

Why are we doing this?

1. Skills gap in the workforce

‘... the development of a well connected and highly skilled generation of professional leaders ...’

‘... growing workforce with skills commensurate to deal with the emerging digital preservation challenge, an enhanced and widely distributed skill set and a step up the career ladder for what is intended to become a group of community leaders ...’

2. Emergent nature of the challenge

‘The repository ... shall have appointed staff with adequate skills and experience to fulfil these duties’

‘From thousands of files to trillions: the days of manual processing are over’



Why are we doing this?

3. No career structure for digital preservation

‘... programs should be integrated into the training of professionals such as conservators, librarians and archivists ...’

‘... I’m going to go back and feel like I know where to start, which I didn’t before!
Need to go back and look at risk assessment and a digital preservation policy...’

4. But some pretty good examples of professionals who are leading the sector

Here they are!



Key challenges and Key Skills

**It won't do itself
It won't go away
Don't wait for perfection**

**What is the question?
6 basic challenges and skills
Two lessons from experience**

Digital preservation makes bleak reading ...



Digital Archives

Strategies for Digital

Findings and Recommendations
Archaeology: A Survey of



Cadw



DoENI



English
Heritage



The
Heritage
Council



Historic
Scotland

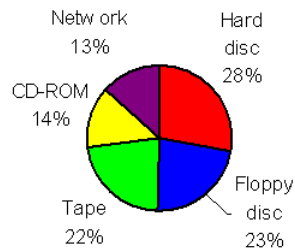


RCAHM
Wales



Digital Archives

The present state of digital archiv



Digital Archives

In short, the archaeological record could be decaying faster in its digital form than it ever did in the ground

Digital preservation typically makes bleak reading 2



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Let's restate the problem ...

- Digital data has value. It is an asset.
- It has potential and creates new opportunities.
- Use gives rise to direct and indirect outcomes.

...but...

- Deployment depends on software, hardware and people.
- Software, hardware and people change.

...therefore...

- Access is not guaranteed without (some) action
- Value, opportunity, impact not guaranteed



Digital**Preservation**Coalition

Digital preservation is not just about 'data':

Digital preservation is not just about 'access':

Digital preservation is not just about 'risk':

it's about

people and

opportunity



Key responses

1. Migration

Changing the format of a file to ensure the information content can be read

2. Emulation

Intervening in the operating system to ensure that old software can function and information content can be read

3. Hardware preservation

Maintaining access to data and processes by maintaining the physical computing environment including hardware and peripherals.

4. Exhumation etc

Maintaining access to an execution environment or software services so that processes can be re-run with new data





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Core Challenge 1

Access and long term use depends on the configuration of hardware and software and the capacity of the operator.





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Challenge 2

Technology continues to change creating the conditions for obsolescence.





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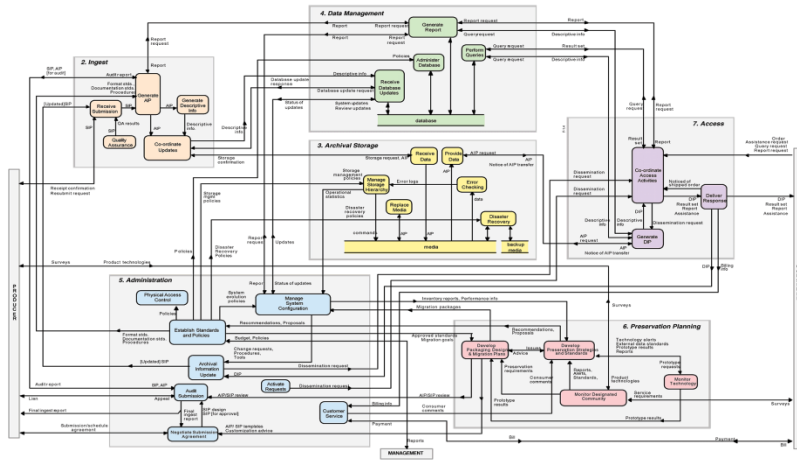
Challenge 3

*Storage media have a short life.
Storage devices are subject to
obsolescence.*



Challenge 4

Digital preservation systems are subject to the same obsolescence as the objects they safeguard.



