Research Data Management in a research-intensive university

Dr Paul Ayris

Pro-Vice-Provost
(UCL Library Services & UCL Office for Open Science and Scholarship)
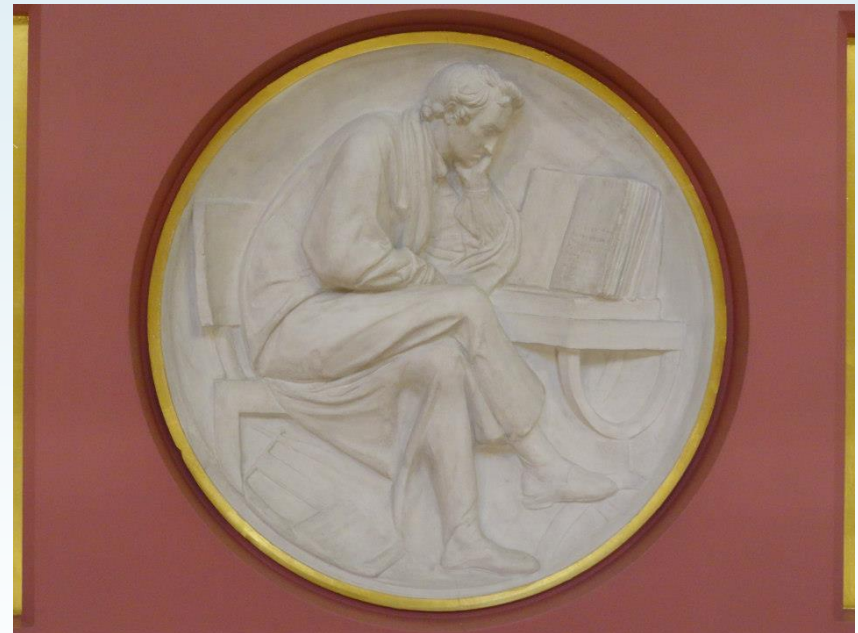
E-mail: p.ayris@ucl.ac.uk
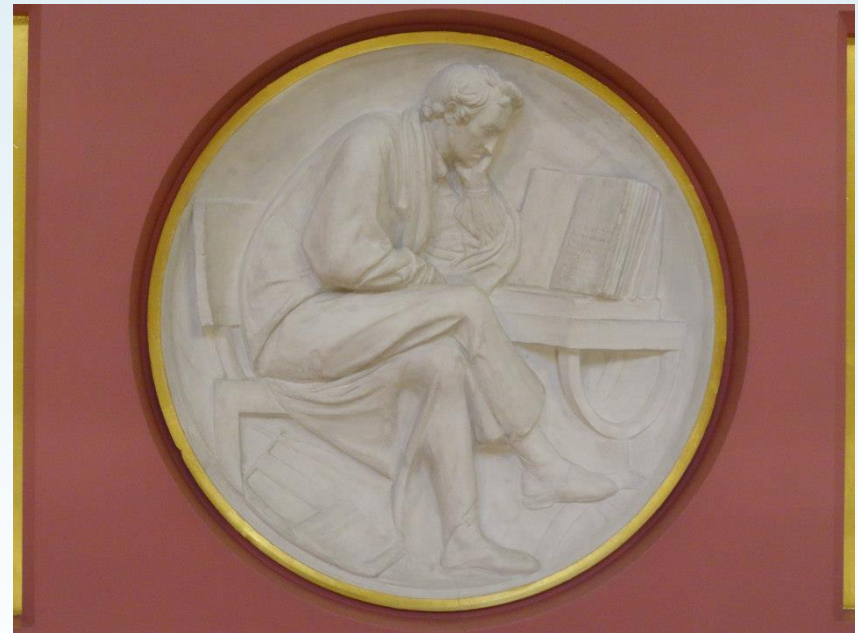Twitter: @ucylpay

Content

- ❑ LEARN
- ❑ Research Data Management at UCL
- ❑ Next Steps

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❑ Research Data
   Management at UCL

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LERU Roadmap for Research Data

