A Librarian’s Process for Building an Institutional Repository

LIBRARY CONNECT
BLUEPRINT FOR SUCCESS

http://libraryconnect.elsevier.com
Building an institutional repository is a big job, but like all big jobs it can be broken into a series of logical steps. Here’s a process you can customize for your library and institution.
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The Overall Process

Start

- Project initiation
- Define content
- Define feature set
- Define access protocols
- Define maintenance process
- Create metadata schema
- Choose tool
- Build/install and maintain system

Finish

Watch the Library Connect webinar “Institutional & research repositories: Characteristics, relationships and roles” to see 3 different approaches (http://goo.gl/wLkSH5)
Project Initiation

Start

Meet with stakeholders to define project goals

Define task force members + responsibilities

Create project documentation + deliverable timelines

Form project team

Create detailed project plan and team member responsibilities and goals

Set up a private group (https://goo.gl/CYh9JE) on Mendeley to share research and project documentation, or join a public group (https://goo.gl/ex2Xpc) to learn from other repository managers

Finish
Project Initiation

Start

Meet with stakeholders to define project goals

Define task force members + responsibilities

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Form project team

Create detailed project plan and team member responsibilities and goals

Finish

RELEVANT DECISION MAKERS
- Faculty representatives
- Library leadership
- Technical department heads
- IT representatives

TASK FORCE MEMBERS
- Chosen by stakeholders to represent them in everyday project consultation
- Possess necessary skills to guide and evaluate project progress

TEAM MEMBERS
- Anyone doing actual work on project (designers, developers, catalogers, etc.)

EXAMPLES
- Project plan
- Stakeholder registers
- Project calendars
- Deliverables and milestones
- Resource lists

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Will there be a mandate to upload?

- **No**:
  - Define content types and versions to include
  - Define repository taxonomy
  - Define relationship to institution’s digital collections
  - Finish

- **Yes**:
  - Define mandate parameters and policies

Consider the authors’ perspective by taking into account principles of academic freedom, reducing administrative burden and recognizing individual achievement.
**Define Content**

**Start**

- Will there be a mandate to upload? **no**
  - Define content types and versions to include
  - Define repository taxonomy
  - Define relationship to institution's digital collections
  - **Finish**

- **yes**
  - Define mandate parameters and policies

**Content Types**
- Theses and dissertations
- Articles (accepted MS, DOI full-text final versions, OA PDFs)
- Conference proceedings
- Chapters of books
- Research datasets
- Lecture notes and/or videos
- APIs/software applications
- Metadata
- Abstracts

**System Options**
- Entirely independent systems?
- Shared CMS/DB with separate UIs?
- Shared system, different access points?
- Commingled content?
Define Feature Set

Start

Conduct requirements definition sessions with stakeholders

Identify desired functionality

Prioritize features

Finish

What other systems should the IR integrate with? Can it ingest APIs to help automate processes? Does it offer APIs to update departmental websites?
Define Feature Set

Start

**Conduct requirements definition sessions with stakeholders**

**Identify desired functionality**

**Prioritize features**

Finish

**POTENTIAL FEATURES**

- Site navigation
- Discovery modes (browse, search, advanced search, special featured content, geolocation, timeline display, heat maps)
- Data sharing (API access, citations, metadata download)
- Download of artifact copies
- Integration into main library site
- Integration with online catalog
- Feedback/customer support
- Reciprocity with other internal sources such as departmental sites? (faculty profiles, etc.)
Create Metadata Schema

1. Start
2. Review existing metadata for target artifacts
3. Choose schema based on metadata needs
4. Define base metadata set
5. Define metadata completeness threshold for artifact publication
6. Define responsibilities for new artifact metadata creation
7. Create metadata set
8. Are schema extensions needed for specific artifact types? (yes/no)
   - Yes: Create metadata set extensions
   - No: Define responsibilities for new artifact metadata creation
9. Finish

