FAIR Forever?
Accountabilities and responsibilities in the preservation of research data

Amy Currie and William Kilbride
IDCC21
19 April 2021
Background and Methods
The Digital Preservation Coalition

Who we are

What we do

• Community Engagement
• Advocacy
• Workforce Development
• Capacity Building
• Good Practice and Standards
• Management and Governance
• Scaled to the Global Challenge

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FAIR, EOSC, and the ‘FAIR Forever’ Study

- Need to develop, monitor and maintain EOSC's capability in the preservation of digital materials
- Assess current strengths, weaknesses, opportunities and threats to the preservation of research data across EOSC
- Look at how the open science community might benefit from and align development with the knowledge and experience of the wider digital preservation community

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Research Design and Methods

• Desk-based assessment
  – reviewed EOSC governance documentation, EOSC projects’ outputs and plans, and other relevant literature addressing the current state of development of digital preservation approaches, workflows, and services for the envisioned EOSC Web of FAIR Data and Related Services as communicated in those materials

• Semi-structured interviews
  – with representatives of the researcher and e-infrastructure communities, specifically the European Strategy Forum on Research Infrastructures (ESFRI) Cluster and Regional projects, to test and refine initial findings and allow others to emerge through discussions of current requirements and capabilities in digital preservation

• Focus groups
  – with representatives of the research data management and digital preservation community to help articulate, assess, and compare potential use cases for preservation services within EOSC. Purposive selection (DPC members, at RPOs, Europe/UK, RDM and DP work).
Key findings (and challenges)
Preservation and the FAIR Principles

• Clearly communicated FAIR requirements and practices expected for ESFRI Ris and other EOSC stakeholders
  – Strengths of EOSC FAIR Working Group, FAIR task groups, and other related initiatives and projects
• Examples of good practice applying FAIR principles that intersect with good practice in digital preservation
  – Strengths of PIDs, emphasis on DMP, planning for robust storage, repository audit and certification
• However...
  – some doubt on implementation/impact of preservation actions in DMPs
  – sufficiency of preserving metadata and diachronic interoperability
  – ‘FAIR fatigue’ and aspirational vs achievable goals for preservation
Digital Preservation is not explicit

There were implicit meanings and assumptions about digital preservation—and data—in the EOSC vision and among stakeholders.

By digital preservation, we mean “the series of managed activities necessary to ensure continued access to digital materials for as long as necessary”

We know you know this, but that’s more than backup or storage
Roles, responsibilities, and accountabilities are unclear

Not just what they do: also how they report to each other …

| ICT-Specific | LIS-Specific | Discipline Specific | General Public | Resource Provider | Service Provider | Research Funders |
|--------------|--------------|---------------------|----------------|-------------------|------------------|------------------|
| Data RI support professional | Research software engineer | Data Sci. data analytics | Educator/Trainer | Data steward | Data curator | Policy maker |
| Researcher | Citizen | EOSC Enabler | Data scientist | Software developer | Technical director | Training coordinator |
| Data preservation coordinator | Digital preservation manager | Digital preservation specialist | Research data manager | Programme/project manager | Information specialist | Librarian |
| Digital archivist |
Risks to data, reputation, and sustainability

“Digital materials are listed Critically Endangered when they face material technical challenges to preservation, there are no agencies responsible for them or those agencies are unwilling or unable to meet preservation needs”

DPC Global List of Digitally Endangered Species
(The BitList 2020),
http://doi.org/10.7207/DPCBitList20-01
Recommendations and Response
# 19 Recommendations for Action

