Libraries at the Heart of Teaching, Learning, and Research: Research Services Platform

Oren Beit-Arie | Chief Strategy Officer, Ex Libris
ELUNA Strategy Update: A Framework for Next-Generation Library Services

Oren Beit-Arie, Chief Strategy Officer
ELUNA 2008 | July 30, 2008
Key Goals of Next-Gen Library Services Framework

- Work more efficiently
- Focus on areas of value
- Drive new services

Enable shifting focus to the strategic
The Evolving Role of Libraries

Teaching & Learning
Research
Provost & CIO

Library Staff
Library Collections
Library Systems

Library
Strengthening Library’s Impact Across the Institution

Library

Students
Instructors

Researchers
Provost & CIO
Researchers

publish  publish  publish

(funding, collaborators, tenure)
Research Process, Drivers and Goals

Compliance with mandates and policies around openness and re-use of funded research require sustainable and systematic research outputs & data management.

Growing competition for funding and prestige drive the need for better visibility and recognition of research outputs - both at the individual researcher and the university level.
Research Outputs are Increasingly Diverse

The intellectual work of faculty (and students)

- **Publications**: Published version, Author accepted manuscript, pre-prints, ETDs, etc.
- **Data**: Evidence: Datasets, raw, computational, tables, spreadsheets, images, etc.
- **Processes**: Code, Software, ELNs, etc.

Data and Processes may be final or “active/in-process”

Outputs may be public or need to be restricted
The Institutional Goal

Capture Research Outcomes:
Improve Visibility, Impact and Compliance

Discovery
- Specialized ("Native")
- External (e.g. Google,...)
- Institutional and Aggregated

Analytics, Dashboards
- "what is going on?"

Publication Lists
- Researchers Profiles

Reports
- (compliance)

Metrics
Publishing (OA,...)
Preservation
### A table summarizing the Federal public access policies resulting from the US Office of Science and Technology Policy memorandum of February 2013


#### Overview of OSTP Responses

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<td>Published Outputs</td>
<td>Data</td>
<td>Time Limits</td>
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# It's complicated

A table summarizing the Federal public access policies resulting from the US Office of Science and Technology Policy memorandum of February 2013.

<table>
<thead>
<tr>
<th>CFDA</th>
<th>Funder</th>
<th>Link to Response</th>
<th>Timeline to Implement</th>
<th>Policy Coverage</th>
<th>Policy Coverage</th>
<th>Policy Stipulations</th>
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<tr>
<td>93.598</td>
<td>AQL/NIDRR</td>
<td><a href="http://www.nidrr.nih.gov/Programs/NIDILRR/docs/ACU-PublicAccessPlan-JA.pdf">link</a></td>
<td>Oct 2016 (A), Oct 2017 (D)</td>
<td>full</td>
<td>partial</td>
<td>partial</td>
<td>Within 12 months (A),</td>
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<td>AHRQ</td>
<td><a href="http://grants.nih.gov/grants/guide/notice-files/NOT-HS-15-008.html">link</a></td>
<td>Feb 2015 (A), Oct 2015 (D)</td>
<td>full</td>
<td>full</td>
<td>full</td>
<td>Within 12 months (A), with article publication (D)</td>
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<td></td>
<td>ASPR</td>
<td><a href="http://www.phe.gov/Preparedness/planning/science/Pages/AccessPlan">link</a></td>
<td>Oct 2015 (A, D)</td>
<td>full</td>
<td>full</td>
<td>full</td>
<td>Within 12 months (A), with article publication within 30 months of collection (D)</td>
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<td></td>
<td>CDC</td>
<td><a href="http://www.cdc.gov/od/odc/docs/Final-CDC-Public-Access-Plan-Jan-2015.pdf">link</a></td>
<td>Jul 2013 (A), Oct 2015 (D)</td>
<td>full</td>
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<td>full</td>
<td>Within 12 months (A), with article publication within 30 months of collection (D)</td>
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<td></td>
<td>DOD</td>
<td><a href="http://www.dtic.mil/wh/dd/pd/DoD_PubAccessPlan_Feb2015.pdf">link</a></td>
<td>estimate fiscal year 2015</td>
<td>full</td>
<td>full</td>
<td>full</td>
<td>Within 12 months (A), within a reasonable time (D)</td>
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<td></td>
<td>DOE</td>
<td><a href="http://www.energy.gov/dockets/policy-digital-research-data-management-and">link</a></td>
<td>Oct 2014 (A), Oct 2014 (Office of Science)</td>
<td>full</td>
<td>full</td>
<td>Within 12 months (A), with article publication (D), data sharing policy will be evaluated “beginning about three years after this policy goes into effect”, or Oct 2016</td>
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Rational ignorance is refraining from acquiring knowledge when the cost of educating oneself on an issue exceeds the potential benefit that the knowledge would provide.

