



**Alliance Permanent Access to the Records of
Science in Europe Network**

APARSEN – An Integrated view of digital preservation

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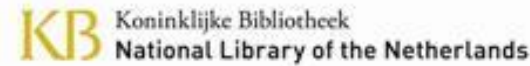
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2nd Common Preservation Digital Heritage

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Network of Excellence



- APA
RSEN**
Alliance Permanent Access to the
Records of Science in Europe Network
-  **Giaretta
Associates**

What may need to be preserved?



- Intellectual capital in digital form need to be preserved and if we get the preservation wrong we will be in trouble
- Public scientific data
- Documents
- Private e.g. Pharmaceuticals, aerospace
- Legal, planning designs
- Medical e.g. health records over a lifetime of a patient or even longer
- Financial e.g. exchange rates, financial records
- Social
-and much more

Understanding the Difficulties

- There are many threats to digitally encoded information:
- Bit rot and changes in hardware and software are the obvious ones
- Gradual loss of usability as the tacit knowledge which is needed is lost
- Legal rights expire or change
- Objects may be altered – is it what you think it is?

Many options



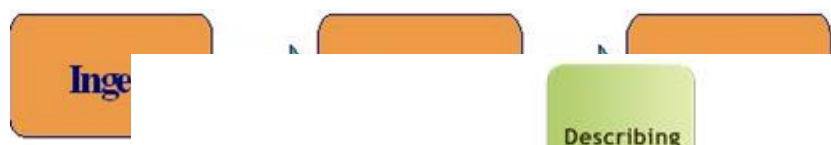
- Is just keeping many copies enough?
 - Can we rely on software vendors to solve the problem ?.
 - Is there a 'magic' preservation form e.g. XML?
 - Is there a special medium that will take care of things forever or at least for hundreds of years?
 - Is there someone who will do it for us
 - but they will have the same issues and so how do you know they can do as they claim?
 - Is there a risk free option?
 - In any case it takes resources so is there a single figure to tell us how much it will cost?
 - Firstly there are many options, depending on how much risk you are willing to live with
 - Secondly costs are notoriously difficult to calculate for any of the options (except for the bit storage)
- No.
 - No.
 - No.
 - No.
 - Maybe
 - No.
 - No.

