Cambridge use case: Integrating RSpace and Apollo repository

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Digital Notebooks - how to provide solutions for researchers
TU Delft Library
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Outline

- Trial overview
- Background: systems at Cambridge
- ELN and repository integration
- Benefits & challenges
- Next steps
- For discussion: future solutions?
Exploratory work of main ELN solutions

- Particular focus on a set of features:
  - Authentication mechanisms
  - Multi-platform and mobile device support
  - Storage options
  - Export options
  - Licensing models
Four ELN providers were shortlisted
  - LabArchives
  - RSpace
  - Scinote
  - OSF

Meeting providers and discuss trial participation and product features
  - Focus on export options: integration with repositories
Background: systems at Cambridge (I)

Prior to repository upgrade: disconnected systems

Apollo

- UIS central services
- Dept. local storage

Active data storage

Archival storage

- Library managed
- Local storage
Background: systems at Cambridge (I)

Prior to repository upgrade: disconnected systems
Prior to repository upgrade: disconnected systems

Background: systems at Cambridge (I)

- OA outputs form
- Research data form
- Apollo
  - Active data storage
  - Archival storage
    - + Library managed
    - + Local storage
  - + UIS central services
  - + Dept. local storage
Background: systems at Cambridge (II)

Automated submission, integration with CRIS system

- CRIS System
  - OA outputs
  - Research datasets

Apollo

- + UIS central services
- + Dept. local storage
- + Active data storage
- + Archival storage
  - + Library managed
  - + Local storage

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Background: systems at Cambridge (II)

- **RSpace**
- **Data storage**
  - Notebooks
- **CRIS System**
  - OA outputs
  - Research datasets

**Automated submission, integration with CRIS system**

**Apollo**
- + UIS central services
- + Dept. local storage

**Active data storage**

**Archival storage**
- + Library managed
- + Local storage
Background: systems at Cambridge (II)

- RSpace
  - Data storage
  - Notebooks

- CRIS System
  - OA outputs
  - Research datasets

- Apollo
  - Active data storage
  - Archival storage
  - + UIS central services
  - + Dept. local storage
  - + Library managed
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Automated submission, integration with CRIS system
ELN and repository integration

- **RSpace**
  - Dedicated Cambridge instance (v1.48.0)
  - Shibboleth Single Sign-on
  - Cloud storage

- **Apollo repository**
  - DSpace platform (v5.6)
  - Open-source
  - Local storage
  - Trial “staging” instance
The deposit process ...

1. Users select notebook / files to be exported,
2. Users provide minimal metadata
3. Notebook is packaged and sent to the repository

Demo time!
Benefits

- Suppress the need for yet another platform for research data sharing and long-term storage
- Better data curation: datasets are curated during the research process
  - Internal links, underpinning data and documentation are exported

Challenges

- Coping with large datasets
- De-centralised active data stores
- Preserving the ELN structure in the repository
Next steps

- Focus of the integration between active research data and archival data storage
- Develop a pilot with researchers currently using Rspace
  - Research groups currently using the community edition
  - Shown interest in knowing more about repositories
- Jisc Research Data Shared Service (RDSS)
Future solutions?

Institution 1
Institution 2
Institution N

CRIS System

Repository UI

Shared ELN

Shared Repository

Archival storage

Active data storage

Repository UI
Future solutions?

Institution 1  Institution 2  Institution N

CRIS System  Repository UI

+ Jisc RDSS project  + National-level repository

Shared Repository  Archival storage

Shared ELN

Active data storage
Future solutions?

Institution 1 → Shared ELN → Repository UI
Institution 2
Institution N

Shared Repository

Active data storage
Archival storage

+ Inst. Local storage + Shared storage

+ Jisc RDSS project + National-level repository

CRIS System

Repository UI

+ Inst. Local storage + Shared storage

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Thanks!