❑ Overseen by Research Data Working Group

Pablo Achard (University of Geneva)
Paul Ayris (UCL, University College London)
Serge Fdida (UPMC, Paris)
Stefan Gradmann (University of Leuven)
Wolfram Horstmann (University of Oxford)
Ignasi Labastida (University of Barcelona)
Liz Lyon (University of Bath)
Katrien Maes (LERU)
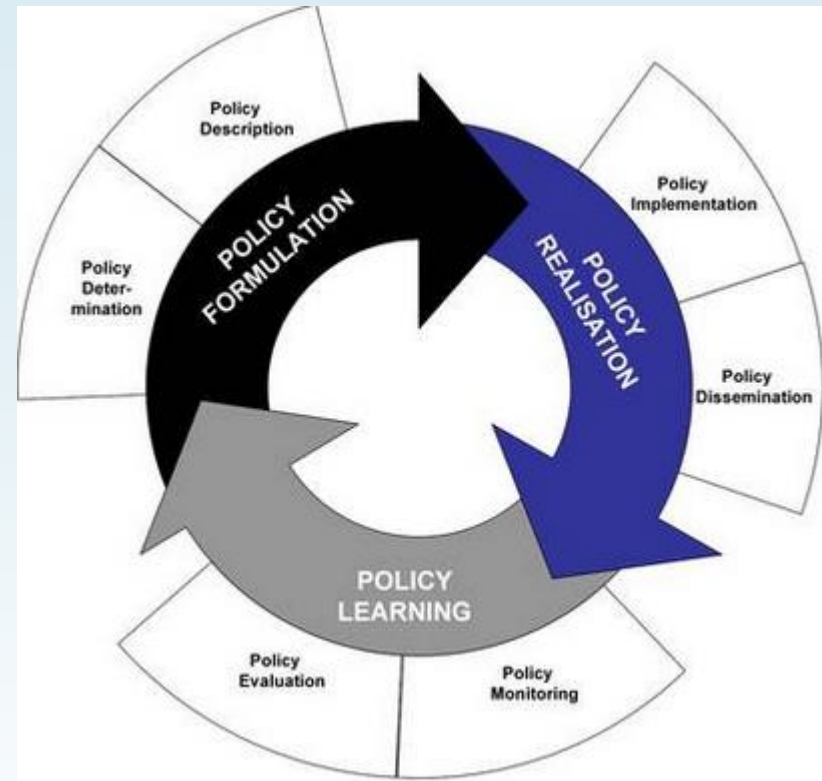Susan Reilly (LIBER)
Anja Smit (University of Utrecht)

Key Messages

❑ Each LERU university needs a Research Data Management Strategy

❑ Researchers should have Research Data Management Plans

❑ LERU universities need to bring stakeholders together

❑ Benefits of 'open data' for sharing and re-use should be advocated and explored

A Box of Useful Knowledge
(Brougham Papers, UCL Library Services)

Policy Development

- ❑ Case Study on Policy development from UCL
- ❑ Drivers
  - ❑ External funders
  - ❑ Need to inform researchers
  - ❑ Raise awareness of issues facing UCL researchers
- ❑ Identifies roles and responsibilities
- ❑ Data to be made open in the most open manner appropriate

See www.lanecrothers.net/politicalprof/the-policy-cycle-and-our-frozen-politics/

- ❑ Researchers should have Data Management Plans
- ❑ LERU slams lack of data policies – *Research Europe*

Open Data

❑ Open Data allows research data to be shared and re-used
  ❑ Avoids costly duplication of research activity
  ❑ Provides greater transparency in research activity
  ❑ Potential to speed discovery of solutions to societal Grand Challenges, such as health care & environmental science

❑ Can all research data be open?
❑ Certain categories probably cannot
  ❑ National security
  ❑ Data protection
  ❑ Commercial Funder requirements

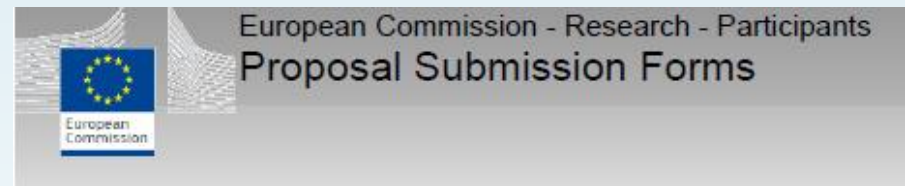http://en.wikipedia.org/wiki/File:Open_Data_stickers.jpg

LEARN – **LE**aders **A**ctivating **R**esearch **N**etworks

❑ Purpose was to develop the LERU Roadmap for Research Data to build a global co-ordinated global e-infrastructure

