Collaborating to Manage Research Data

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Notre Dame Research Profile
- Research & Sponsored Programs Revenue

- FY09: $120.9 million
- FY14: $189.7 million
- $68.8 million (56.9%) increase
- 9.4% annual growth rate
Data Growth Potential
- Investment in Research

• FY09: $88.9 million
• FY14: $161.9 million
• $73 million increase (82.1%)
• 12.7% annual growth rate
• Advancing Our Vision
  – $13 million recurring investment
  – 10 Disciplines (i.e. computational data, adult stem cell, nuclear physics)
  – 80 new faculty
Nature of Research Data

• Often requires enormous storage (volume, accumulative)
• Often exists in diverse formats
• Increasingly owned by faculty across institutions
• Requires intensive resources and new expertise
Related Materials: Any Format

- Article
- ETD

Statistical Data

Image Data

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Library Context

- Institutional Digital Repository

• Part of Hydra community
• Vertical Successes
• High demand due to the Open Data Mandate and Public Access Policies
• Storage allocation internal to library needs
• Digital Initiative Program staffing level
User-Centric Personas

Targeted Early Adopters

Core Features

- Faculty
- Grad Students
- Librarians
- Curators
- Science
- Arts & Humanities
- Engineering

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Design Strategy

• Design for everyone, but optimize for intermediate (Alan cooper)
  – Critical needs
  – What are the core? Other advanced services?
Partnerships are Key

• Increasing complexity demands support of experts
  – Funding Agency Requirements
  – Copyright and Intellectual Property
  – Metadata and Data Structuring
  – Data sharing and Preservation
How Do We Connect with Researchers?

Top Down

- Office of Research
- Colleges and Departments

Researchers

- Pre/Post Award Grant Consultants
- Collaborators
- Subject Liaisons
- Colleagues

Grass Roots
Priorities First Phase

- Wide format support, with mixed collections
- Focus on Preservation and Curation
- Get Users Engaged Early
- Release Early; Release Often
Grow Together

User Base

Features

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Layered Continuous Improvement

Feedback determines Investment in most impactful advanced services

Continuous Feedback from Growing User Base

Early User Feedback

Identify Target Users and Most Common Needs

Core Features: Wide Format Support, Preservation, Sharing

Enhanced Management, Presentation, Publishing, Collaboration

Advanced Discovery, Harvesting, Curation, Analysis, Computation
Release Early; Release Often

- Early Access Release • Nov 2013
- Point Release One
- Point Release Two • Every 3-4 sprints (6-8 weeks)
- ...
- Next Major Release
Sustain through Community

Shared IR Project

• Complete Multi-Institutional Collaboration from top to bottom within the Hydra Community
  – Shared Roadmapping and Governance
  – Community and Local Roles
  – Rotate Resources

DATA CURATION EXPERTS

INDIANA UNIVERSITY

UNIVERSITY OF NOTRE DAME
Hesburgh Libraries

NORTHWESTERN UNIVERSITY

UNIVERSITY OF CINCINNATI

UNIVERSITY OF VIRGINIA

PENNSTATE

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Community Development & Adoption

Curate

- Notre Dame CurateND
- Duke
- DCE
- Libra2.0
- Cincinnati
- Va Tech
- Northwestern
- Penn State
- Indiana
- LSE?
Mixed Architecture
Future Priorities

• By April
  – Improved Organization and Managed Collection Support
  – Submission, Review, and Publish Workflows
  – Integration with ORCiD
  – Bulk Ingest Support
Future Priorities

• April and beyond
  – Enhanced Publishing Layer to Digital Exhibits, Online Journals
  – Tuned and Optimized for large datasets
  – Integration with SHARE
  – Pluggable support for solution bundles
What is CurateND?

CurateND is a secure repository service enabling the University of Notre Dame community to share its research and scholarly work with a worldwide audience. Faculty, staff, and students can use CurateND to collect their work in one location and create a durable and citable record of their papers, presentations, publications, data sets, or other scholarly creations.

Get Started
FAQ

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• Hydra Shared IR Project Wiki:
  – https://wiki.duraspace.org/display/hydra/Shared+IR+project
• http://curate.nd.edu