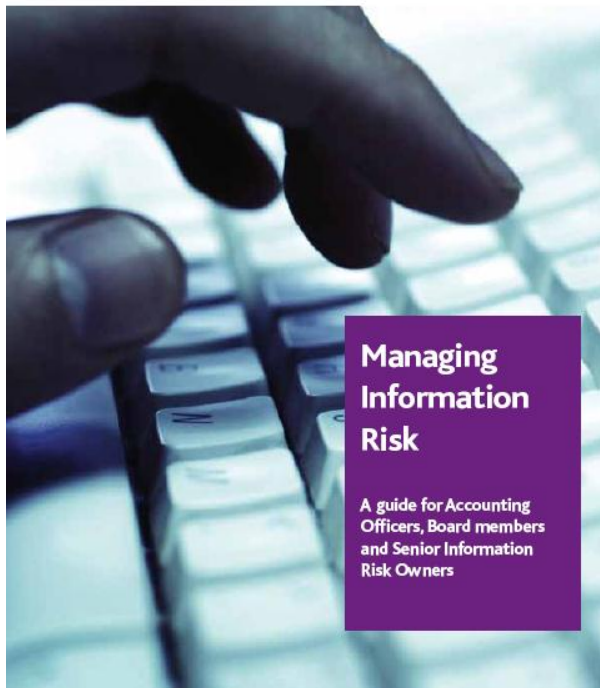


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Challenge 5

Digital resources are intolerant of gaps in preservation.

HM Government





Challenge 6

*Different strategies for
different types of user or
collection or interaction*





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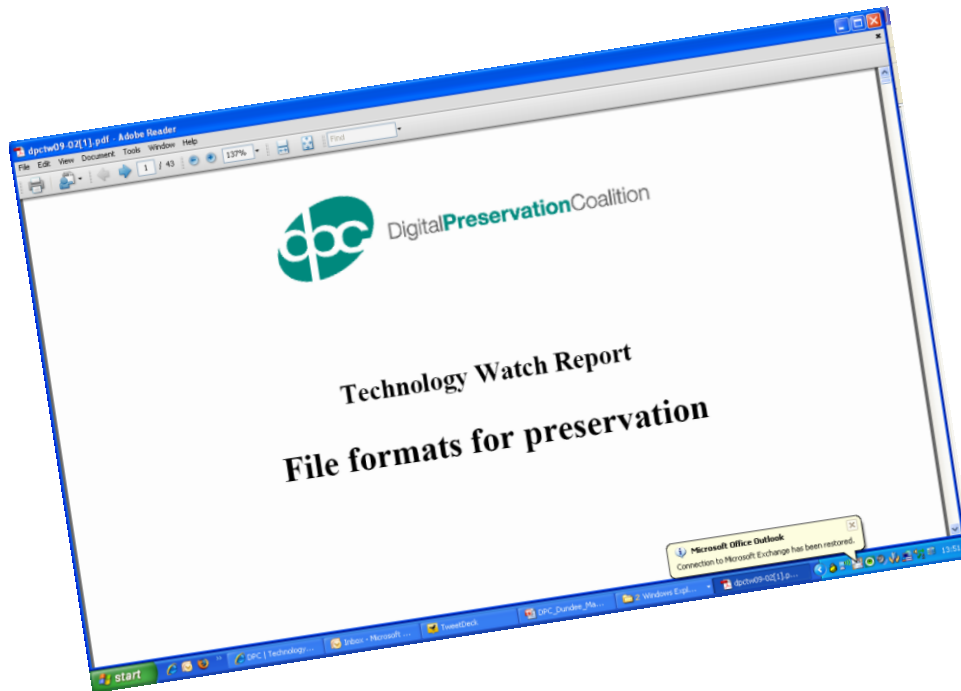


The problems are more subtle than we realised a decade ago...

e.g. file format obsolescence

Changing file formats?
Conformant containers?
Units of information?

How to pick a winner ...



Adoption
Dependency
Disclosure
Transparency
Metadata support
Interoperability
Complexity
Stability
Rights management

Todd, M 2009 'File formats for preservation', DPC Technology Watch Report 02/09, online at <http://www.dpconline.org/advice/technology-watch-reports.html>



How to pick a winner ...

