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What's the problem with digital preservation? emerging practice (good and bad)

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Digital preservation typically makes bleak reading …

When asked about how long their digital resources would be available for, JISC-funded projects said ...

‘In perpetuity’
‘Indefinitely’
‘50 years’
‘10 years then elsewhere’
‘until 2014’
‘forever or for three years’

DPC/Portico/ULCC

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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

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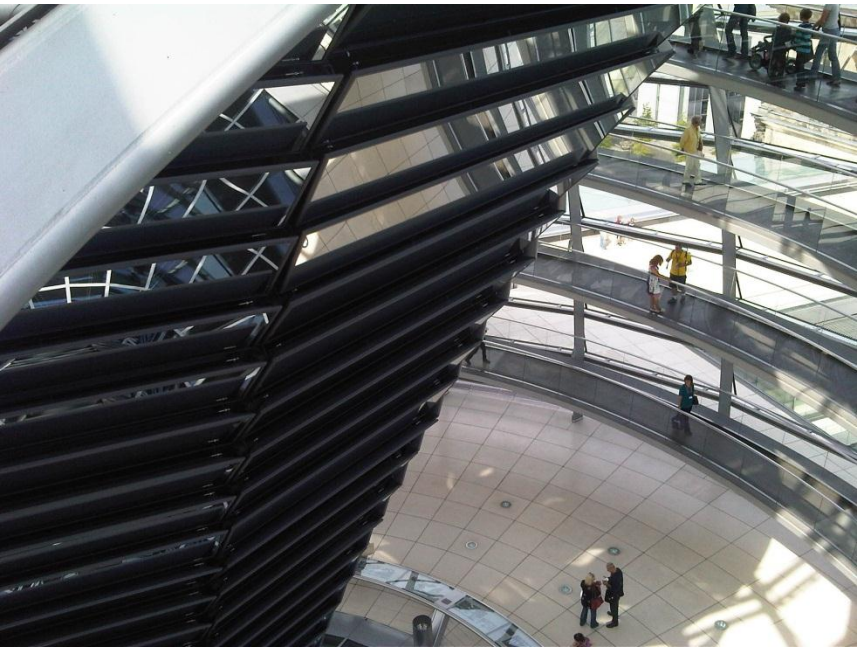
We do preservation because we want to be:



1. Transparent

e.g. Data Protection, Freedom of Information … childcare, human tissue

2. Safer

e.g. preparedness, detection, disaster, recovery, audit

3. Smarter

e.g. scientific value, access to heritage, value of social knowledge

4. Wealthier

e.g. efficient business, management of IP, employment, planning, creative

5. Healthier

e.g. managed life history, research and safe innovation

6. Greener

e.g. evidence-based policy development, efficient data retention

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And because of ….

1. Legal Compliance
e.g. Sarbanes-Oxley, Data Protection

2. Regulatory Compliance
e.g. power generation, aviation, banking

3. Legal protection
e.g. patents, mis-selling, detection, audit

4. Unanticipated exploitation
e.g. petro-chemical, music, pharmaceuticals

5. Business Continuity and improvement
e.g. product recall, disaster recovery

6. Business Value
e.g. getting the right information to the right people at the right time in a format they can use

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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

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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. etc

Research and development field, new solutions and new approaches continue to emerge, eg virtualisation for preservation

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Challenge 1:

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

… so we need to capture this configuration and use it to enable access.

Metadata, documentation, representation information

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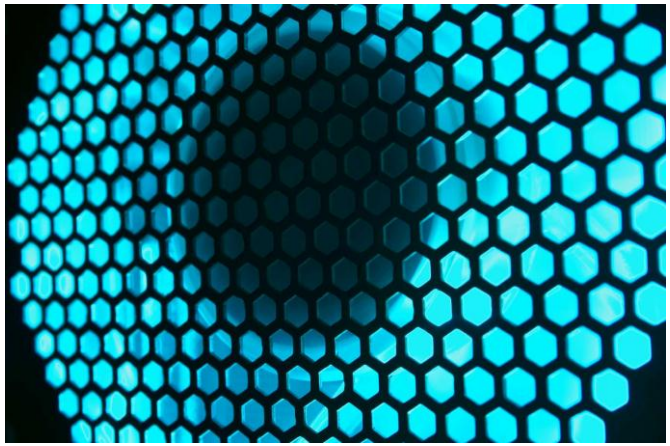
Challenge 2

Technology continues to change creating the conditions for obsolescence.



… technology watch
… planning and testing and doing and

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Challenge 3

Storage media fail, have a short life and storage devices are subject to obsolescence.

