

# EOSC and the future of Research & Innovation in Europe

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Pro-Vice-Provost (UCL Library Services)

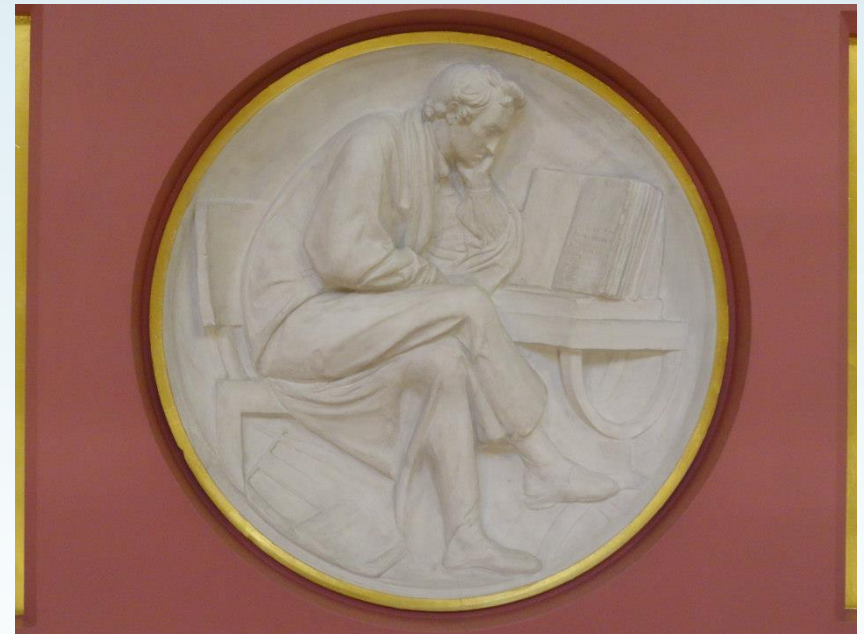
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# Content

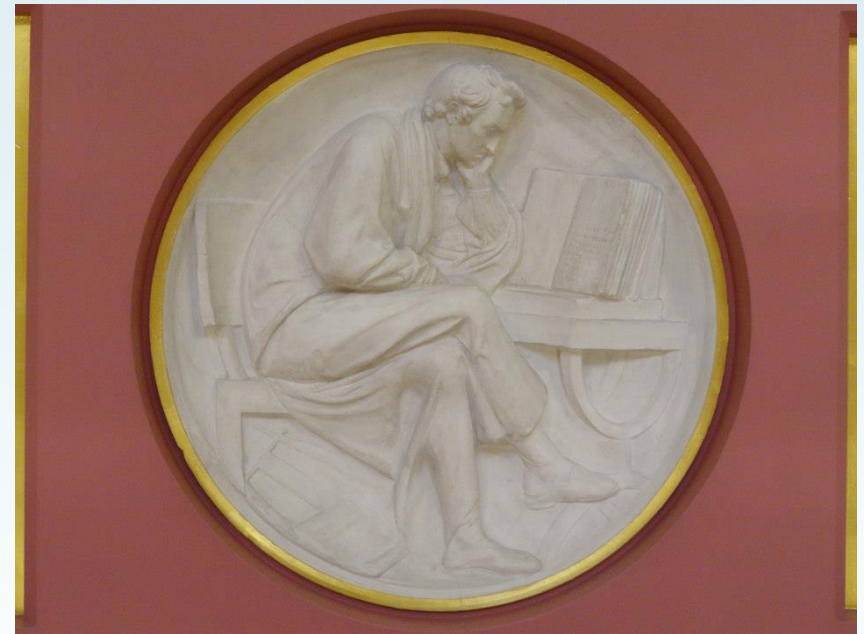
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- ❑ LEARN project
- ❑ Reward systems
- ❑ Skills development
- ❑ EOSC, FAIR and Open data
- ❑ Model infrastructure
- ❑ Conclusions



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# European Commission: Open Science Policy Platform – 8 pillars of Open Science

Future of Scholarly Communication

EOSC (European Open Science Cloud)

