Research outputs: You want me to do what?!?

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The Agenda

1. The challenge(s) -- 30 minutes
   a. The overall environment
   b. Stories and Perspectives of Researchers/Librarians/VPR/Provost

2. Is there a solution? -- 20 minutes
   a. A vendor perspective

3. Q & A – 10 minutes
The University of Iowa is Iowa’s largest comprehensive research university, with a balanced commitment to the arts, sciences, and humanities. It’s home to one of the nation’s largest academic medical centers and the pioneering Iowa Writers’ Workshop.

Total Federal & Non-Federal Research Funding FY16: $437.9m
The Overall Environment

- Research Data Management Systems
- Institutional Repositories
- Current Research Information Systems
- Research Administration Systems
- Locally Developed
- Globus
- PIVOT
- VIVO
- Digital Measures
- CONTENTdm®
- DSpace
- Fedora™
- Islandora
- BePress™
- Omeka
- The University of Oklahoma Libraries
- The University of Iowa Libraries

Red box = library didn’t stand it up, but we work with & may end up maintaining it.
Perspectives: 
What do researchers want?

• How can I do my work:  
  • Faster  
  • More efficiently  
  • W/O extra work!!

• One place to deposit
• More visibility/citations for their research
• One place to manage external profile & publication lists
• Monitor research data requests (for reuse & verification)
Perspectives:
What do researchers want?

- Not be required to fill in a long list of metadata fields
- Help convince Provost that research data reuse should count towards tenure & promotion
- Produce data management plan summaries from long versions
Perspectives: What do librarians want?

• Fewer systems/silos/stacks
  • Each has different workflows, interface
• Aggregating/Indexing/Searching the silos is challenging
• A way to support researchers at scale (not 1-on-1)
• Standards on what an object should be/contain
  • New ones get invented all the time, but none get retired!
• Better metadata on research objects
• Faster ways to generate research object metadata
• More comprehensive capture of all of the institutional research objects generated
Perspectives:
What does the VPR’s Office want?

• Managing grant compliance, specifically:
  • Research data management plan compliance (when we find out exactly what that is!)
  • Publication compliance with OA funder mandates

• Metrics on research data usage

• New processes to interweave into existing processes. No new overhead or silos!

• Greater access, dissemination & reuse of research data, research outcomes and even faculty that generate all of this
Perspectives:
What do Provosts want?

1. Student Success
2. Faculty Impact
3. Community Impact
4. Brand Equity

1. Students getting value.
2. Less complicated solutions.
3. Quality
4. A holistic picture
5. Complete and accurate data.
Perspectives:
What do Provosts want?

Advise decision-making
Is there a solution to all this?!?

Esploro
by
ExLibris
The bridge to knowledge
So, what are we hearing

The Goal

A growing need and an urgency to collect, curate and disseminate data about research outputs and activities at an institutional level, to improve and promote: Visibility, Impact and Compliance

(*) Although there are significant regional variations (mandates, regulations, national assessments, technology adoption, organizational cultures, etc.) - we are hearing similar stories and experiences in many universities, globally
Basically

Institutional Research Records

Do a few useful things

- Discoverability & Re-Usability
- Reports & Dashboards: “what is going on”
- Analytics & Metrics: Trends, Impact, Assessment reports
- Services: Publishing (OA), Preservation

This is ‘our’ research stuff!
# Challenges

<table>
<thead>
<tr>
<th>How to get the data</th>
<th>Curation</th>
</tr>
</thead>
<tbody>
<tr>
<td>What data to get</td>
<td></td>
</tr>
<tr>
<td>How to manage &amp; improve it</td>
<td>Management</td>
</tr>
<tr>
<td>Do useful things with it</td>
<td>Dissemination</td>
</tr>
<tr>
<td>Add Value (&quot;why should I do it?&quot;)</td>
<td>YES</td>
</tr>
</tbody>
</table>

@scale Sustainable
Better Data is Key

Curated, and enriched data is key to improve research visibility, compliance, and efficiency, and drive greater impact of research outputs.

Wide range of Research Objects (Outputs and Activities)

<table>
<thead>
<tr>
<th>PUBLICATIONS</th>
<th>CREATIVE WORK</th>
<th>RESEARCH DATA</th>
<th>PROCESSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final versions, pre-prints, ETDs, etc.</td>
<td>Audiovisuals, media installations, drawings, compositions, etc.</td>
<td>Datasets, raw data, computations, tables, spreadsheets, etc.</td>
<td>Code, Software, ELNs, etc.</td>
</tr>
</tbody>
</table>

Systematic and sustainable data management

- Automated curation
- Metadata enrichment
- Discoverability & accessibility (public/restricted)
- Linking research objects and metadata
- Digital preservation
Getting the Data – a changed paradigm

More streamlined Author Archive/Deposit, Interwoven into their work

- Simple, embedded and integrated
- Automated Metadata (when possible) and notifications
- Review/Edit vs. Fill-in forms

More comprehensive automatic captures from external sources

- Published content (e.g. Indexed by Library discovery)
- Disciplinary and Specialized Repositories
- National Repositories
Research Objects Flows Today

Institutional Repository

Research Data

Publications

Data & Processes

Disciplinary / Specialized Repositories

Published Content

Direct Deposit

Sometimes
Creating a Comprehensive View of Research Objects

- Early triggers from research project for data planning
- Allow reporting back to funders

• Metadata and ID enrichment
• Links b/w publications and data
• Controlled vocabularies
• Library mediated, when required (WF based)
• Feeds of enriched data back to source (where possible)
• Adding flags & triggers for OA, sensitive data etc.

Research Office

Grants / HR / Project

Institutional System of Research Records

Publications & Data

Publications

Data & Processes

Published Content

Central Index (Primo/Summon)

Disciplinary / Specialized Repositories

Research Services Platform

External
Flexible Data Model is Needed

Simple asset – metadata and files
Related assets (e.g. publication and related data)
Flexible Data Model

Simple asset – metadata and files
Related assets (e.g. publication and related data)
Aggregated research object
Supports Linked Data standard
Creating a Unified System of Records for all Research Objects

Moving beyond the traditional institutional repository:
Capturing a comprehensive record of research objects in a unified, metadata rich, cloud-based repository

Research Objects Management

- Rule-based workflows
- Access rights management
- Storage
- Publications
- Creative works
- Research Data
- Processes, Activities

Unified & comprehensive
Workflow-based
Integrated analytics
Quality metadata
Mediate & unmediated
Broad dissemination

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The Framework: Research Services Platform

Dissemination
- Researcher
- VPR
- Discovery

Researcher Profiles

Analytics & Reports

Research Objects Management
- Publications
- Creative Work
- Research Data
- Processes

Metadata curation and enrichment

Researcher Deposit

Automatic Capture
Paving the way to greater impact of academic research by driving visibility, efficiency, and compliance of research activities, leveraging library expertise and technology
Building **Esploro**

Study and research – conversation with more than 30 universities (NA, EU, UK, ANZ)

**Development partnership** with five universities:

- Lancaster University
- Sheffield University
- University of Oklahoma
- University of Miami
- University of Iowa

Development is underway
WIP/Open Issues

Researcher engagement:
- What value researchers gain of this system?
- How can we entice engagement/usage?

Data model flexibility

Metrics

Consortia

Cross Institutional
Thank you!

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