

# The role of NRENs and universities in data management

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# Why are NRENs and universities relevant in data management?

- Researchers are based in institutions so core provision to store, collaborate, publish, share data comes from uni
- NRENs provide the main infrastructure for services to work
  - Network connection
  - Trust and Identity services e.g. eduroam
  - Increasingly offer data services e.g. Researchdrive, DMP tools, ELN...
  - Can help to broker service contracts e.g. to CRIS systems via HEAnet
- Universities are members of NRENs so they can help provide national advocacy and coordination

## What data challenges do researchers face?

- Capturing, organising and handling large / complex data
- Getting access to relevant data and services
- Need to draw on support locally and from externals e.g. RIs
- Having the skills to make data Open and FAIR
- Time pressures to publish
- Lack of recognition and rewards

## What are unis doing to help?

- Offering various services throughout the lifecycle
- Consulting with researchers on DMPs to plan well from start
- Running training courses to increase data skills
- Providing data stewards / software engineers as part of team
- Coordinating strategy at institutional level – RDM boards

# Institution often have many data services in place

## Research Information

### Management (CRIS) systems

e.g. Elsevier Pure, Symplectic Elements, CRIStin, Converis

## Data Management Planning tools

e.g. DMPonline, Haplo, Data Stewardship Wizard, RDM Organiser, Argos, EasyDMP

## Electronic lab notebooks

e.g. Jupyter, Rspace, LabTrove, SciNote, Benchling

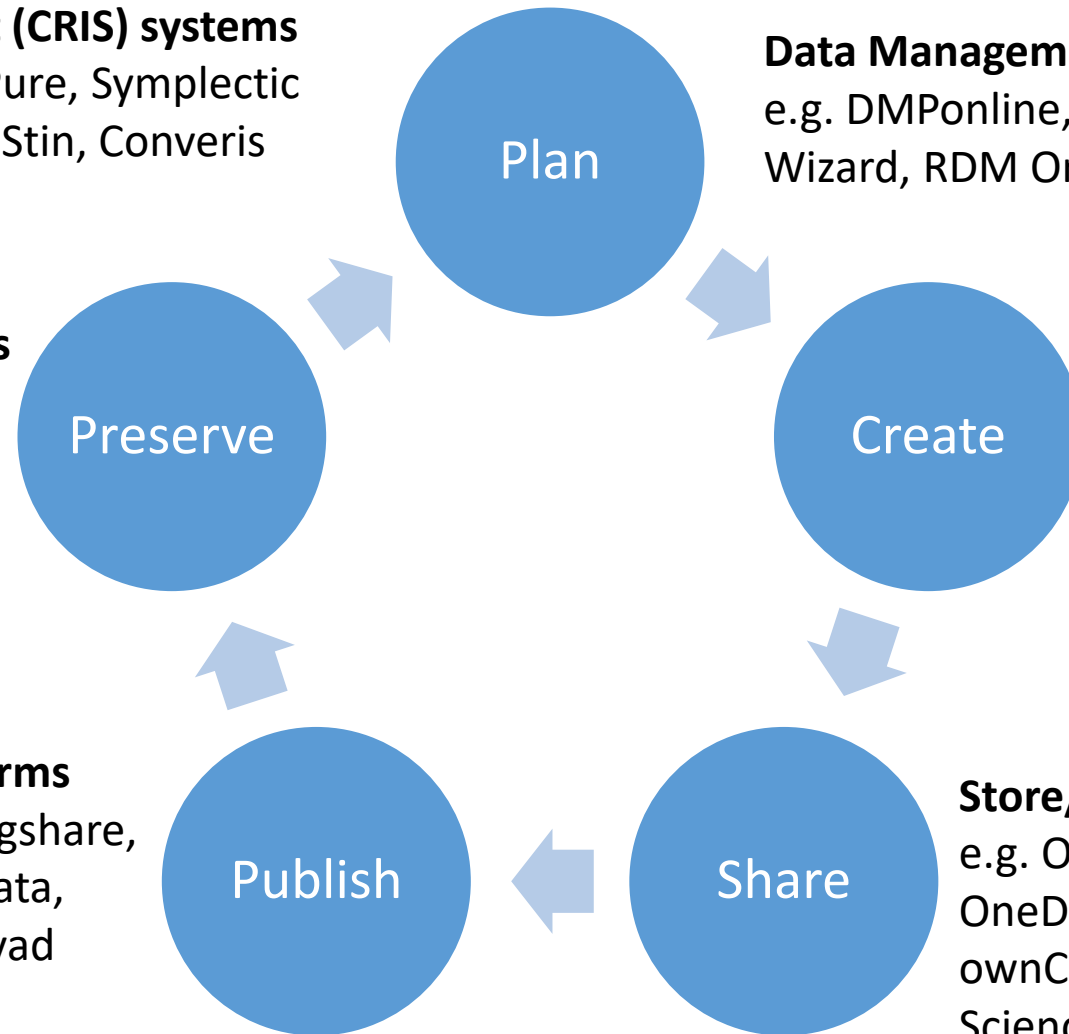
## Analysis and workflow tools

e.g. Matlab, R, SPSS, ArcGIS, Taverna, MyExperiment

## Store/sync/share platforms

e.g. Office 365 (SharePoint / OneDrive), Google Drive, ownCloud, NextCloud, Open Science Framework, and various disciplinary platforms e.g. OMERO