FAIR Data

Skills

Research Integrity

Rewards

Altmetrics

Citizen Science

## League of European Research Universities

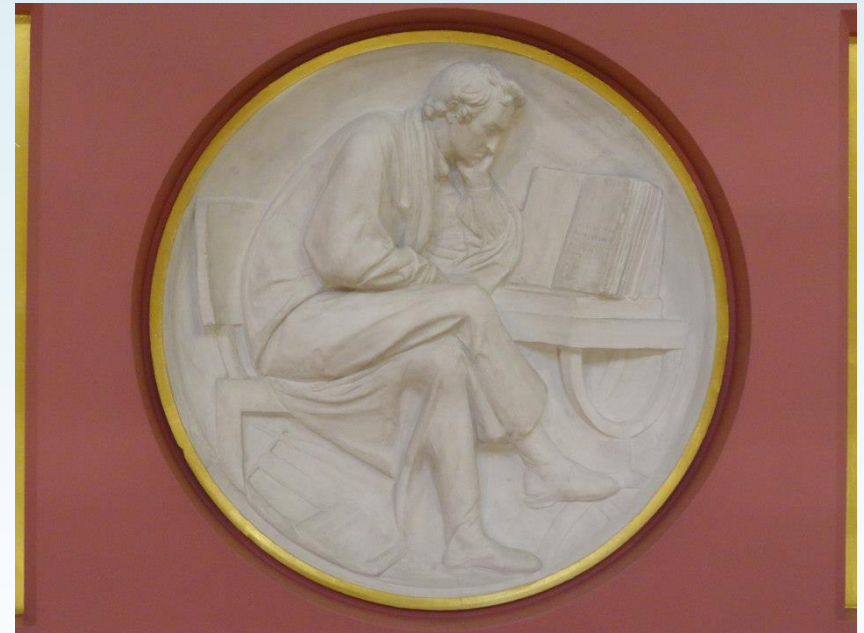
23 leading universities pushing the frontiers of innovative  
research

- ❑ LERU has produced an Open Science Roadmap for universities
- ❑ Launched on 12 June 2018 at <https://www.leru.org/publications/open-science-and-its-role-in-universities-a-roadmap-for-cultural-change>
- ❑ 41 Recommendations



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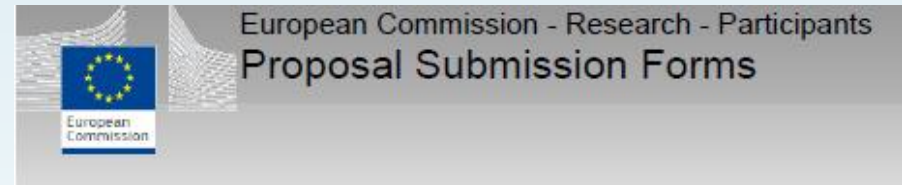
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# LEARN – LEaders Activating Research Networks

- Purpose is to develop the [LERU Roadmap for Research Data](#) to build a global co-ordinated global e-infrastructure
- To embrace all RDM stakeholders
  - Researchers
  - Support services
  - Policy and decision makers
  - Publishers



Horizon 2020

Call: H2020-INFRA-SUPP-2014-2

Topic: INFRA-SUPP-7-2014

Type of action: CSA

Proposal number: 654139

Proposal acronym: LEARN

## LEARN Deliverables

- ❑ Model Research Data Management Policy
  - ❑ Fed by a study of RDM policies and input from Workshop attendees
- ❑ Toolkit to support implementation
  - ❑ Issues identified in Workshops and in literature
  - ❑ Surveys and self assessment tools
- ❑ Executive Briefing (in six languages)



<http://learn-rdm.eu>



Wilkins Building, UCL, 1826





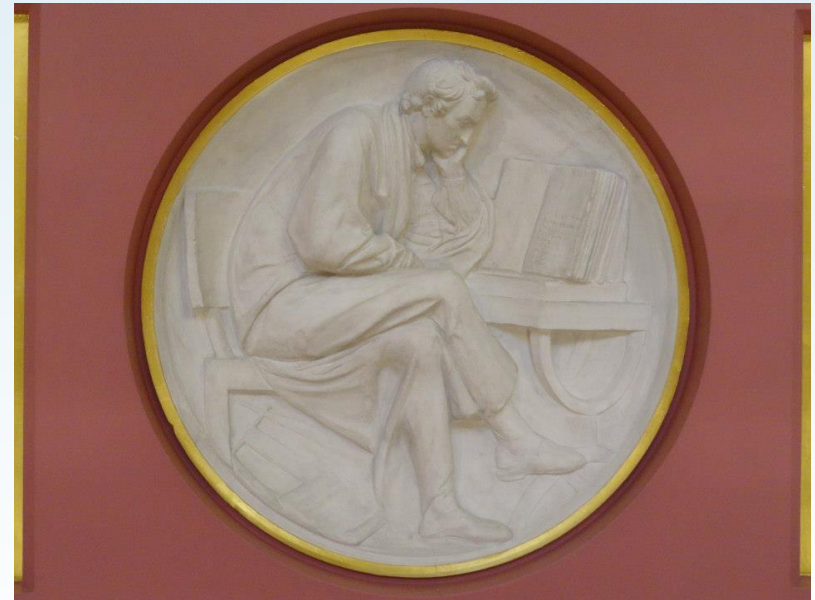
# Presentations



65 Presentations to  
Policy Makers, Higher  
Education  
Professionals,  
Librarians, Data  
Specialists

## What is the problem LEARN seeks to address?

- ❑ How prepared are you and your institution for research data management?