❑ LEARN website

European Commission - Research - Participants
Proposal Submission Forms

European Commission

Horizon 2020

Call: H2020-INFRASUPP-2014-2

Topic: INFRASUPP-7-2014

Type of action: CSA

Proposal number: 654139

Proposal acronym: LEARN

LEARN

- ❑ 5 partners
  - ❑ UCL (University College London) – lead partner
  - ❑ University of Barcelona
  - ❑ University of Vienna
  - ❑ LIBER
  - ❑ ECLAC – UN Commission for Latin America and the Caribbean
- ❑ Started in June 2015; ran for 24 months
- ❑ €497,000 budget
  - ❑ 100% funded
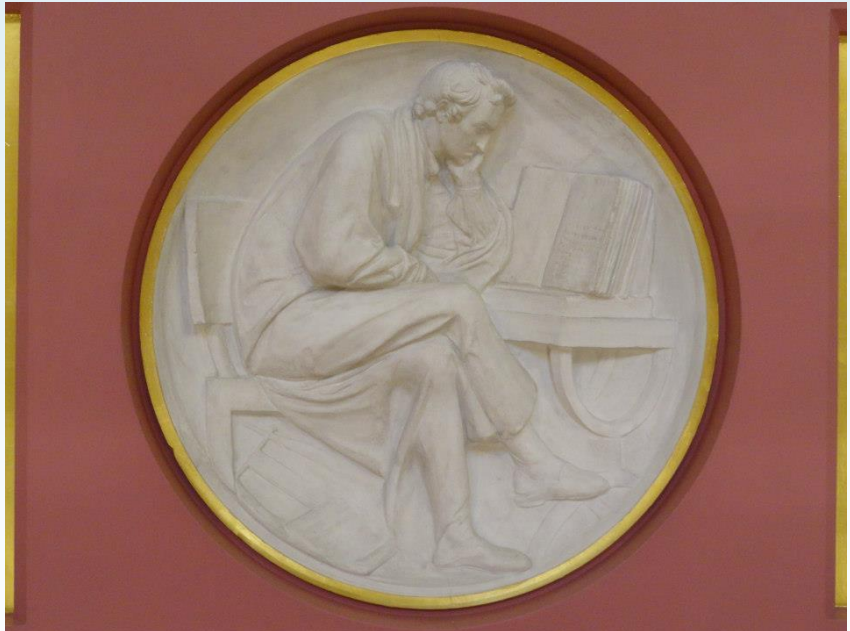

Wilkins Building, UCL, 1826

LEARN Deliverables

❑ Model Research Data Management Policy

    ❑ Fed by a study of RDM policies and input from Workshop attenders

❑ Toolkit to support implementation

    ❑ Issues identified in Workshops and in literature

    ❑ Surveys and self assessment tools

❑ Executive Briefing (in several languages)
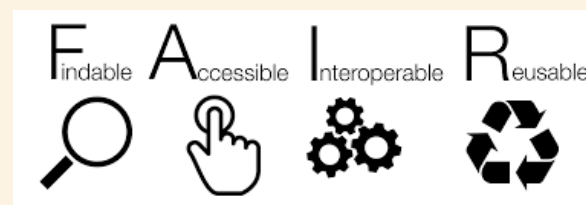

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□ Research Data Management at UCL

□ Next Steps

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- Open data is a crucial aspect of open science
- Without the data underpinning research papers it can be very difficult to validate or reproduce research
- Data may be re-used or combined with other data in future projects
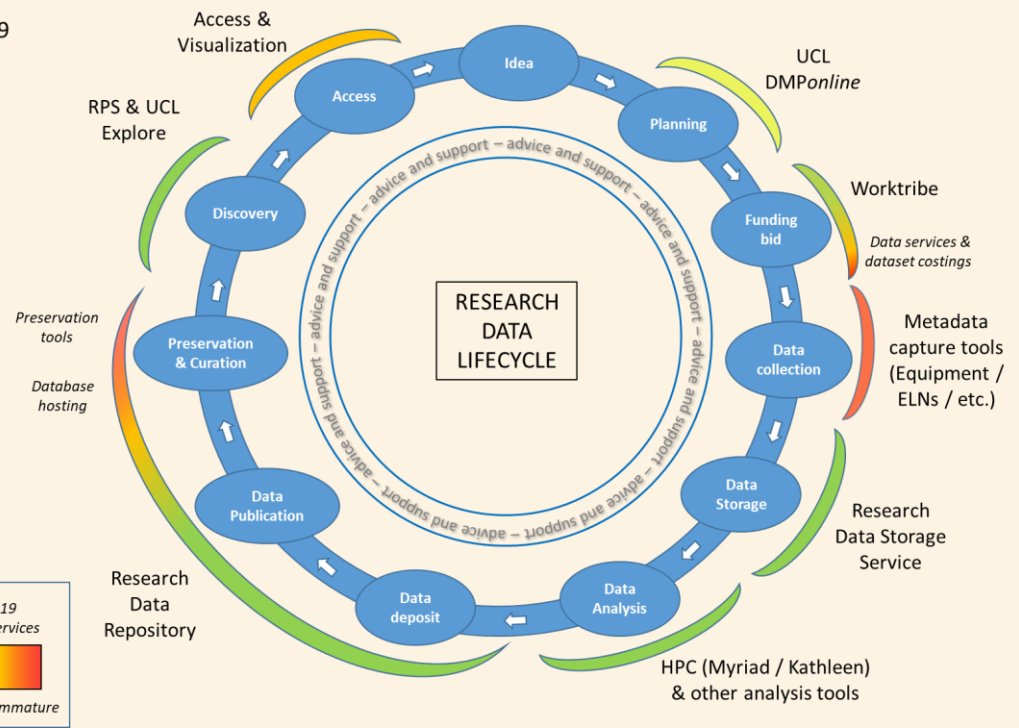- But a culture change to data sharing is required in many disciplines