| For the EOSC Secretariat | For Funders | For Research Repositories | For the DP Community |
|--------------------------|-------------|---------------------------|----------------------|
| **Recommendation One**: of urgent priority, establish a working party or task group, reporting directly to the EOSC Association Board with respect to digital preservation. | **Recommendation Six**: of urgent priority, articulate to all grant holders the clear view that adherence to FAIR principles requires preservation actions to be monitored and managed over the entire life of a project not simply at the point of completion. | **Recommendation Four**: of urgent priority, adapt workplans to include quality improvement mechanisms where these do not already exist, including DPC Rapid Assessment Model, establishing thereby a strategic framework to achieve baseline certification for primary preservation services, or identifying preservation pathways for data. | **Recommendation Twelve**: of urgent priority, provide a place for EOSC to share lessons and articulate emerging requirements outwith the research data 'bubble'. |
| **Recommendation Two**: of high priority, formalize terms of reference and host an initial meeting of a digital preservation task group to establish an iterative work plan. | **Recommendation Seven**: of high priority, audit preservation pathways for all research outputs to identify critically endangered content. | **Recommendation Ten**: of medium priority, provide strategic framework for audit of data management plans. |  |
| **Recommendation Three**: of medium priority, establish an operational basis for partnership to deliver the candidate model services proposed in this report. | **Recommendation Eight**: of high priority, initiate a process to establish accountabilities and obligations with respect to implementation of data management plans. | **Recommendation Fourteen**: of medium priority, identify costs of action versus inaction with respect to high value, critically endangered content. |  |
| **Recommendation Eleven**: of medium priority, establish a mechanism to align EOSC implementation and interpretation of 'FAIR' with the path dependent and continuous quality improvement cycles of digital preservation. | **Recommendation Nine**: of medium priority, establish mechanisms to engage expert communities of practice in the validation of data management plans. |  |  |
| **Recommendation Thirteen**: of medium priority, establish and verify business models for preservation services. | **Recommendation Fifteen**: of medium priority, identify costs of action versus inaction with respect to high value, critically endangered content. |  |  |
| **Recommendation Sixteen**: of high priority, establish an ongoing basis for partnership in the digital preservation community, including beyond the research data community. | **Recommendation Seventeen**: of medium priority, establish more sustained digital preservation training for researchers and repository managers. |  |  |
| **Recommendation Five**: of urgent priority, designate a Senior Digital Preservation Rapporteur on behalf of the Board to directly communicate and liaison with a Digital Preservation Task Group, to monitor and oversee EOSC's responses to digital preservation risks. |  | **Recommendation Four**: of urgent priority, adapt workplans to include quality improvement mechanisms where these do not already exist, including DPC Rapid Assessment Model, establishing thereby a strategic framework to achieve baseline certification for primary preservation services, or identifying preservation pathways for data. |  |
| **Recommendation Eighteen**: of high priority, obtain strategic control of digital preservation risks to EOSC. |  | **Recommendation Ten**: of medium priority, provide strategic framework for audit of data management plans. |  |
| **Recommendation Nineteen**: of medium priority, establish a strategic trajectory for management of digital preservation risks, embedding these within reviews and enhancements. |  | **Recommendation Fourteen**: of medium priority, identify costs of action versus inaction with respect to high value, critically endangered content. |  |
Recommendation One: of urgent priority, establish a working party or task group, reporting directly to the EOSC Association Board with respect to digital preservation.

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19 Recommendations: Response

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| **Recommendation Two:** of high priority, formalize terms of reference for a Digital Preservation Core (DPC) to work in close cooperation with the EOSC Association Board and the EOSC Secretariat to establish a working party or task group with the mandate and authority to expedite the implementation of digital preservation activities. | |
| **Recommendation Thirteen:** of medium priority, establish and verify business models for preservation | |
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Where do you see your role?

- EOSC Secretariat
- EOSC Association
- Research Funder
- Research Repository
- Digital Preservation community
- Policy Maker
- Researcher
- Technician
- Practitioner
- Manager
- Data RI support professional
- Research software engineer
- Data Sci. data analytics
- Educator/Trainer
- Data steward
- Data curator
- ...

[Image of a person thinking]
...and responsibilities for the preservation of FAIR data?

| As Research Repositories | **Recommendation Four**: of urgent priority, adapt workplans to include quality improvement mechanisms where these do not already exist, including DPC Rapid Assessment Model, establishing thereby a strategic framework to achieve baseline certification for primary preservation services, or identifying preservation pathways for data. |
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|                           | **Recommendation Ten**: of medium priority, provide strategic framework for audit of data management plans.                                                                                                                                                                                                                                                                              |
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| As part of the Digital Preservation Community | **Recommendation Twelve**: of urgent priority, provide a place for EOSC to share lessons and articulate emerging requirements outwith the research data 'bubble'.                                                                                                                                                                                                 |
Thank you! Questions?

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References

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