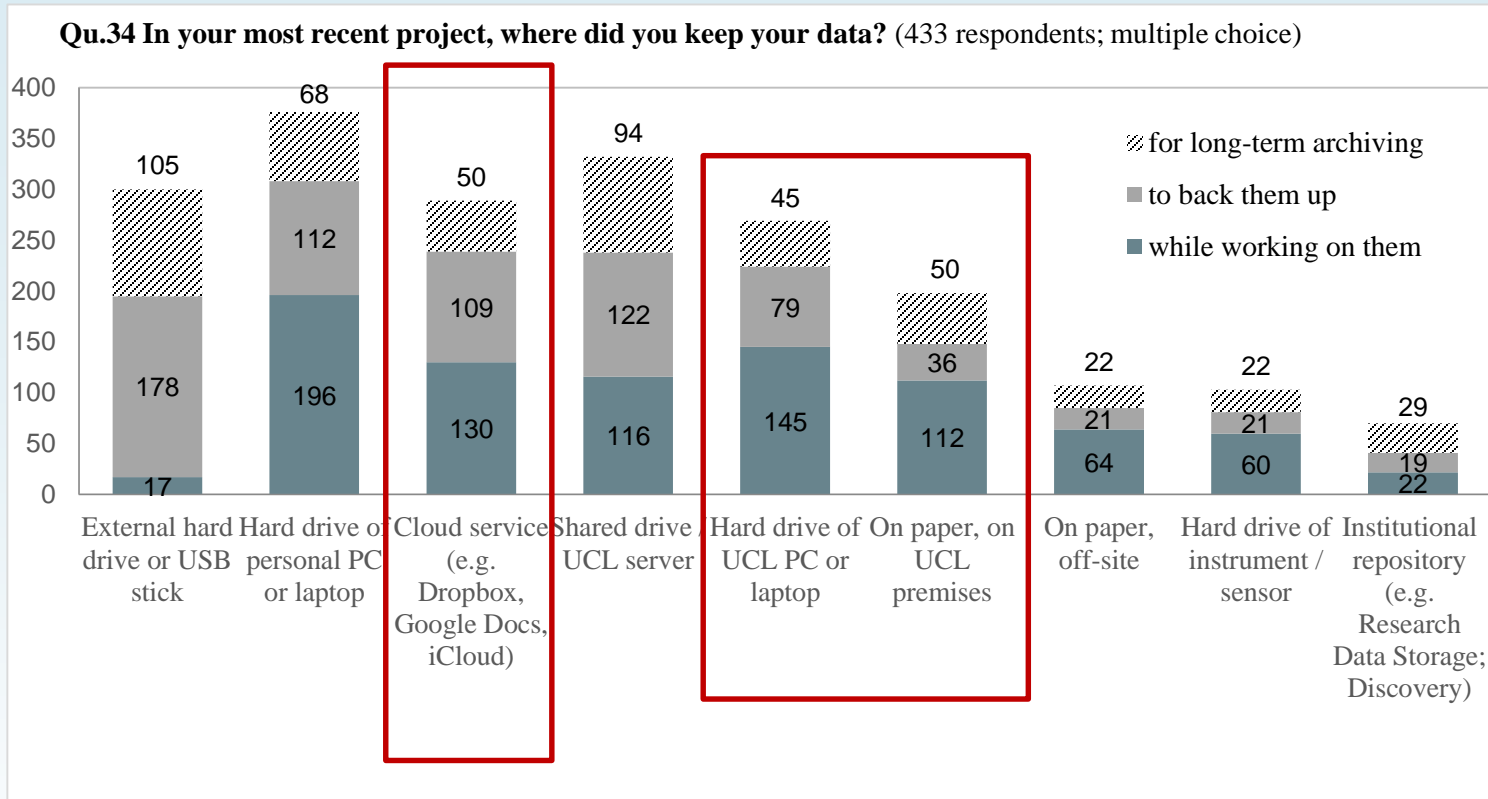
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# UCL survey by Research Data Advocacy Officer



- 130 research departments, institutes, centres and units represented in survey
- Response rate – 306 completed surveys out of 619
- Respondents
  - 18% early career researchers
  - 39% experienced researchers
  - 30% research students