Thanks to Dr J.A. Wilson, UCL Research IT, for sharing his slides

RDS - Research Data Services

- UCL is developing a suite of services to support Open Science and good research data management across the research life-cycle
- Research Data Services (RDS) offers:
  - Research Data Storage Service (for use during projects)
  - Research Data Repository (for long-term preservation and publication)
- Research Data Management team (in Library) offers:
  - Data management planning
  - Advice and guidance
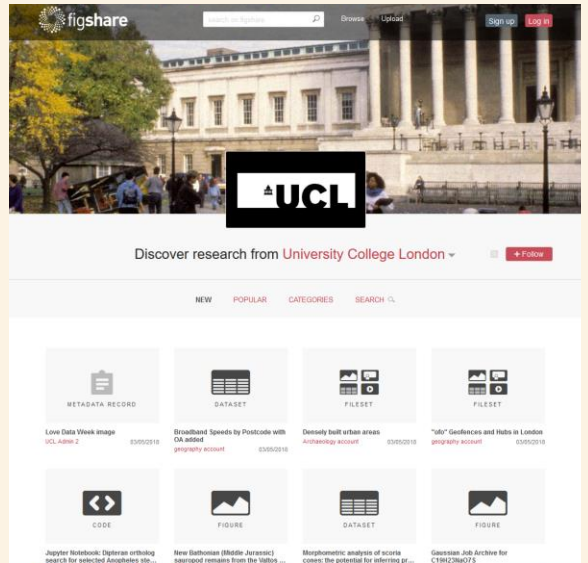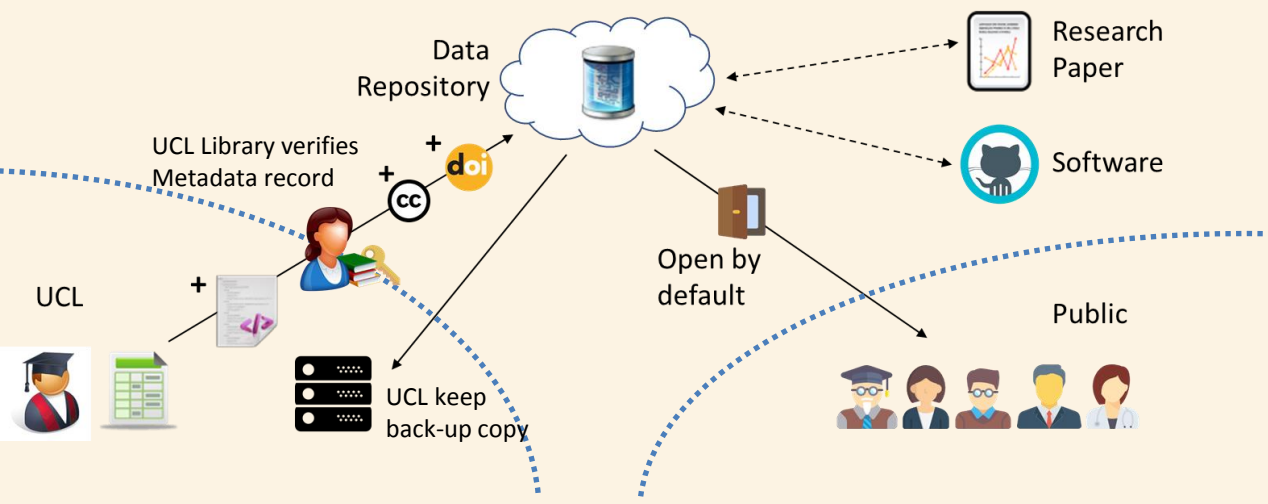 - Metadata review for the Repository