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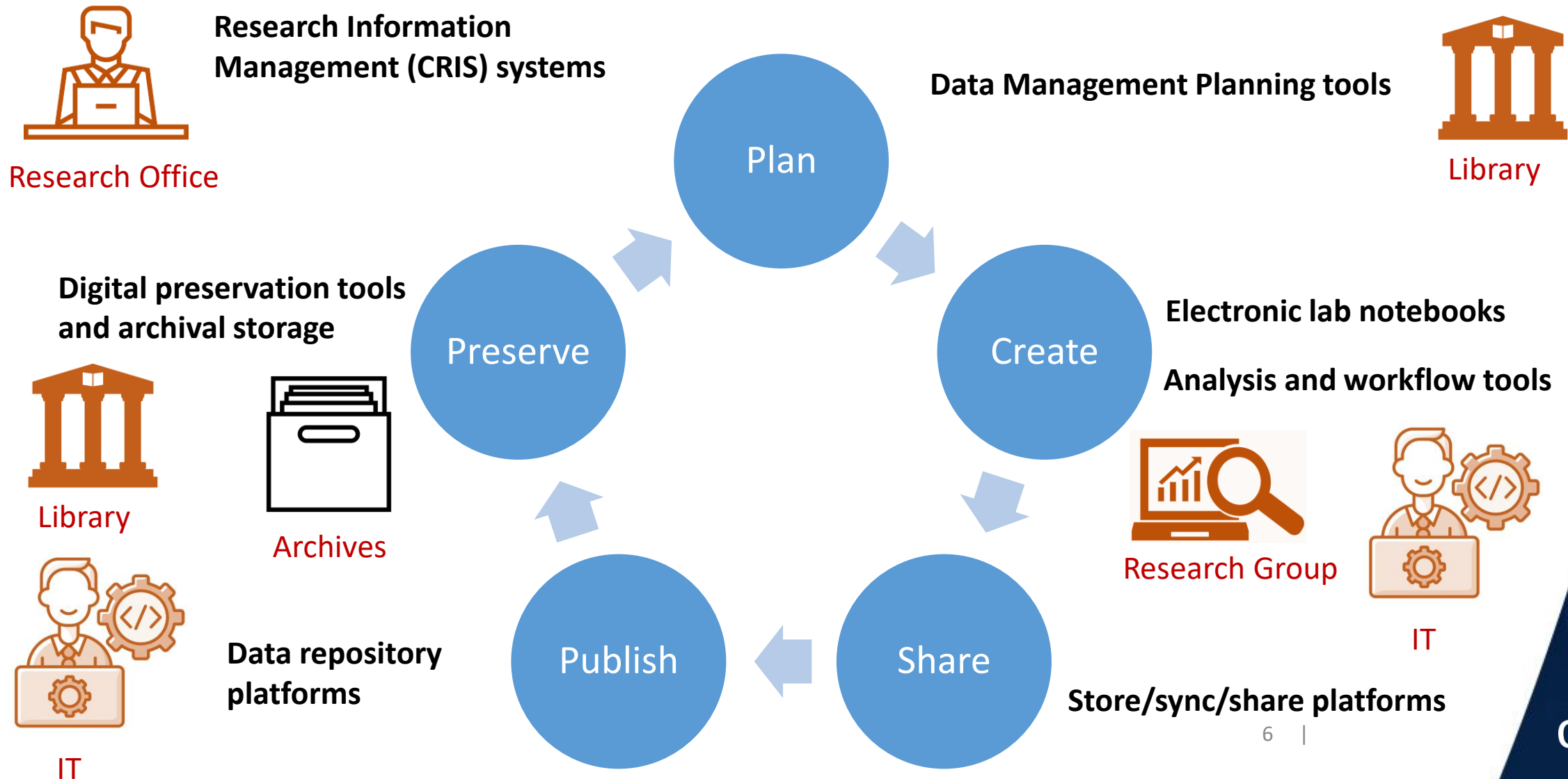
## Digital preservation tools and archival storage

e.g. Archivematica, Preservica, BitCurator, Ex Libris Rosetta, Arkivum

## Data repository platforms

e.g. ePrints, Dspace, Figshare, Islandora, Mendeley data, Invenio, Dataverse, Dryad

# Different service units are often responsible for each system



## Lessons

- Services are not always acquired systematically with a view of data exchange / connections between systems
- There's a lack of interoperability across research systems – lots of re-entering of data, poor join-up
- Need to coordinate across actors, within universities and across units – role for NRENs

## Why engage NRENs in data management?

- In all MS/AC – truly European infrastructure
- Have demonstrated robust & reliable service delivery at scale
- Work for universities who are grappling with RDM
- Have relevant skills to provide solutions e.g. procurement
- Can act as a community and lobby for change
- Have viable, sustainable business models