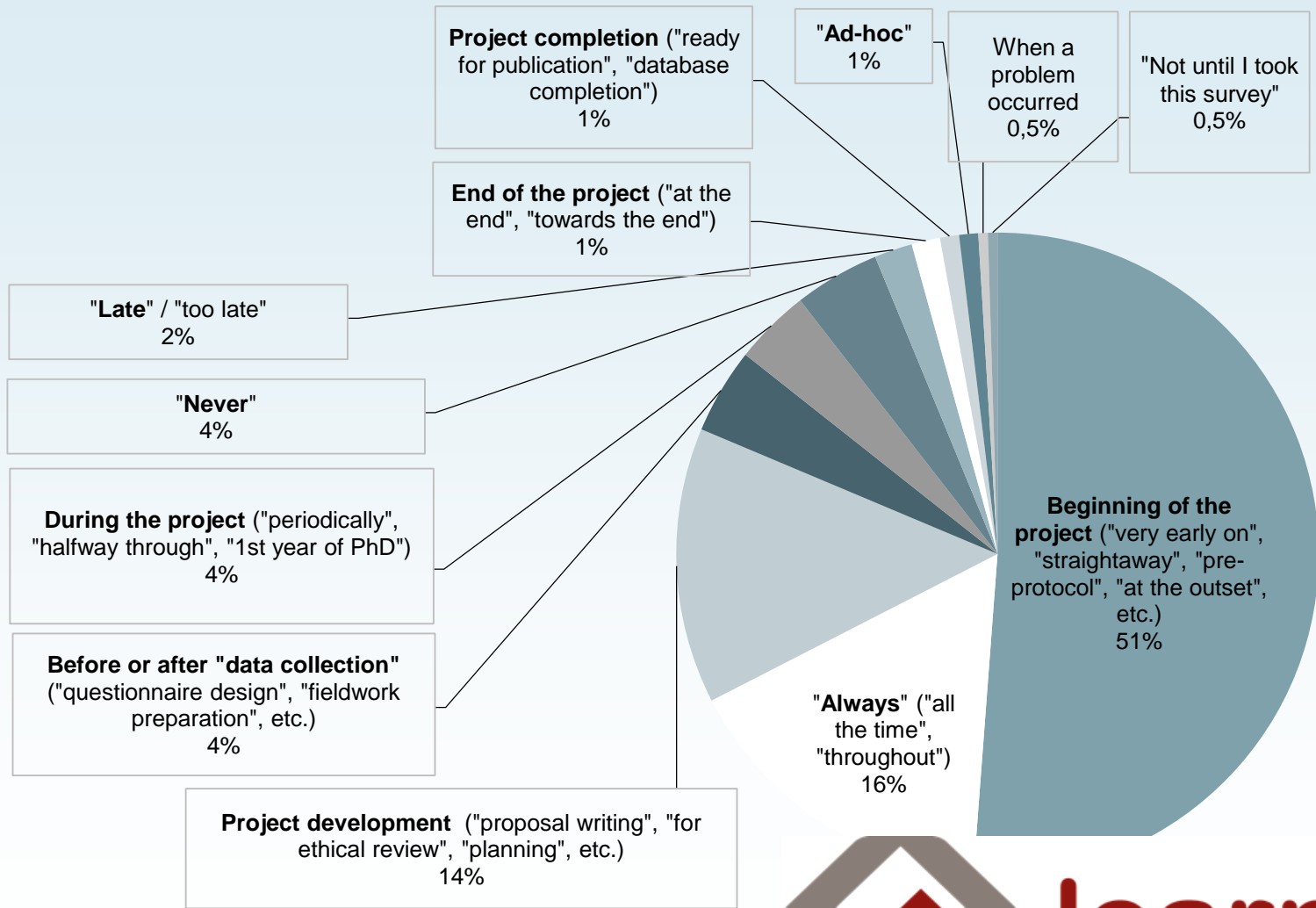


- 45% of respondents used a personal computer for storage
- Choices included Cloud services; others used paper...
- Central UCL facility used by only 5%

**Qu.64 Would you be interested in some help with data management? Please tick up to FIVE preferred elements from the list below. (308 respondents; multiple choice)**

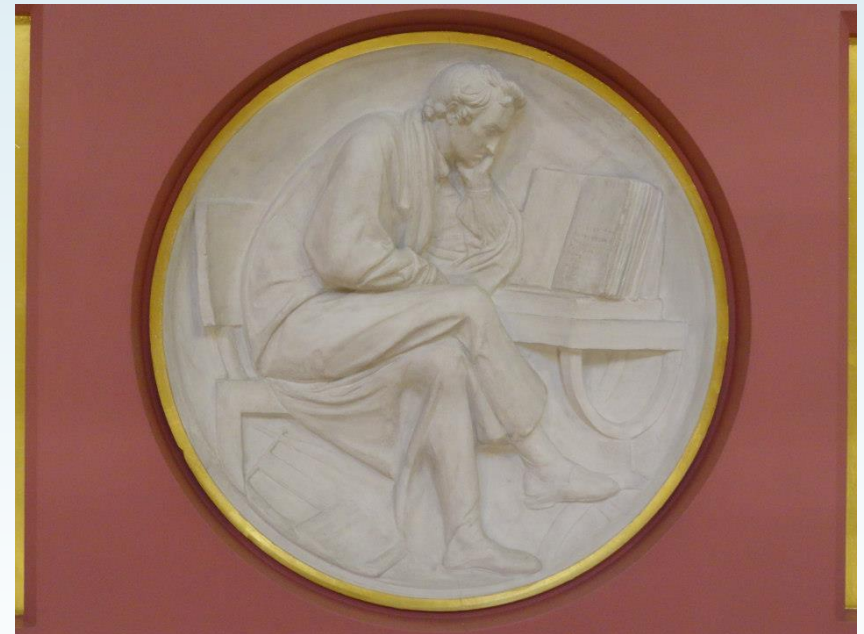


**Qu.61 At what stage of the project did you think about data management?** (217 respondents; free text)



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# Delivering on institutional Mission and Strategy