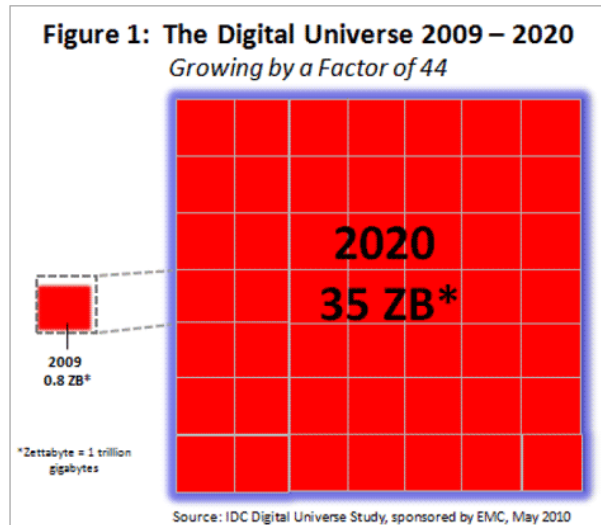
beyond and **potentially over-writing the criteria** ...
repository managers should **align** the recognition and
weighting of criteria with a **clear preservation strategy**
that articulates the **purpose** of the repository and the
needs of its designated community;

Todd, M 2009 'File formats for preservation', DPC Technology Watch Report 02/09, online at <http://www.dpconline.org/advice/technology-watch-reports.html>

How to pick a winner ...

'Digital Universe' Nears A Zettabyte

May 4th, 2010 : Rich Miller



The Great Recession hasn't slowed the breakneck growth of the Digital Universe. In 2010 the volume of digital information created and duplicated in a year will reach 1.2 zettabytes, according to new data from IDC.

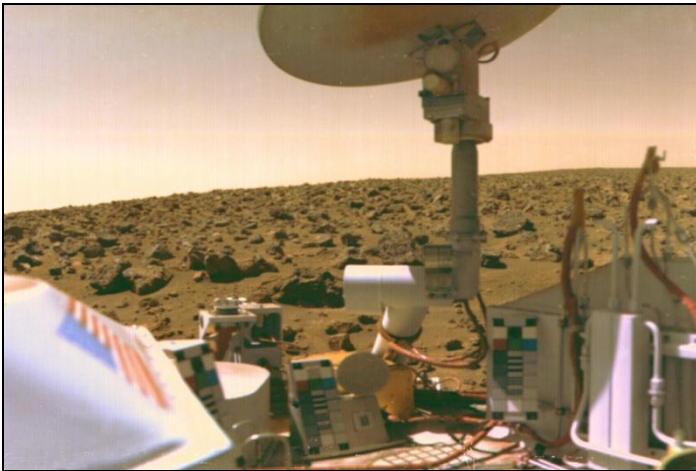
You ain't seen nothing yet

Data growth on 3 axes

- volume
- complexity
- expectation

... it's not going to be about obsolescence so much as workflow and capacity

Digital Preservation as a ‘discipline’



Courtesy NASA/JPL-Caltech

Daunting challenge
Decade of research and development
Replete with jargon and acronyms
Turf war between professions?
Disconnected from practice?
A whole new barrier