RDR - Research Data Repository

- 'Figshare' interfaces for deposit, discovery, visualization & access
- Long-term storage and curation for significant data
- Data publication, with licence and DOI (Digital Object Identifier) assignment
- Pricing: free initially (within reason)
- Launch scheduled for May 2019
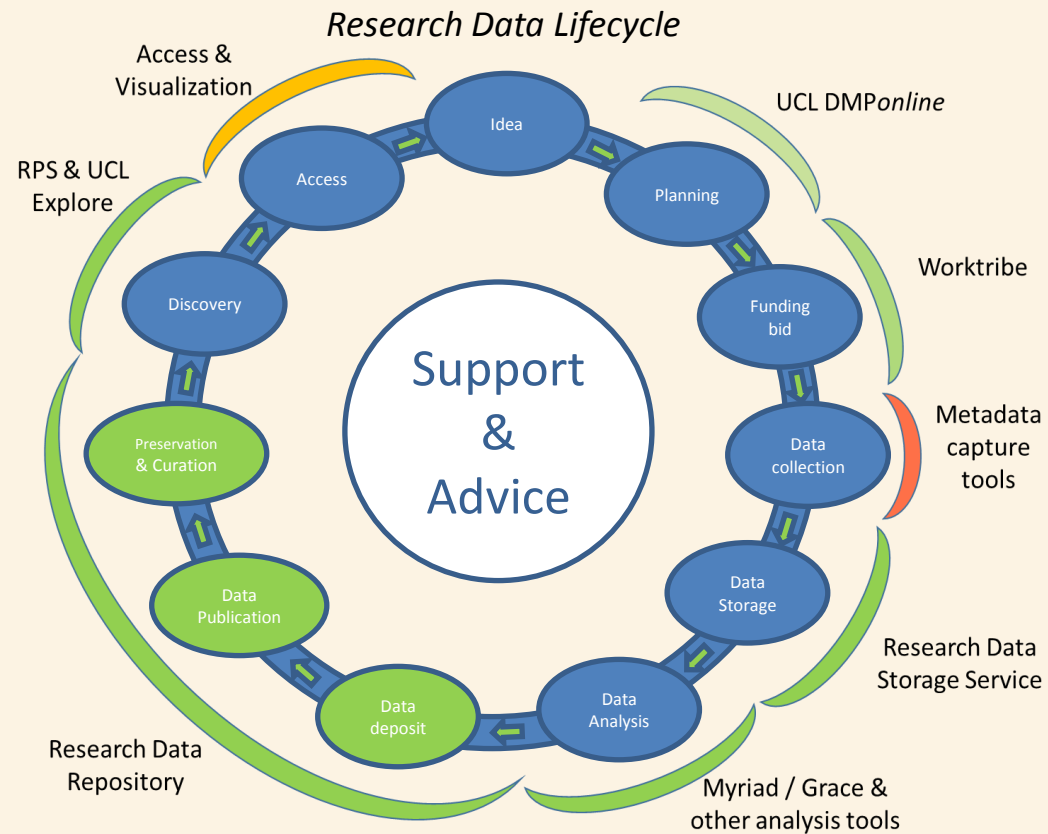
UCL Research Data Repository Service

- Long-term commitment for UCL

- Service provided jointly by Research IT Services (ISD) and UCL Library

  - Research IT Services deal with technical issues, reporting, back-up, system integrations, future developments

  - Library's Research Data Support Service provide advice and guidance for _all_ aspects of data management across the research data lifecycle, including the Repository, and review metadata records before publication

- Records added to Figshare will be reflected in the Research Publication Service and in UCL Explore

Research Data Lifecycle

UCL Research Data Repository Future Plans

- Better support for sensitive data & restricted access

- Specialist metadata for different disciplines

- Preservation tools

- Migration of accounts from public Figshare to UCL Figshare (optional)

- Better technical integration between data management tools and services

- Ultimately, enriched documentation and an audit trail to facilitate reproducibility and re-use
    - Research Computing
    - Research Software Development
    - Research Data Storage Service
    - Research Applications