- ❑ 2019 UCL Research Strategy aims to ‘foster open and engaged research’
- ❑ With ‘policies and developments in open access (most notably, the establishment of UCL Press, the UK’s first fully open access university press) and open science’



UCL Student Centre, opened 18/2/19



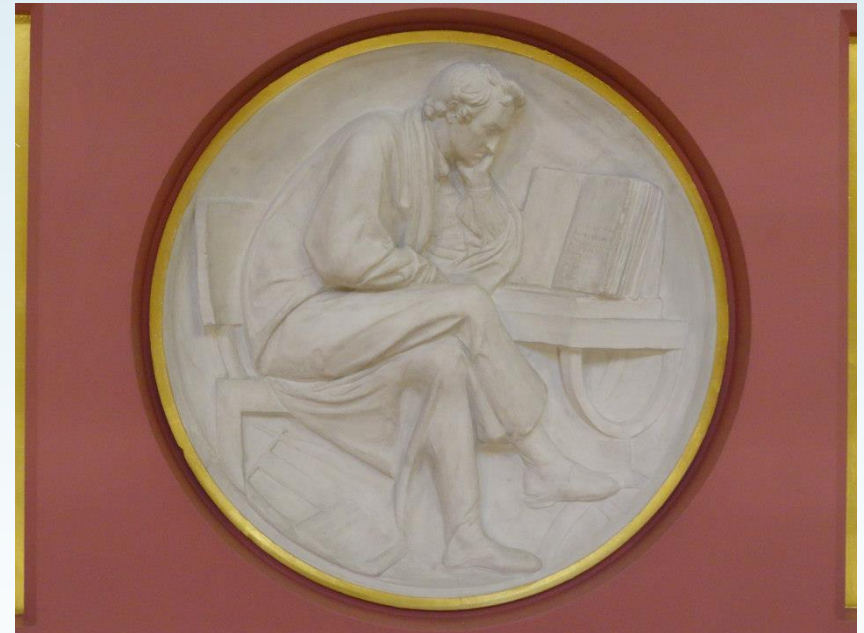
## Valuing your colleagues

- ❑ Insert Open Science principles into career frameworks
- ❑ Develop institutional policies for rewarding Open Science
- ❑ Apply to appointment, promotion, induction and appraisal procedures
  - ❑ UCL has included openness into its new academic promotions framework
  - ❑ <https://www.ucl.ac.uk/human-resources/sites/human-resources/files/ucl-130418.pdf>



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## Workshops / Training

- ❑ Annual Open Science Workshop being held in UCL to introduce Open Science concepts, **funded by UCL HR**
  - ❑ One of the Focus on Open Science Workshops 2019
- ❑ Bibliometrics Officer / Head of Library Skills to lead skills development programme for Library and academic Departments
  - ❑ Open Access
  - ❑ Research Data Management
  - ❑ Responsible use of Metrics



- ❑ Early career researchers a principal target
- ❑ Challenge to engage with established researchers

## Reproducibility

### Challenges

- Omitting null results
- Weak experimental design
- Underspecified methods
- Errors
- Underpowered studies
- Meaning of Reproducibility in an AHSS environment?
- UK network enough?

### Answers

- Open Data
- Open Methods
- Automation
- Open Materials
- Reporting guidelines
- Collaboration
- Pre-registration of experimentation with approval first
- European/global network

### Support mechanisms

- Training
- Embed training programmes in Doctoral School Programmes
- Recognise in Research Evaluation criteria

### Incentives

- Include in appointments criteria
- Use for annual appraisals
- Embed in promotion criteria