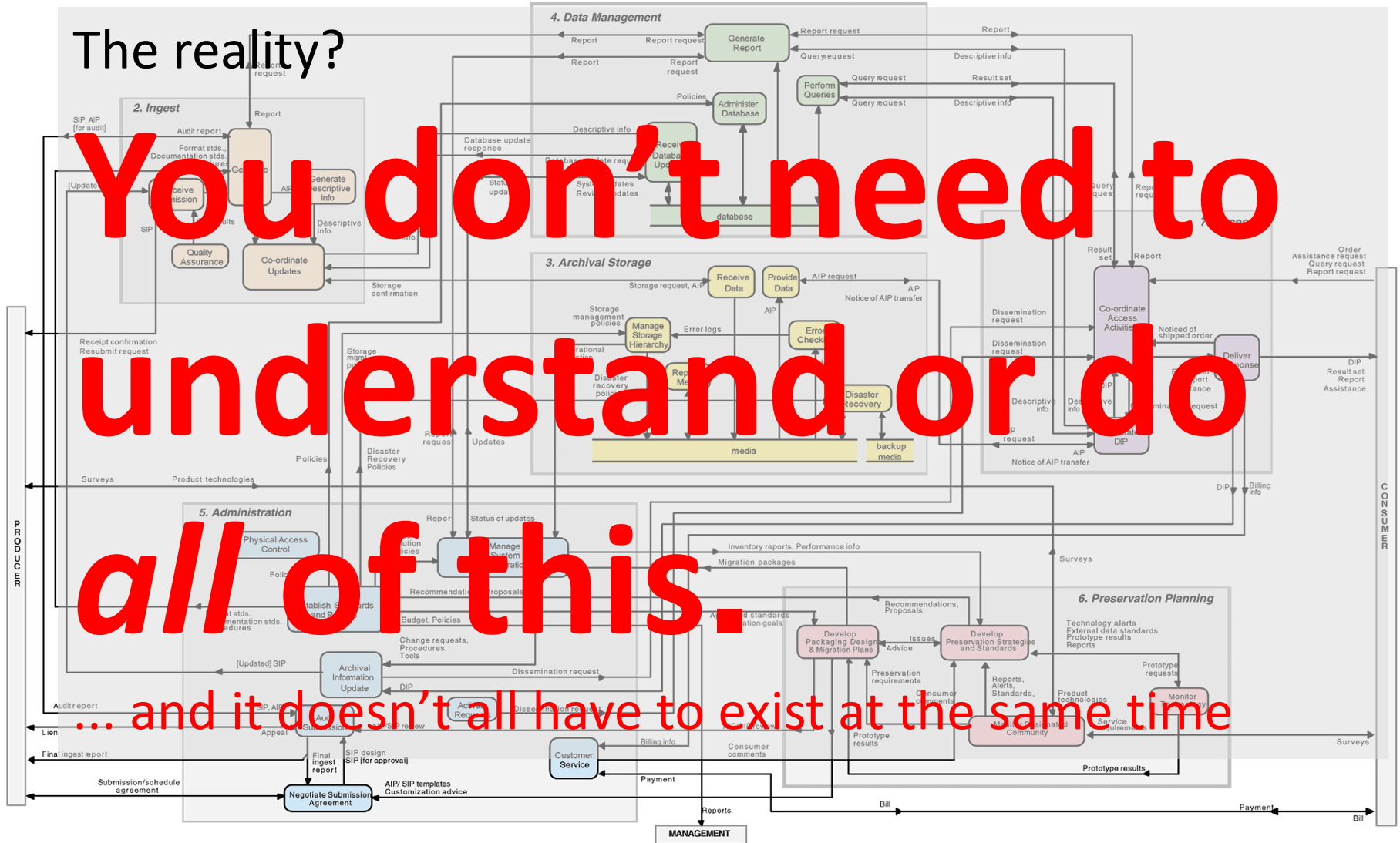
The last decade has shown definitively that thinking of fancy words is not the same as solving problems



The reality?

You don't need to understand or do all of this.

... and it doesn't all have to exist at the same time





Digital**Preservation**Coalition

Oh and ... the Digital Preservation Coalition



*...to make our digital
memory accessible
tomorrow ...*

Workforce development
Advocacy
Knowledge Exchange
Assurance and Practice
Partnership