Research Data Lifecycle

Access & Visualization

UCL DMP*online*

RPS & UCL Explore

Worktribe

Idea

Access

Planning

Discovery

Funding bid

Metadata capture tools

Preservation & Curation

Support & Advice

Data collection

Data Publication

Data Storage

Research Data Storage Service

Data deposit

Data Analysis

Research Data Repository

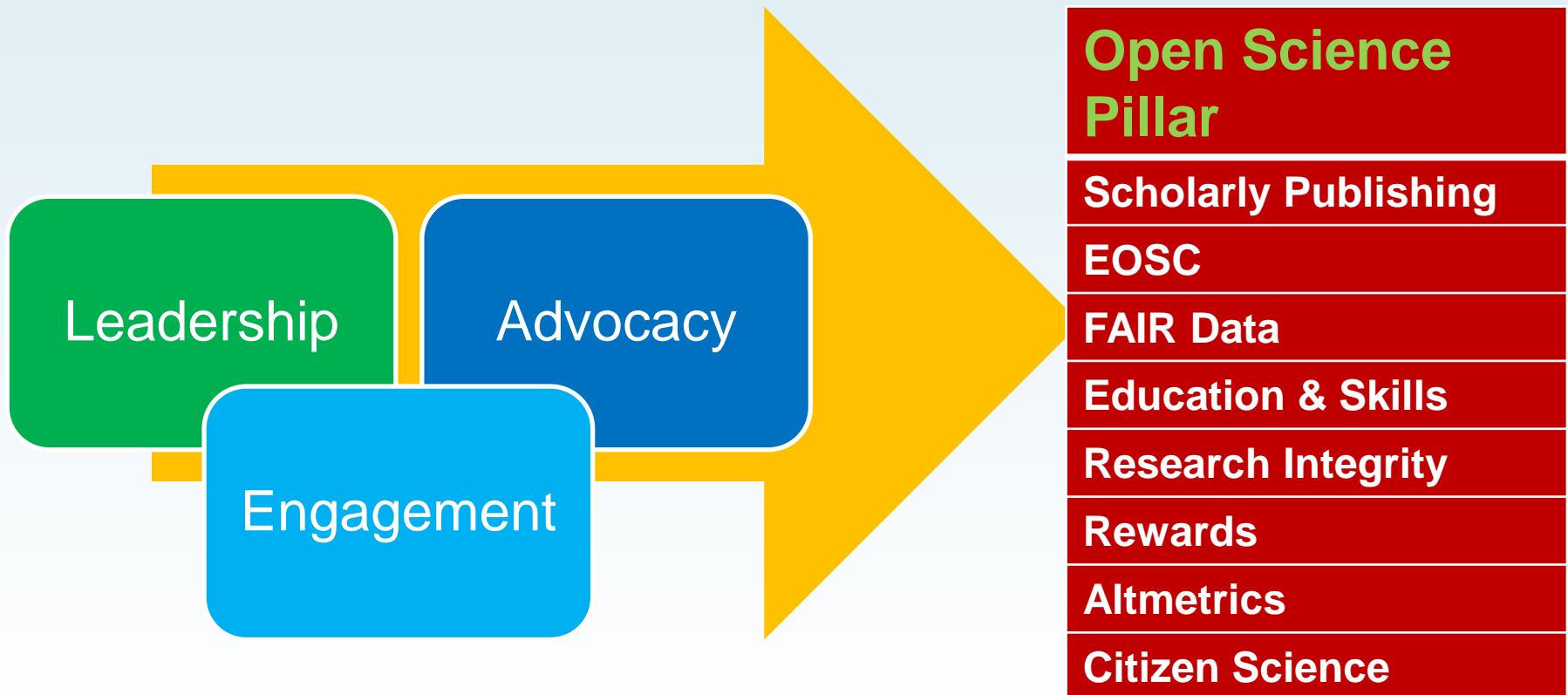Myriad / Grace & other analysis tools

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UCL Open Science Office (planned)

Leadership

Advocacy

Engagement

Open Science Pillar
Scholarly Publishing
EOSC
FAIR Data
Education & Skills
Research Integrity
Rewards
Altmetrics
Citizen Science

Activities planned in all areas for 2020-21

Conclusion

- ❑ Open Science **is** a blueprint for the university of the 21st century
- ❑ Benefits are obvious
- ❑ Challenges are not easy to address
- ❑ Not a given that Open Science will be the default way to proceed
- ❑ Universities have to make a choice

UCL Student Centre, opened 18/2/19