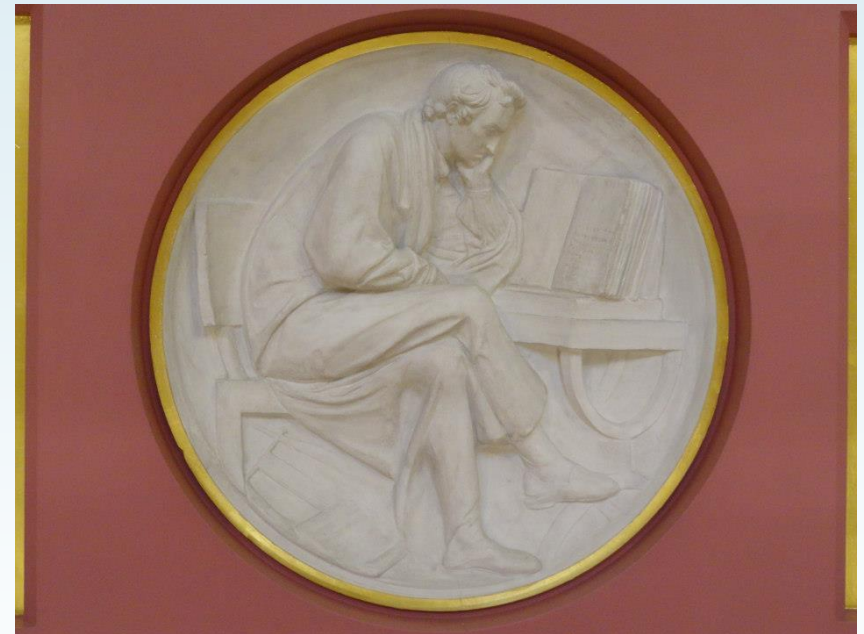
Thanks to Professor Dorothy Bishop,

**Repro-  
-cibility**

University of Oxford

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# European Open Science Cloud & FAIR data: Issues

- Prepare to participate in the EOSC
- Each organisations should have an RDM policy, ideally modelled on [LEARN](#)
- Ensure you have access to correct infrastructure(s)
- Research data should be as open as possible, as closed as necessary
- Where access to research data is restricted, provide free access to the metadata, fulfilling FAIR principles
- Collect information about where your researchers publish



**learn**

<http://learn-rdm.eu>

## The EOSC and FAIR data

- ❑ See <https://ec.europa.eu/research/openscience/index.cfm> for a general overview of current activity
- ❑ Turning [FAIR data into reality](#)
  - ❑ Advancing the global Open Science movement and the development of the European Open Science Cloud is the unambiguous objective for this report, turning FAIR into reality
- ❑ Research organisations, universities and other users will benefit from a copyright exception in the recent EU copyright reform to carry out text and data mining on large sets of data
  - ❑ This will also enhance the development of data analytics and artificial intelligence in Europe
- ❑ EU could save 10.2 billion euros annually through the use of FAIR data – see [Cost Benefit analysis for having FAIR data](#)