## How are NRENs assisting in data management?

- Engaging on a national level in data policy and strategy
- Represent sector – many are Mandated Organisations for EOSC
- Offer data support e.g. DMP, cloud services, repositories
  - *This may be directly or via procurement frameworks*
- Developing tools e.g. EUDAT service suite
- Support national HPC and computing provision

## What are the respective roles: universities

- Ensuring researchers have the right environment to conduct work
- Providing a suite of tools to manage data throughout the lifecycle
- Offering training and data stewardship support
- Amending R&R frameworks to incentivise culture change

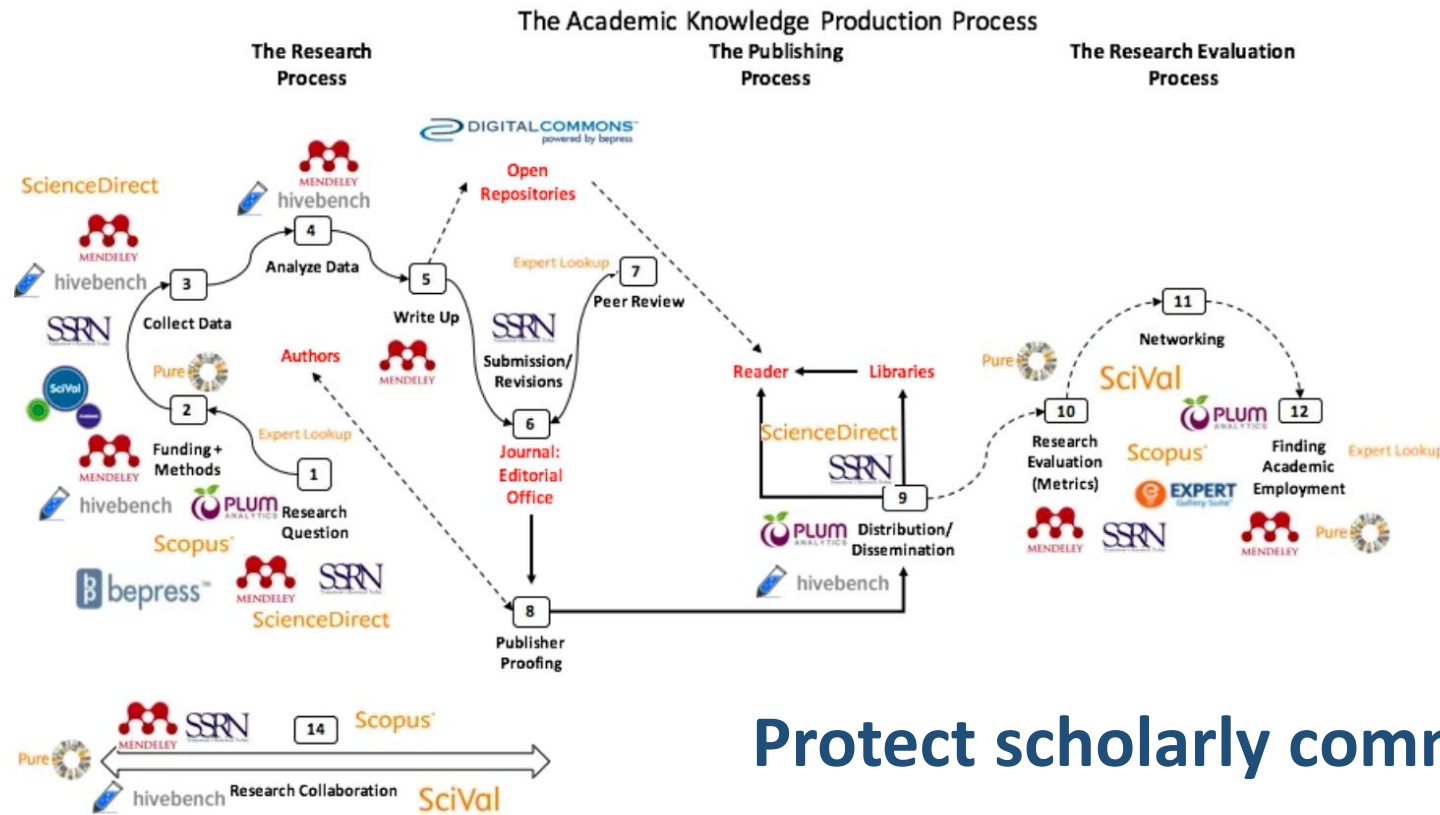
**Work at the coalface to enable data management**

## What are the respective roles: NRENs

- Collating requirements across universities
- Coordinating the sector to help act nationally
- Providing services at the national level
- Or facilitating uptake of services e.g. via procurement
- Advocating for educational T&Cs and interoperability

**National coordination and advocacy to ease work of unis**

# Benefit of collaboration across stakeholders



<http://knowledgegap.org/index.php/sub-projects/rent-seeking-and-financialization-of-the-academic-publishing-industry/preliminary-findings>

# Thank you

Any questions?

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