Rational ignorance - Wikipedia
Research Support is a Key Library Goal

2016 top trends in academic libraries
A review of the trends and issues affecting academic libraries in higher education

Research data services (RDS)
The latest survey of U.S. and Canadian college and research libraries reports that the number of libraries offering research data services has remained flat.¹ This is somewhat unexpected, based on responses to the survey conducted by David Fearon² in which nearly a quarter of respondents indicated plans to offer a range of data services...

http://crln.acrl.org/index.php/crlnews/article/view/9505/10798#b4-0770274
Research Support is a Key Library Goal

NMC Horizon Report > 2017 Library Edition at a Glance

Trends Accelerating Technology Adoption in Academic and Research Libraries

- **Short-Term**
  - Driving technology adoption in academic and research libraries over the next one to two years
  - Research Data Management
  - Valuing the User Experience

- **Mid-Term**
  - Driving technology adoption in academic and research libraries over the next three to five years
  - Patrons as Creators
  - Rethinking Library Spaces

- **Long-Term**
  - Driving technology adoption in academic and research libraries for five or more years
  - Cross-Institution Collaboration
  - Evolving Nature of the Scholarly Record

Research Support is a Key Library Goal

NMC Horizon Report > 2017 Library Edition at a Glance

Challenges Impeding Technology Adoption in Academic and Research Libraries

- **Solvable**: Those that we understand and know how to solve
  - Accessibility of Library Services and Resources
  - Improving Digital Literacy

- **Difficult**: Those that we understand but for which solutions are elusive
  - Adapting Organizational Designs to the Future of Work
  - Maintaining Ongoing Integration, Interoperability, and Collaborative Projects

- **Wicked**: Those that are complex to even define, much less address
  - Economic and Political Pressures
  - Embracing the Need for Radical Change

Yet currently:
Consultancy, Project-based, lack of tools, no insights/analytics, no collaboration, disjoined from their main solutions (Alma/Discovery)
Research Functions and System Types Today

- Repository
- Research Data Management
- Publications
- CRIS / RIM
- Funding / Research Admin
- Publications Management
- IR
- RIM
Research Outputs Flows Today

Institutional / Local

- Publications
- Data & Processes

- IR
- RDM

sometimes

External

- Published Content
- Disciplinary Repositories

Publication Lists & Reports
Reputation and Impact

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Challenges of Increasing Complexities

Visibility & Compliance

Capturing the Institution’s Research Products

Multiple Silo-ed systems, many on premise; with different technologies and data models - integration is hard
Challenges of Increasing Complexities

Visibility & Compliance

Capturing the Institution’s Research Products

Researchers are inclined to share data with their research colleagues and discipline and less with the institution.
Challenges of Increasing Complexities

Visibility & Compliance

Capturing the Institution’s Research Products

Poor/Lack of Integration; many point solutions

Very Partial Researchers Engagement

Complicated Processes, Workflows

Lots of manual work; workflows (when exist) vary for different research disciplines, data types and open access mandates
Challenges of Increasing Complexities

Visibility & Compliance

Capturing the Institution’s Research Products

- Poor/Lack of Integration; many point solutions
- Very Partial Researchers Engagement
- Complicated Processes, Workflows
- Increasingly diverse data & poor metadata quality

Publications (published versions, author version, pre-prints, ETDs, etc.), data (Datasets, raw, computational, tables, spreadsheets, images, etc.) and processes (code/software, ELNs etc.); Limited metadata curation tools
Challenges of Increasing Complexities