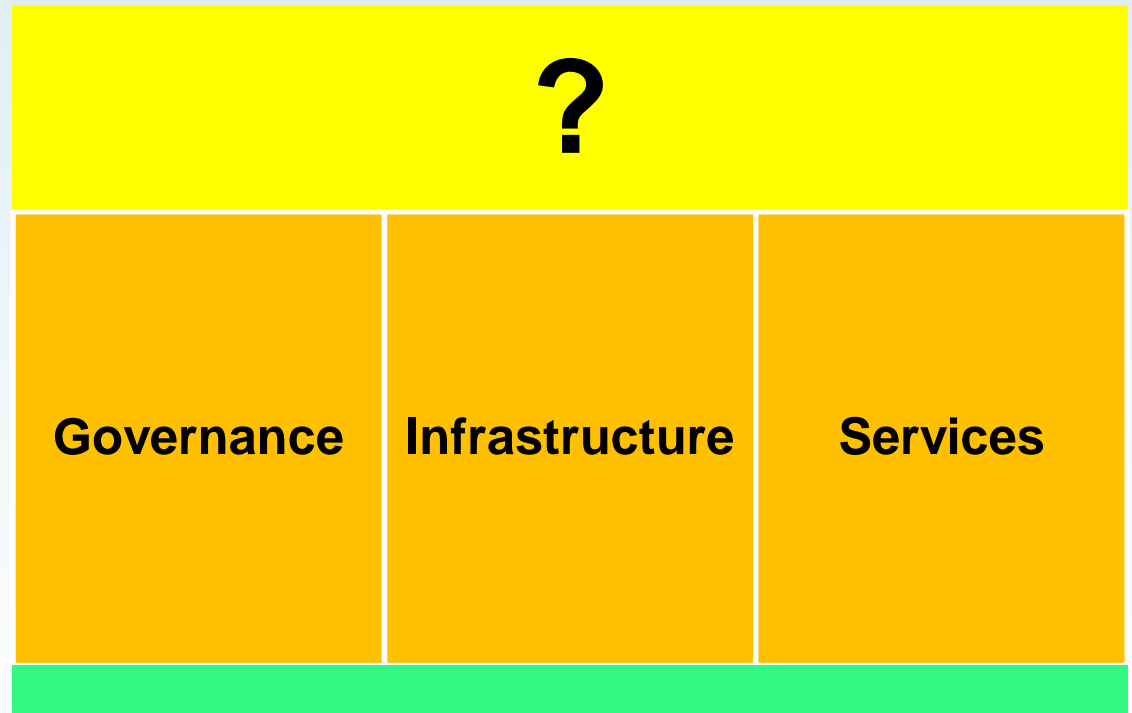
## LERU Recommendations for the EOSC

<b>Infrastructure development</b>	Has your university established a data repository, or does it have access to a 3 <sup>rd</sup> party repository/repositories which can interact with the EOSC?
<b>Infrastructure development</b>	Does your university have a search and discovery service, enabling users to find what research data is available, and where it is located?
<b>Policy development</b>	Has your university signed the EOSC Declaration as a statement of commitment at a local level?
<b>Co-operation and collaboration</b>	Will your university develop their research data management offering so that it is aligned with the principles of engagement with the EOSC, once the latter are agreed and available?



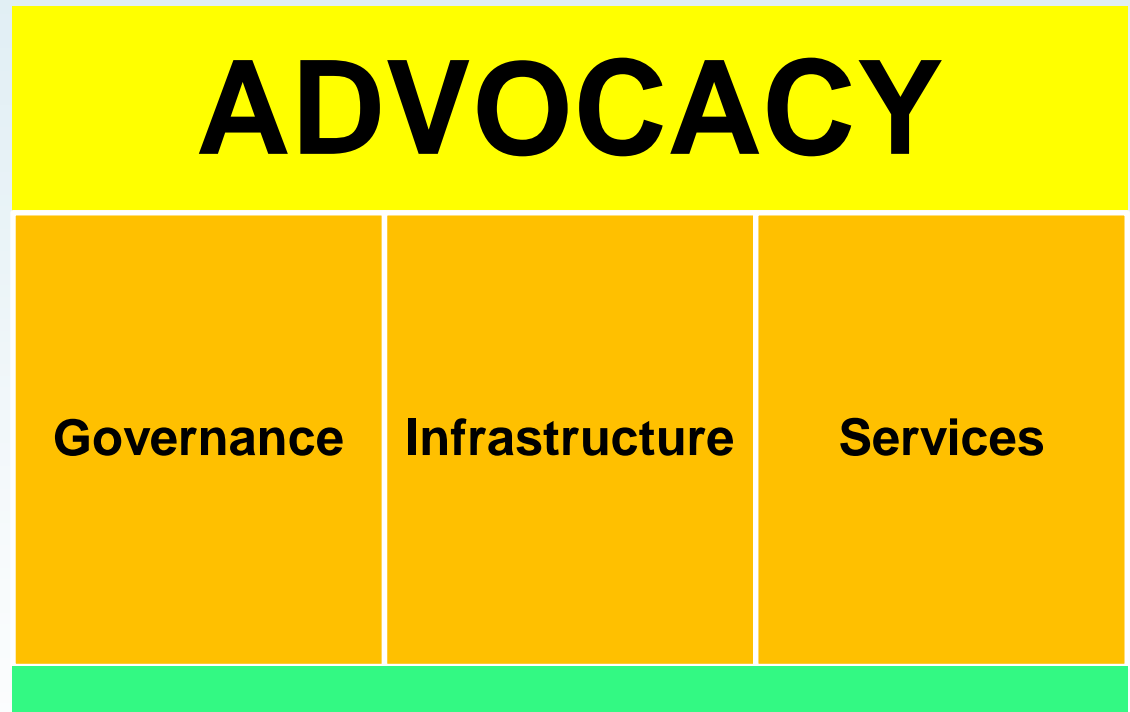
# Challenges in a Roadmap for EOSC

- ❑ Knowledge about EOSC in universities is not high
- ❑ Publications count for reward and promotion, not research data
- ❑ Rules for university engagement with EOSC unclear



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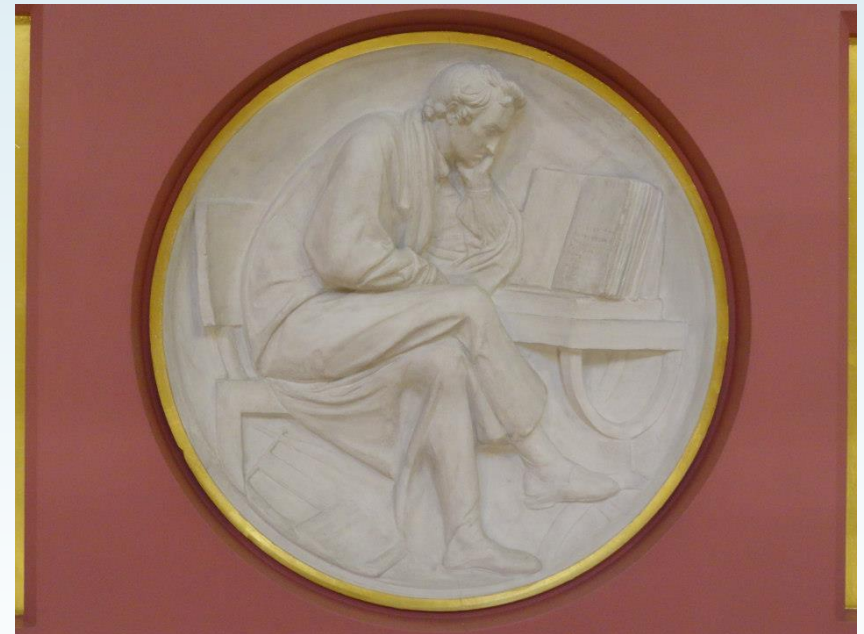
# The future for EOSC?