… so we need a storage strategy which includes error checking and refreshment

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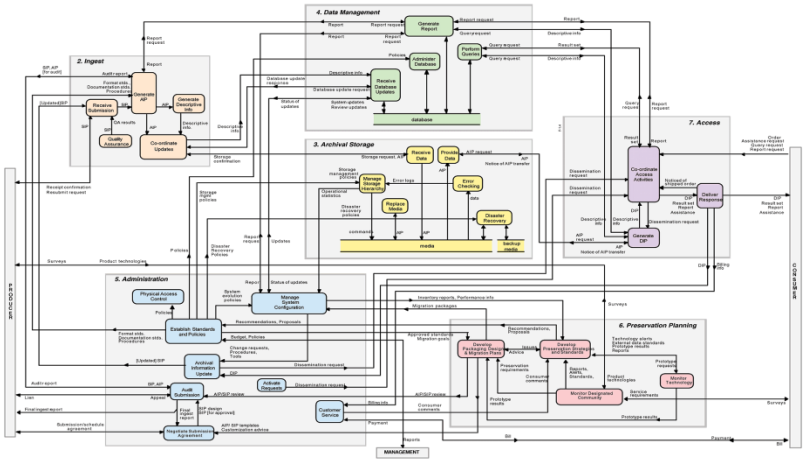
Challenge 4



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

… so we need systems which are modular, based on standards and which are tested

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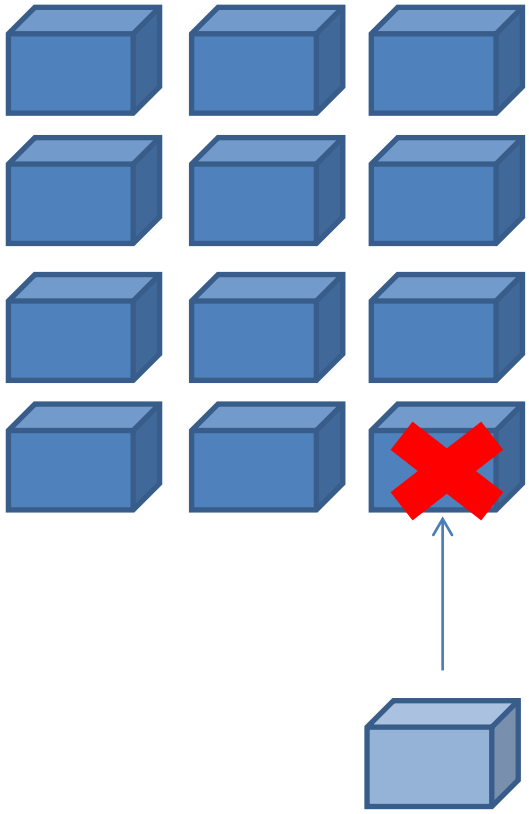
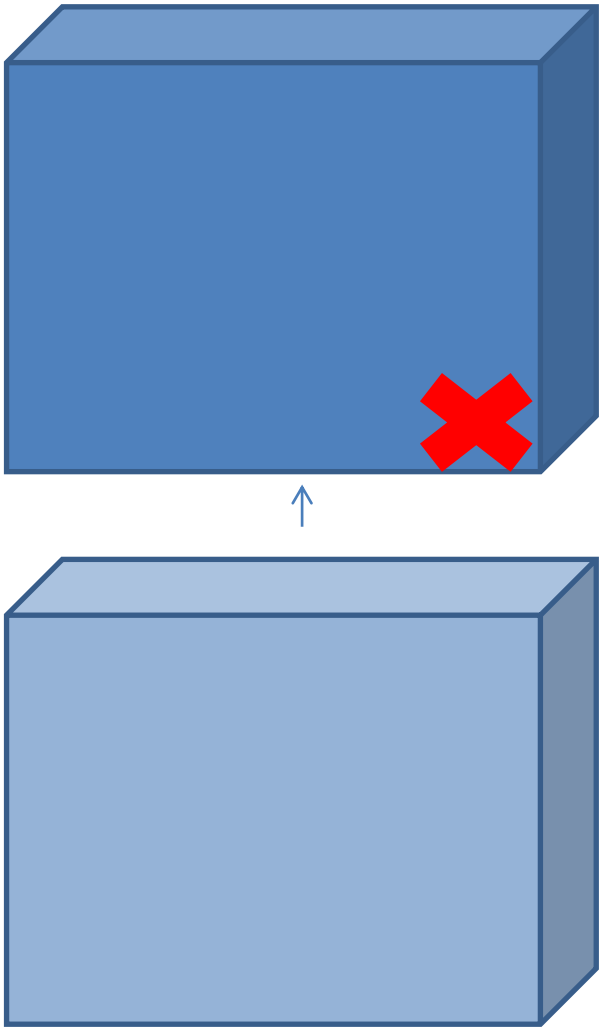
Challenge 4
Microservices and standards