Visibility & Compliance

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Dissemination & Reports

Reporting & Compliance
Challenges of Increasing Complexities

Visibility & Compliance

Capturing the Institution’s Research Products

Dissemination & Reports

Poor/Lack of Integration; many point solutions

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Reporting & Compliance

Consistent Analytics
Challenges of Increasing Complexities

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Dissemination & Reports

- Reporting & Compliance
- Consistent Analytics
- Discovery
Challenges of Increasing Complexities

Visibility & Compliance

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Dissemination & Reports
- Reporting & Compliance
- Consistent Analytics
- Discovery

Difficult to scale
Challenges of Increasing Complexities

Visibility & Compliance

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- Complicated Processes, Workflows
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Dissemination & Reports

- Reporting & Compliance
- Consistent Analytics
- Discovery

Difficult to scale

Lacking long term ownership
Many Unmet Needs

• I have a lot of data in a lot of places—raw data, pre-publication, published version,…
• I waste a lot of time on managing data and process
• I work with a cross-institutional research group
• I don’t understand the impact of the funder mandates
• My publication should be available in OA via the publisher soon
• Why should I share my research outputs and data with my university
• What’s In It For Me???

• IR model and workflows primarily for publication data
• We have separate repositories and solutions for other data: Raw data, code, eTDs, special collections, etc.
• Inadequate metadata tools result in low and inconsistent quality
• Too much manual work—hard to scale
• We have limited reporting and analytics capabilities to track all data
• Publishing capabilities from repositories are limited

We need to rethink the model!
Disruption Ahead
Our Approach

Leverage library skills and technology to **lead** strategic and mission-focused service in close collaboration with institutional research stakeholders.
Rethinking IR – A New Paradigm of Research Services Platform

A System of Records of the institution’s research outputs: capturing records of research publications, data & processes of the institution's research community

This is our research stuff!

- Unified & Comprehensive
- Quality Metadata!
- Workflow-based
- Mediate & Unmediated
- Integrated Analytics
- Broad Dissemination

The System of Research Records
Rethinking IR – A New Paradigm of Research Services Platform

The System of Research Records

How?

Capture Published Content (e.g. Journal Articles,...)

Researchers’ Deposits

‘Synch’ with External Repositories

where many researchers are...!

where researchers publish
Rethinking IR – A New Paradigm of Research Services Platform

**New Value**

**Added Value through tools and workflows:**
- Enhancing Metadata and IDs (with some automation)
- Applying controlled vocabulary
- Linking objects (e.g. data-to-publication, etc.)
- Adding triggers for e.g. for OA compliance workflow in line with publishers policies
- Adding flags and triggers for sensitive data, un-documented code, etc.
- And more...

**Leverage cloud platform & community zone concepts for efficiency and collaboration**
- Sharing templates, schemas, mandates, best practices...
- Institutional & cross institutional analytics and discovery

The System of Research Records
Research Services Platform

The Goal

Capture Research Outcomes:

Improve Visibility, Impact and Compliance
# Key Benefits

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<tr>
<th>Current Status</th>
<th>The Future</th>
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<tr>
<td>Diverse Point-Solutions</td>
<td>Unified system of research records</td>
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<tr>
<td>Many solutions are on premise</td>
<td>Full Cloud / SaaS based solution</td>
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<tr>
<td>Lacks structured workflow across solutions</td>
<td>Tailored &amp; sustainable workflows</td>
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<td>Limited visibility for the process and research achievements</td>
<td>Strong visibility &amp; compliance adherence</td>
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<tr>
<td>Publication centric data relying on researcher deposits</td>
<td>Widening the scope of data to all research outputs including automated aggregations and researcher deposits</td>
</tr>
<tr>
<td>Hard to change Researchers habits</td>
<td>Keep parts of what’s working well</td>
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Steps and Timeline

What we’ve done so far:

• Study and Research
• 30+ discussions w/diverse academic research libraries (US, EU, ANZ)
• Finalizing Development Partners program (US, EU)

Next steps:

• Launch Development Partners program (Jul ‘17)
• Requirements gathering, scope prioritization and conceptual design
• Agile development of functionality; including early partner releases (testing throughout 2018)
• Partners implementation end-2018
thank you
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