Digital**Preservation**Coalition



UKLA



University
of Glasgow



University of
St Andrews



ARCHAEOLOGY
DATA SERVICE



Royal
Commission on the
Ancient and
Historical
Monuments of
Scotland



The NATIONAL
ARCHIVES
of SCOTLAND



The Open University



UNIVERSITY OF LEEDS



ALBA | CHRUTHACHAIL



PORTICO



ENGLISH HERITAGE

KING'S
College
LONDON



UNIVERSITY OF
CAMBRIDGE

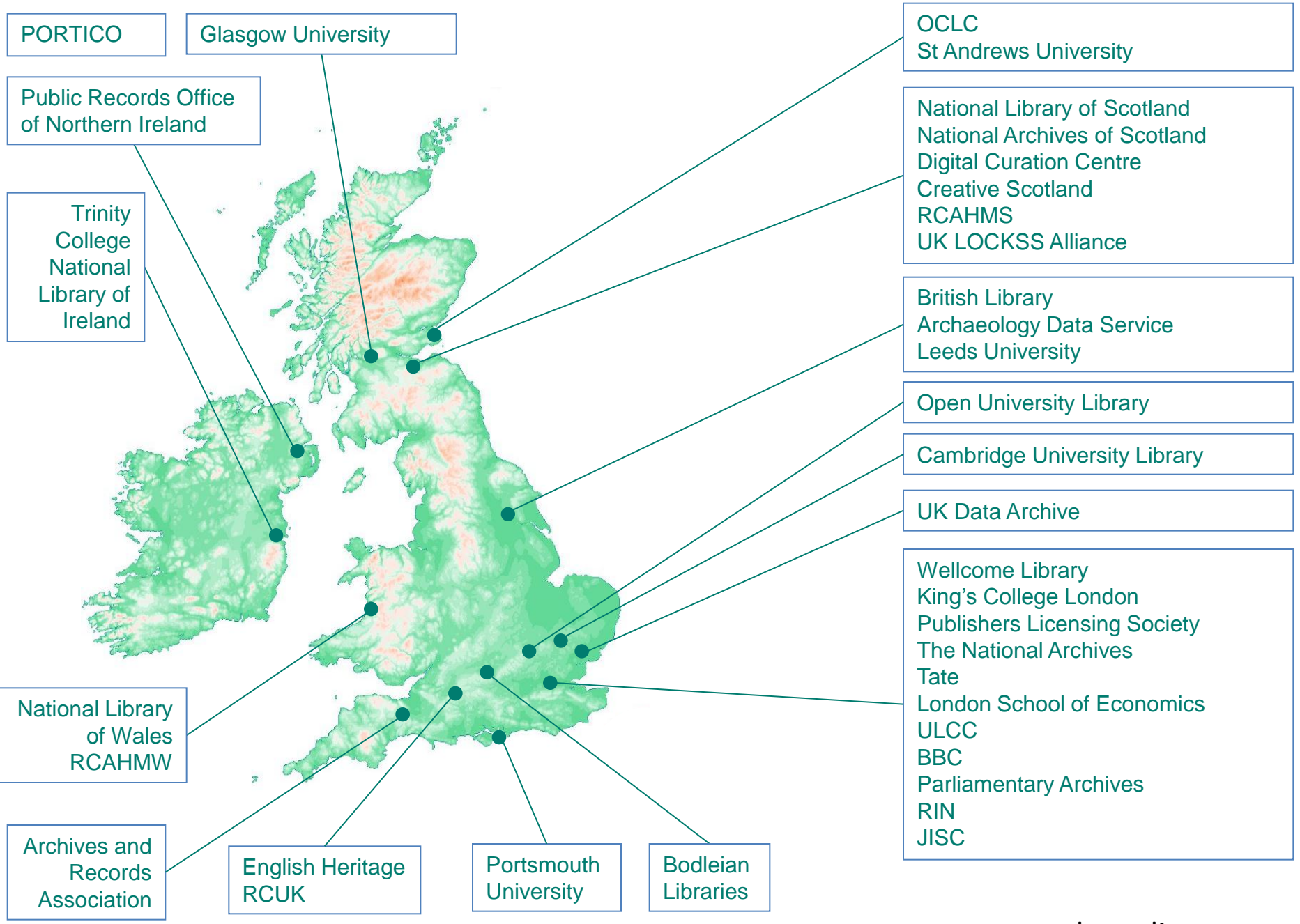


Public Record Office
of Northern Ireland

Trinity College Library Dublin



www.dpconline.org





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DPC as a partner and friend!

Preserving Email
Practical Tools for Preservation
Web Archiving Task Force
Intellectual Property Rights Report
Planning day
E-journal content Event
E-journal content event
Preservation and Business Continuity
Director's Group
Persistent Identifiers
Digital Forensics for Preservation
Preserving digital sound and vision

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