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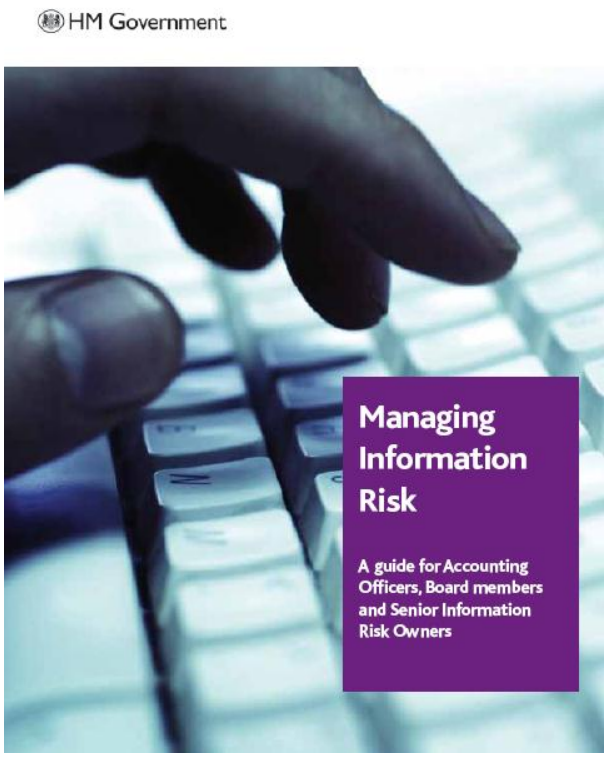
Challenge 5

Digital resources are intolerant of gaps in preservation.



We need to act early and we need to act on an on-going basis. Lends itself to risk management approaches

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Challenge 6

Resources can be corrupted or tampered without trace

A variety of solutions:

- *Checksum*
- *Forensic tools*
- *Authenticity Evidence Records*
- *Data security protocols*

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How do we face those challenges?

Work together!

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Oh and ... the Digital Preservation Coalition

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

UKLA

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University of Dublin

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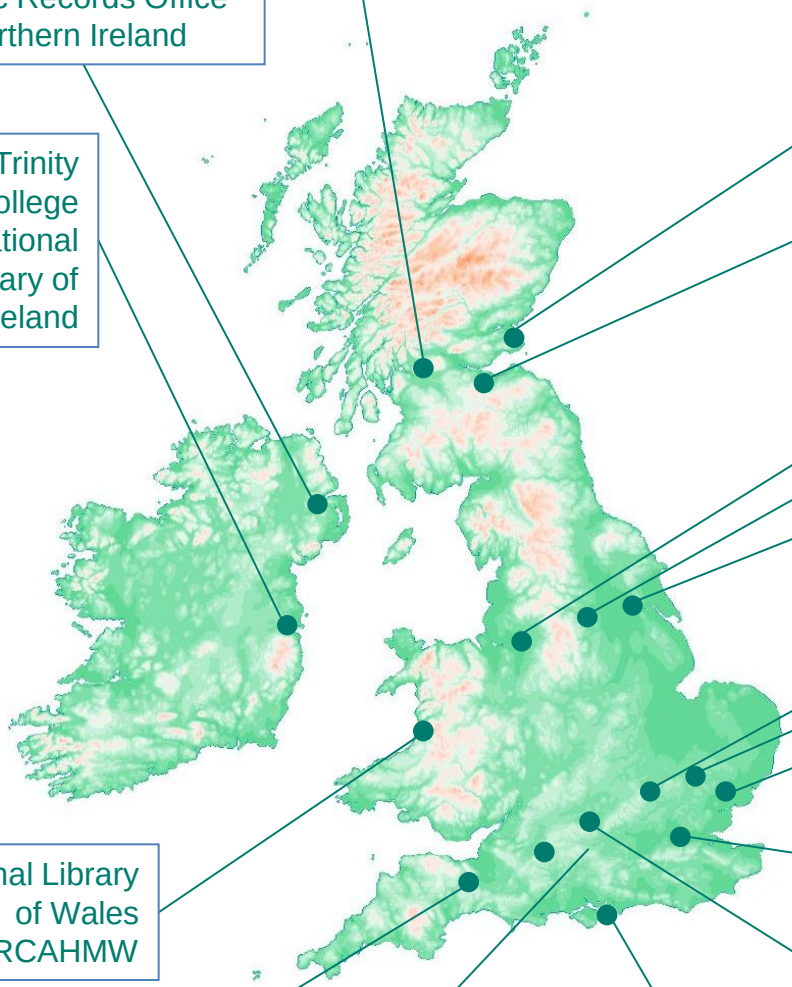
/w.dpconline.org