Implications

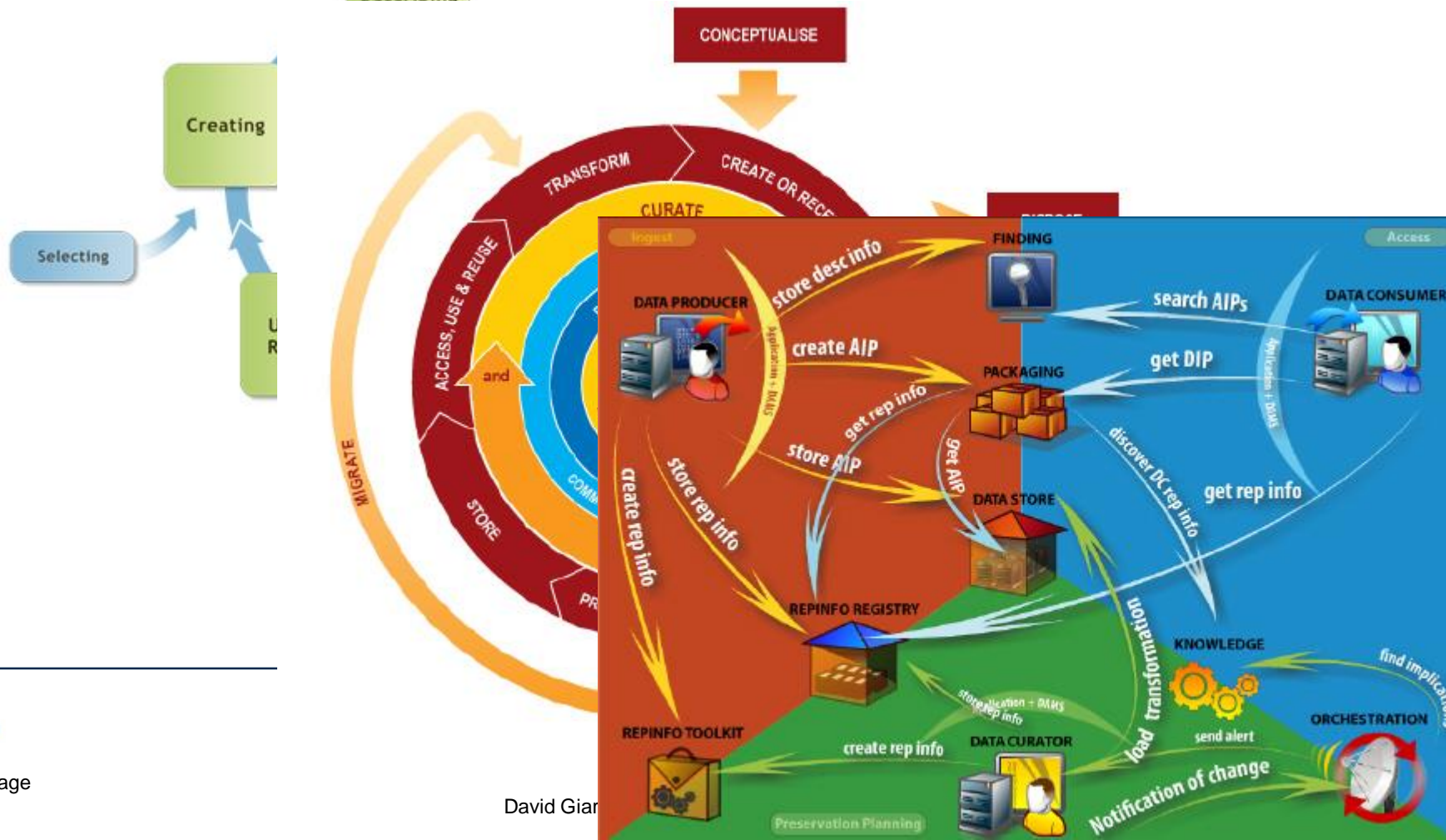


- Accepting that
 - Digital preservation is difficult
 - It involves many different aspects
 - Things change over time
 - Needs resources
 - Even the largest organisation cannot do everything
- Then one needs
 - a way to bring everything relevant together
 - A way to guide responses to new challenges and opportunities
- Therefore one needs the integrated vision

Many models – why another?



See
<http://blogs.loc.gov/digitalpreservation/2012/02/life-cycle-models-for-digital-stewardship/>



...and r

Collection,
processing,
documentation
(metadata)

cataloguing,
archival,
publication,
sharing

curate
transform
preserve
serve

Data Lifecycle Models and Concepts by
CEOS, 2012, see
<http://www.ceos.org/images/DSIG/Data%20Lifecycle%20Models%20and%20Concepts%20v13.docx>

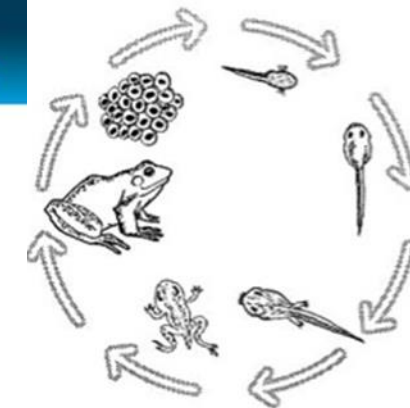
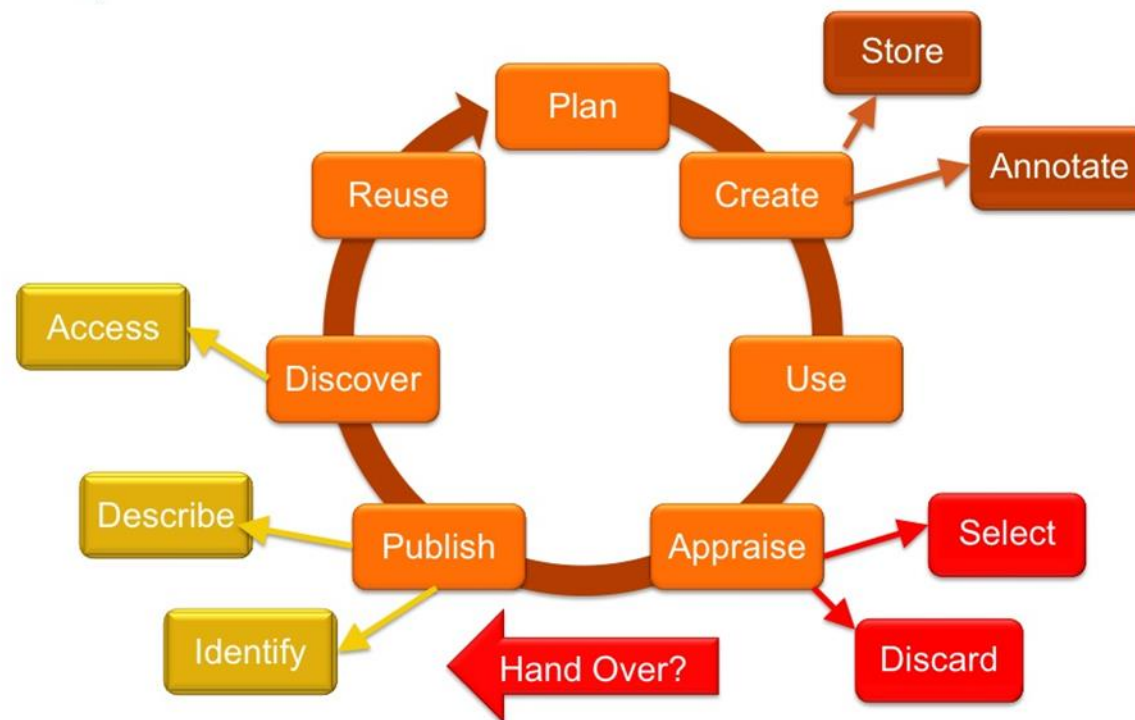