Automate repository updates with ScienceDirect metadata. ScienceDirect APIs can check entitlements, link users to the best available version, display an access indicator, check embargo end dates and embed final articles. (https://goo.gl/4V6GJ9)
Create Metadata Schema

Start

Review existing metadata for target artifacts ➔ Choose schema based on metadata needs ➔ Define base metadata set

Are schema extensions needed for specific artifact types?

yes ➔ Create metadata set extensions ➔ Define metadata completeness threshold for artifact publication ➔ Define responsibilities for new artifact metadata creation ➔ Finish

no ➔

The breadth and types of content expected to be included in the IR will dictate which schema fits best (DC, RDF, MODS, MARC, etc., or some specifically created hybrid).
Define Access Protocols

User types may include institutional users (can be entitled or non-entitled institutions) and external entitled and non-entitled users.

Start

Need to differentiate access based on user profiles?

Yes

Define user types

Create user type permissions profiles

Assign permissions profile to artifact categories

No

Need to differentiate access based on user location?

Yes

Create location permission profiles

No

Finish
Define Access Protocols

Start

Need to differentiate access based on user profiles?

yes

Define user types

Create user type permissions profiles

Assign permissions profile to artifact categories

Need to differentiate access based on user location?

yes

Create location permission profiles

no

Finish

no

yes

USER TYPE EXAMPLES
- Admin
- Contributor
- Reference librarian
- Institutional user
- General public

Access to some artifacts may be allowed if user is in a certain location (e.g., a computer located in the engineering library building can access certain restricted engineering-related materials).
Define Maintenance

Start → Create ongoing staffing plan → Create policies and documentation → Create marketing and outreach plan → Create service-level agreement → Finish

Institutional repositories are welcome to host research published by Elsevier under these hosting guidelines: https://goo.gl/ymdwTB
Define Maintenance

- Who will manage the IR?
- Who can modify metadata/upload content?
- Who is responsible for intake of new materials?

- Create name
- Branding
- Launch announcement/press release
- Advertising to potential users
- Outreach to faculty

Start ➔ Create ongoing staffing plan ➔ Create policies and documentation ➔ Create marketing and outreach plan ➔ Create service-level agreement ➔ Finish

- Submission alias/link
- Acceptable materials list
- Process for submitting entity to follow
- Does faculty self-upload?
- Metadata needs
- How long will documents be kept in the IR?
- How is versioning handled? (new versions, updates, retractions)
- Is there a parallel dark archive?

- Typical submission timetable
- Self-upload or submission to IR staff?
- Response timetables
  - Submission inquiry
  - System error report
  - Metadata correction request
- Notifications of downtime, system upgrades, etc.
Choose Tool

Start

Create decision criteria

Define initial set of choices

Evaluate choices

Formulate initial recommendation

Review with stakeholders and receive stakeholder approval

Finalize choice

Finish

Consider partnering with your Research Office to implement a system like Pure (https://goo.gl/bKTwCt) that can capture and validate research information data, generate custom reports and act as an IR.
Choose Tool

POTENTIAL SYSTEM TYPES
• Commercial
• Open source
• Customized third party
• Build in-house

Start

Create decision criteria

Define initial set of choices

Evaluate choices

Formulate initial recommendation

Review with stakeholders and receive stakeholder approval

Finalize choice

Finish

CRITERIA
• Desired features
  • Support for software
  • Import organizational structures
  • Run advanced analytics
  • Store multiple content types
• Customization requirements
• Cost/benefit analysis
• Need for control over future system development
• Staffing capacity

Define weighting of criteria (some are more important than others)
• Score options according to each criteria
• Top weighted score wins
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Bibliography

I'd like to specially thank Reggie Ra ju, Deputy Director of Client Liaison Services at the University of Cape Town, and Laurie N. Taylor, Digital Scholarship Librarian at the University of Florida, for their help while researching this project. Their expertise on institutional repositories was instrumental in putting together this guide.

— Leo Stezano


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