Apollo, Cambridge’s Institutional Repository, and the University’s CRIS system

10.17863/CAM.24236

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DuraSpace-euroCRIS Interoperability Event
Umeå, Sweden, June 13, 2018
Outline

- Overview of systems at Cambridge
- Repository and CRIS integrations
  - Before & after
  - Integration points
- Benefits & challenges
- Next steps
Background: Apollo

Apollo holds the University’s research outputs
Available since 2003
Runs on the DSpace repository platform (open source)

https://www.repository.cam.ac.uk
One of largest DSpace repositories in the world (over 230,000 items)

Since May 2016 ...
- 17,000 DOIs minted
- > 2.5 million downloads of repository content
- > 28,000 full-text files available open access

*Source: Institutional Repositories Usage Statistics UK (IRUS UK)*
Background: Symplectic Elements

- Elements (v5.10)
- Internal system in use since 2010

- Linked data
  - ~6K active users
  - ~250K publications
  - ~14K grants
  - ~14K professional activities

https://elements.admin.cam.ac.uk
Timeline of research information at Cambridge
Repository integrations project

- First instance available
- DSpace v1.x

2003

Apollo

- OA / Data deposits via Elements
- Systems data match

2016

- Repository re-launch - Apollo
- Upgrade to v5.6
- DOI minting
- Request a copy

Elements integration

2017

2018/19

- Upgrade Elements integration
- Apollo upgrade (v6.x – v7.x)

Coming next ...
Prior to repository upgrade: disconnected systems

- Internal system for Cambridge researchers
- Research outputs: publications, grants, equipment

Before integration

Research data form

OA outputs form

Elements
Cambridge CRIS System

Apollo
After integration

Discoverability
~17,000 DOIs

Elements
OA outputs
Research datasets

OA and data submission workflows

Apollo

Helpdesk
- Deposits management
- Communication with researchers

Following from upgrade ...
Integration points (and workflows)

**Repository ↔ Elements**
- Via Repository Tools 1 (RT1) connector
- Repository – CRIS metadata crosswalks
- Data match to link existing repository content in CRIS
- Automatic update of repository records

**Repository → Helpdesk**
- Via Zendesk API
- Tickets creation and update
- Receive updates from Elements

**Open Access (OA)**
- Article and data deposits via CRIS

**OA workflows**
- Submission management
- Communication with researchers

**Elements**

**Apollo**

**Helpdesk**
Benefits after integration

For researchers
- ‘One stop’ shop: OA deposits, grants linking and researcher profiles
- Flexible submission workflows: placeholder DOIs for in-progress research datasets can be issued

Open Access policies and funder compliance
- Enhanced reporting
- Data available from a single source

Enhanced visibility of outputs
- DOI registration and richer publications metadata
- Populated ORCID profiles
Remaining challenges

Technological
- Systems dependencies: cannot upgrade DSpace beyond v5.x due to incompatibility with the RT1 connector
- Duplicate records in Elements due to multiple submissions: i.e. accepted and published versions of articles
- Metadata updates: “all or nothing”

Data related
- OA compliance reporting is very complex and relies on the availability of complete publications data
- Varied coverage from external metadata sources

Operational
- Large volume of deposits (it is a good thing!) but review processes in the repository are cumbersome and time-consuming
- Very complex user interface for researchers in CRIS system
Next steps: migrate to RT2

- Upgrade current repository – CRIS connector to Repository Tools 2 (RT2)
  - Repository – CRIS integration decoupled from repository
  - Enhanced and highly configurable metadata crosswalks

- Current blockers preventing migration now
  - Lack of subsequent deposits into the repository
  - Metadata updates from CRIS to repository not available yet
Next steps: Fast-track deposits

- Simple web interface to review repository OA submissions
  - Via DSpace API
- Reduced processing times
- Better response times and communication with researchers
Next steps: Lastminute.CAM

- Simple web interface to update publications information in the CRIS system
  - Via Elements API

- Enhanced researcher experience

- Collect key information in a timely manner

- Enhance compliance reporting
Thanks!