The Geoarchiving Process Lifecycle

JISC

inspiring innovation

Supporting the Research Data Lifecycle



<http://www.ipcc.ie/lifecycle.html>

ty

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Preserve the object by a variety of sub-processes

- Ingest
- Store
- Plan preservation, including identifying the designated community (ideally this should be done at the earliest opportunity – certainly before the creation of the digital objects, if we want to secure the best conditions for future usage and we must secure a proper value justification to secure financial resources flows)
- The basic steps in preservation to counter changes are:
 - create adequate Representation Information for the Designated Community and/or
 - transform to another format if necessary or
 - if preservation cannot be carried on by the current organisation then hand over to the next organisation in the chain of preservation
- Evidence about the authenticity of the digital objects must also be maintained, especially when the objects are transformed or handed over.
- Confirmation of the quality of preservation can come from an Audit (with possible certification)

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Value proposition

- The portfolio of Value proposition/s will provide the core of the answers to “who pays and why?”
- Value propositions must be created by the identification, classification and quantification of the expected benefits which may be obtained by the targeted communities of customers and users from the continuous usage of the preserved objects, which in turn depends on the needs of the users and the usability conditions created for such preserved objects
- the objects will probably be more useful to one type of user community than to another, and this may change over time. These differences and changes must be addressed by a portfolio of Value propositions (as well as by the design and implementation of adequate business models)
- rights may be associated with the objects, perhaps arising from the value or potential value of the object.



Business model

- Decisions about the mix of sources providing the financial resources required for implementing and operating the preservation business process will be based on the characteristics of the users and customers base (the target groups), the competition in the provision of the preserved assets as well as in the nature and dynamics of the formulated business case.
- The resources may be used at the very start to create new digital objects, which will presumably have been created for a specific purpose and which then may be either disposed of or be preserved.
- A selection process will be needed to decide what is to be preserved. This will presumably be based on business case and risk considerations. It may also depend on the interest of other possible curators of the information.
- This financial resourcing may be (perhaps should be) part of the budgets needed to create the digital objects. However some or all of the objects created may be disposed of rather than preserved.





Links



- APARSEN www.alliancepermanentaccess.org was co-funded by the European Union under FP7-ICT-2009-6
- All deliverables: <http://www.alliancepermanentaccess.org/index.php/about-aparsen/aparsen-deliverables/>
- Clickable integrated view:
<http://www.alliancepermanentaccess.org/index.php/community/common-vision/>
- Integrated GLOSSARY of digital preservation
<http://www.alliancepermanentaccess.org/index.php/consultancy/dpglossary/>
 - SKOS ontology to show relationship between terms from different glossaries
 - OAIS, [APARSEN](#), [DPC](#), [ANZ](#), [SNIA](#), [INTERPARES](#), [ISO16363](#)
- Tool repository – being updated:
<http://www.alliancepermanentaccess.org/index.php/tools/aparsens-tool-repository/>

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