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
  - Population
  - Infection Rate
- Image Data
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

Grass Roots

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

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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

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Release Early; Release Often

- Early Access Release
  - Nov 2013
- Point Release One
- Point Release Two
- ...
Sustain through Community
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 NOTRE DAME
Hesburgh Libraries

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Community Development & Adoption

- Notre Dame CurateND
- Duke
- Uva Libra2.0
- Cincinnati
- Va Tech
- Northwestern
- Penn State
- Indiana
- DCE
- LSE?

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Mixed Architecture

Shared Repository Services
- Ingest/Management
  - Content Mgmt
  - Ingest/Transformation
- Data
- Video
- Document
- Images
- Digital Repository
- Search Index

IR Public View
- Browse and Search
- Document Viewer
- Data Viewer
- Image Viewer
- Audio/Video Streaming

Publication Channels
- Online Journal
  - Browse and Search
- Data Visualization
  - Browse and Search
- Exhibit/Digital Collection View
  - Browse and Search
- Audio/Video Library
  - Browse and Search
- ORCID
  - External Search Index
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
Quick Demo

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.

CurateND is a service of the Hesburgh Libraries of Notre Dame.

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