etc.)
- Supporting institutional reputation and strategic decision making
- Improving services for researchers
- Recording institutional research facilities and their use
Reporting and compliance drive RIM adoption
Managing annual academic activity reporting
58% 28% 9% 1%

Supporting institutional compliance
53% 26% 12% 5% 4%

Supporting expertise discovery
23% 46% 20% 7% 4%
Reasons for adoption:

- US is an outlier
  - No national compliance requirements
  - Early emphasis on Research Networking Systems (e.g., Harvard Profiles)

- Action for the next survey
  - Different platforms emphasize different capabilities, so…
  - Increase promotion to Profiles RNS and VIVO communities

- Research Question for the next survey
  - Will incentives for new adopters of RIM shift away from compliance and toward expertise discovery?
  - Most institutions with reporting mandates will have already implemented RIM
“How important are the following functions of RIM at your institution?”

- Registry of institutional research output
- Publicly available researcher profiles
- Reporting scholarly impact
- Reporting societal impact
- External (e.g., National) research assessment
- Internal reporting
- Annual academic activity reporting workflows
- Awards/grants management workflows
- Compliance and open access to publications
- Reuse (in CVs, biosketches, other web pages)
- Identifying collaborators or expertise
### Important Functions of RIM (n=203)

**Base: Institutions with a live RIM system**

<table>
<thead>
<tr>
<th>Function</th>
<th>Extremely important</th>
<th>Important</th>
<th>Somewhat important</th>
<th>Not important</th>
<th>N/A or Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registry of institutional research outputs</td>
<td>77%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External (e.g., National) research assessment</td>
<td>56%</td>
<td>19%</td>
<td>11%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Internal reporting</td>
<td>52%</td>
<td>37%</td>
<td>8%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Publicly available researcher profiles</td>
<td>44%</td>
<td>34%</td>
<td>11%</td>
<td>3%</td>
<td>8%</td>
</tr>
<tr>
<td>Compliance and open access to publications</td>
<td>45%</td>
<td>29%</td>
<td>14%</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Annual academic activity reporting workflows</td>
<td>35%</td>
<td>31%</td>
<td>15%</td>
<td>7%</td>
<td>11%</td>
</tr>
<tr>
<td>Reporting scholarly impact</td>
<td>32%</td>
<td>42%</td>
<td>20%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Awards/grants management workflows</td>
<td>29%</td>
<td>26%</td>
<td>15%</td>
<td>4%</td>
<td>16%</td>
</tr>
<tr>
<td>Reuse (in CVs, biosketches, other web pages)</td>
<td>27%</td>
<td>39%</td>
<td>19%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Compliance and open access to research datasets</td>
<td>28%</td>
<td>26%</td>
<td>21%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Identifying collaborators or expertise</td>
<td>22%</td>
<td>36%</td>
<td>26%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Reporting societal impact</td>
<td>20%</td>
<td>33%</td>
<td>29%</td>
<td>6%</td>
<td>12%</td>
</tr>
</tbody>
</table>
Importance of RIM System as Registry of Institutional Research Outputs

- Netherlands (n=8): 8 Extremely important, 2 Important, 1 Somewhat important, 0 Not important, 0 N/A or Not Sure
- Australia (n=21): 20 Extremely important, 1 Important, 1 Somewhat important, 0 Not important, 0 N/A or Not Sure
- United Kingdom (n=27): 25 Extremely important, 2 Important, 0 Somewhat important, 0 Not important, 0 N/A or Not Sure
- Peru (n=6): 5 Extremely important, 1 Important, 0 Somewhat important, 0 Not important, 0 N/A or Not Sure
- Italy (n=27): 21 Extremely important, 6 Important, 1 Somewhat important, 0 Not important, 0 N/A or Not Sure
- US & Canada (n=21): 10 Extremely important, 8 Important, 2 Somewhat important, 0 Not important, 1 N/A or Not Sure

OCLC

Practices and Patterns in Research Information Management: Findings from a Global Survey (DOI:10.25333/BGFG-D241), CC BY 4.0
Use of RIM Systems to support repository functions

Does Your RIM System Serve as Your Default...

<table>
<thead>
<tr>
<th>Repository Type</th>
<th>Yes</th>
<th>No</th>
<th>Don't know</th>
<th>N/A</th>
<th>N/A or Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional repository</td>
<td>54%</td>
<td>41%</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>ETD repository</td>
<td>37%</td>
<td>52%</td>
<td>2%</td>
<td>9%</td>
<td>3%</td>
</tr>
<tr>
<td>Research data repository</td>
<td>24%</td>
<td>64%</td>
<td>9%</td>
<td>2%</td>
<td>3%</td>
</tr>
</tbody>
</table>

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Institutions with a live RIM system reporting that their RIM system serves as their default institutional repository/ETD repository/research data repository, with regional subdivisions by OCLC and euroCRIS, Practices and Patterns in Research Information Management: Findings from a Global Survey (DOI:10.25333/BGFG-D241), CC BY 4.0

Does Your RIM System Serve as Your Default...

<table>
<thead>
<tr>
<th>Repository Type</th>
<th>Europe (n=95)</th>
<th>US &amp; Canada (n=22)</th>
<th>Australia (n=21)</th>
<th>Other (n=19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional repository</td>
<td>69%</td>
<td>14%</td>
<td>33%</td>
<td>47%</td>
</tr>
<tr>
<td>Research data repository</td>
<td>23%</td>
<td>9%</td>
<td>14%</td>
<td>53%</td>
</tr>
<tr>
<td>ETD repository</td>
<td>48%</td>
<td>0%</td>
<td>24%</td>
<td>42%</td>
</tr>
</tbody>
</table>
RIM has **multiple** uses at most institutions:

- External & internal assessment are among the most important (and unsurprising)
- Managing OA compliance is also important
- Supporting the discovery of potential research collaborators is less important
Stakeholders
Primary stakeholders based on total number of mentions across all responses for all areas of activity, in aggregate. Note that multiple primary stakeholders could be selected per area of activity by OCLC and euroCRIS, Practices and Patterns in Research Information Management: Findings from a Global Survey (DOI:10.25333/BGFG-D241), CC BY 4.0
Stakeholders with Primary Responsibility for RIM Activities by Country

Based on # of Mentions (Decreasing Importance of Library)
Base: Institution with a Live RIM system

Practices and Patterns in Research Information Management: Findings from a Global Survey (DOI:10.25333/BGFG-D241), CC BY 4.0
Persistent Identifiers
Researcher Identifiers Used in Your RIM system (n=182)

Note: Respondents could select more than one answer

- ORCID: 73%
- Scopus ID: 60%
- ResearcherID: 35%
- PubMed ID: 29%
- ArXiv ID: 9%
- National authority files: 7%
- ISNI: 3%
- Other (Please specify):
  - Google Scholar ID (n=4)
  - SSRN (n=3)
  - Codice fiscale (Italy) (n=19)
- None of the above: 15%
Organization Identifiers Used in Your RIM System (n=162)

Note: Respondents could select more than one answer

- None of the above: 77%
- National authority files: 6%
- GRID: 6%
- Ringgold: 5%
- CrossRef Funder Registry: 2%
Summary: Persistent Identifiers

- Congruent with our qualitative *Convenience and Compliance* findings
- Strong adoption of person identifiers
  - ORCID becoming a *de facto* standard in scholarly literature, but other identifiers also needed and used
  - Organizational identifiers largely unused . . . for now


Discussion

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