PORTICO

Glasgow University

Public Records Office of Northern Ireland

Trinity College National Library of Ireland

National Library of Wales
RCAHMW

Archives and Records Association

English Heritage
RCUK

Portsmouth University

Bodleian Libraries

OCLC
St Andrews University

National Library of Scotland
National Archives of Scotland
Digital Curation Centre
Creative Scotland
RCAHMS
UK LOCKSS Alliance

Manchester University Library

Leeds University Library

British Library
Archaeology Data Service
York University

Open University Library

Cambridge University Library

UK Data Archive

Wellcome Library
King's College London
Publishers Licensing Society
The National Archives
Tate
London School of Economics
ULCC
BBC
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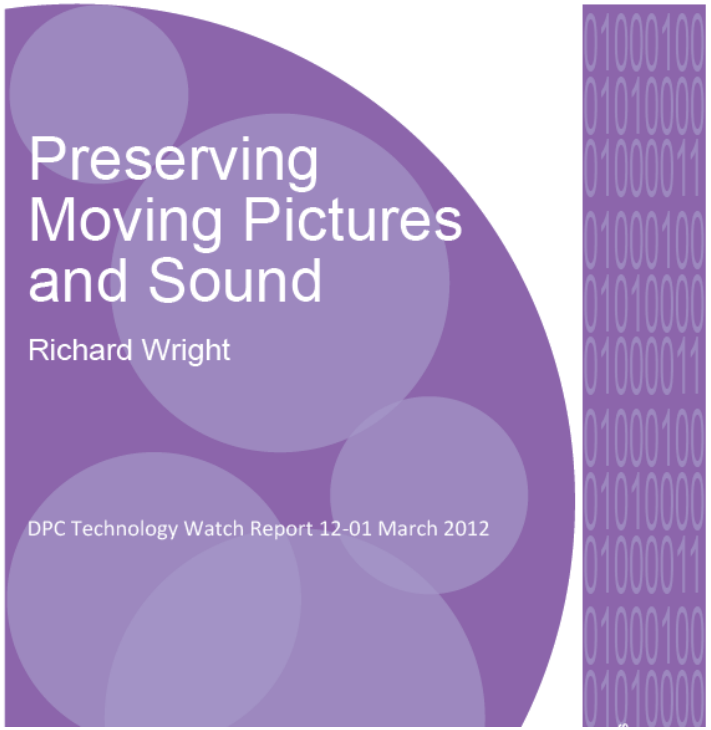
Knowledge Exchange



- Technology Watch
- What's New
- Briefing Days
- Email list
- Case studies
- Conference reports

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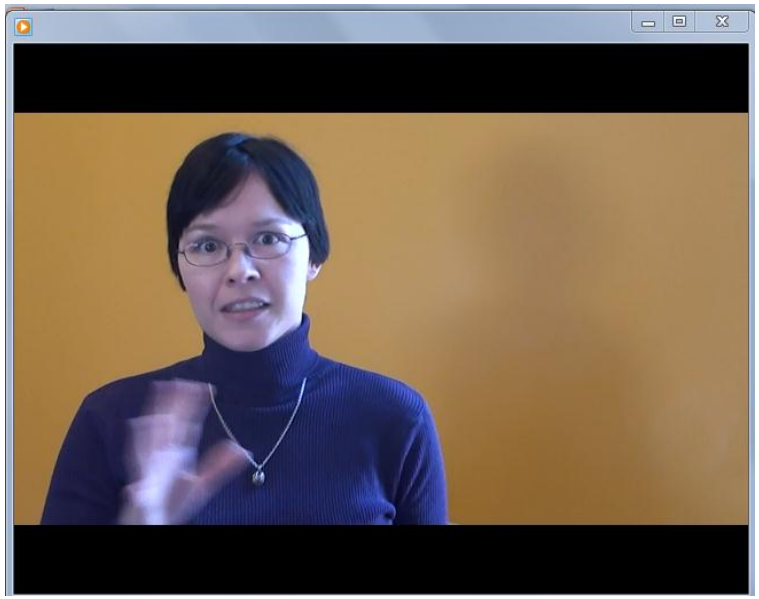
Workforce Development



- Leadership Programme
- Expert Briefing
- Peer networking
- Roadshows:
  - Glasgow in April
  - London in May
  - Aberystwuth in June

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Workforce Development: today!

What I wish I knew before I started

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DPC as a partner and friend!

(join us)

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