- Collaboration
- Sharing
- Ground-breaking discoveries
- Global leadership
- Cost saving
- Income generation
- But...
- Rules of engagement need to be clearer
- Universities yet to buy in



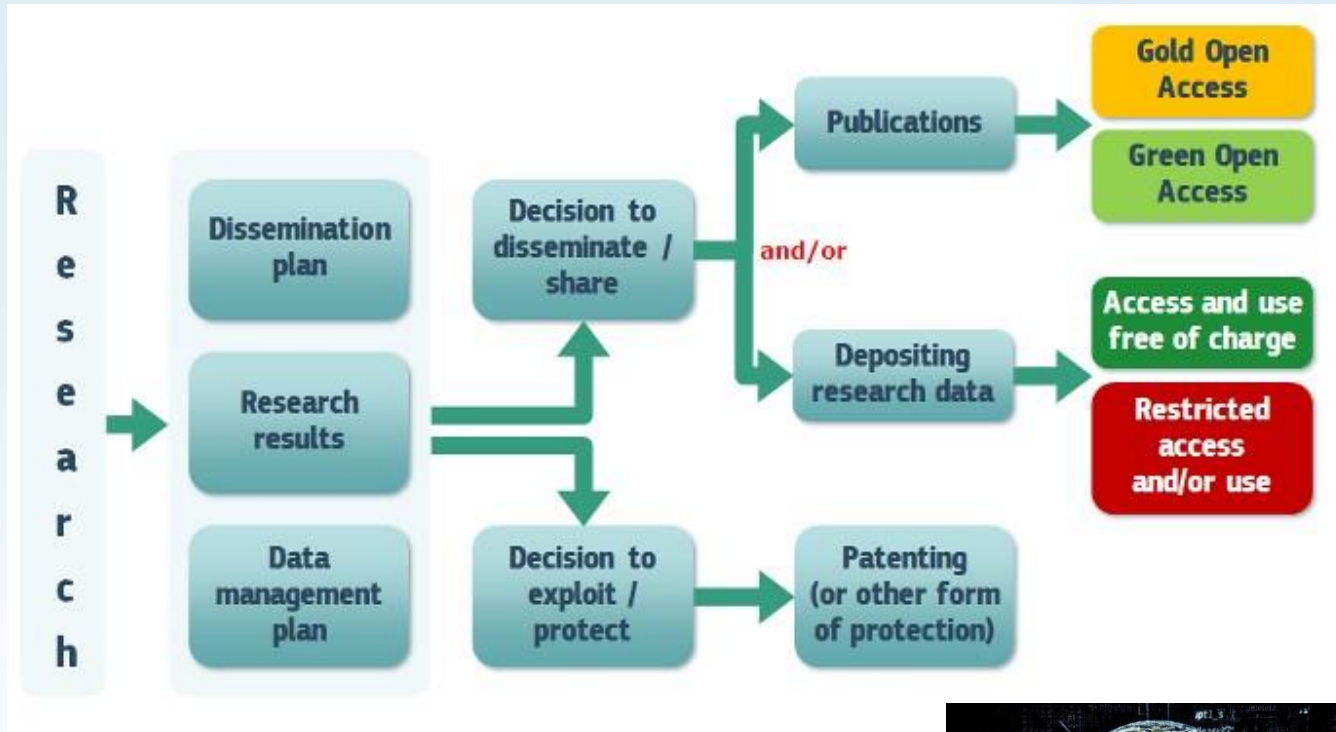
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# Research Data – a new currency



- Data is FAIR
- Data is Open by default
- Develop pan-LERU approach for Big Data
- Repository will interface with EOSC



- Institutional Research Data repository

Graphic from: H2020 Online Manual

[http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-data-management/open-access\\_en.htm](http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-data-management/open-access_en.htm)

## Conclusion

- Open Science is good for the researcher
- It is also good for research
- Research Data is the new currency in research outputs
- Open Science is an opportunity, not a threat
  
- Over to you...



UCL Student Centre, opened 18/2/19