

# *What the User Wants, What the User Needs*

## Cultural Heritage Online: The Challenge of Accessibility and Preservation Firenze, 14-15 December 2006

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# Humanities Advanced Technology and Information Institute (HATII)

## HATII

- <http://www.hatii.arts.gla.ac.uk>

## Digital Curation Centre (DCC)

- <http://www.dcc.ac.uk>

## DELLOS (Preservation Cluster)

- <http://www.dpc.delos.info>

## PLANETS

- <http://www.planets-project.eu/>

## CASPAR

- <http://www.casparpreserves.eu/>

## DPE

- <http://www.digitalpreservation.europe.eu>

## ERPANET

- <http://www.erpanet.org>

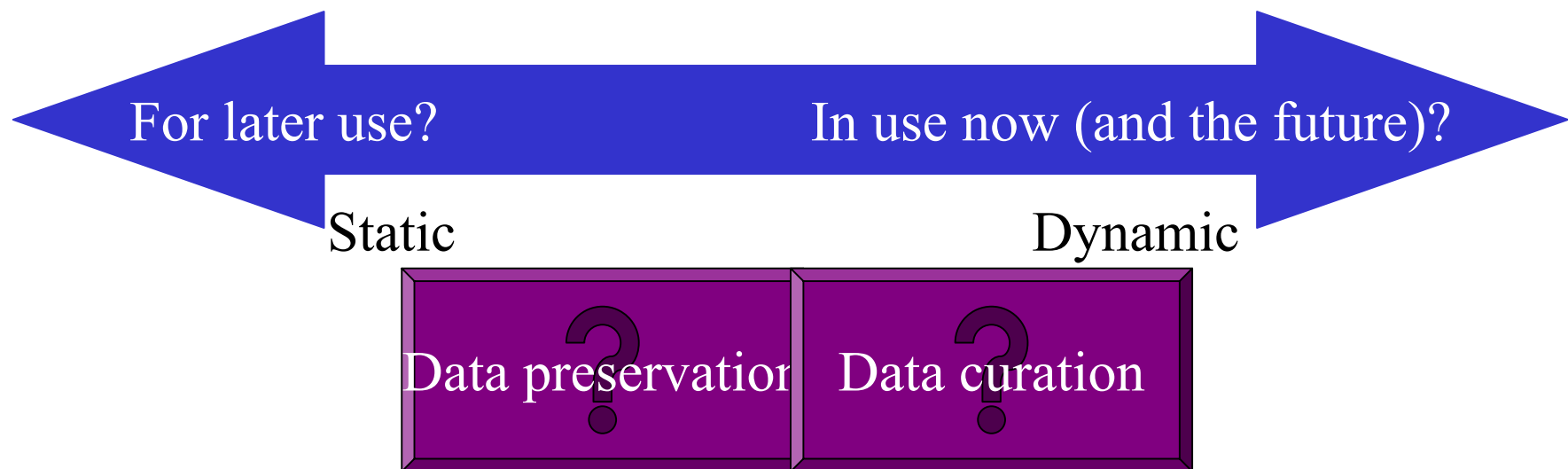


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# Objective of digital longevity

- You all recognise that, Digital materials are fragile and subject to loss because of such factors as hardware and software obsolescence, media degradation, syntactical inoperability, loss of semantic information
- You all believe that, Digital preservation aims to ensure that future users will be able discover, retrieve, render, manipulate, interpret and use digital information in the face of constantly changing technology
- You all are aware that it, involves conservation, renewal, restoration, selection, destruction, enhancing, updating, and annotating
- Your experience has shown you that, It is a risk management activity at all stages of the longevity pathway
- You realise that, In the digital age we are all digital curators whether in our work, in our community or in our personal life

# Repositories and digital curation

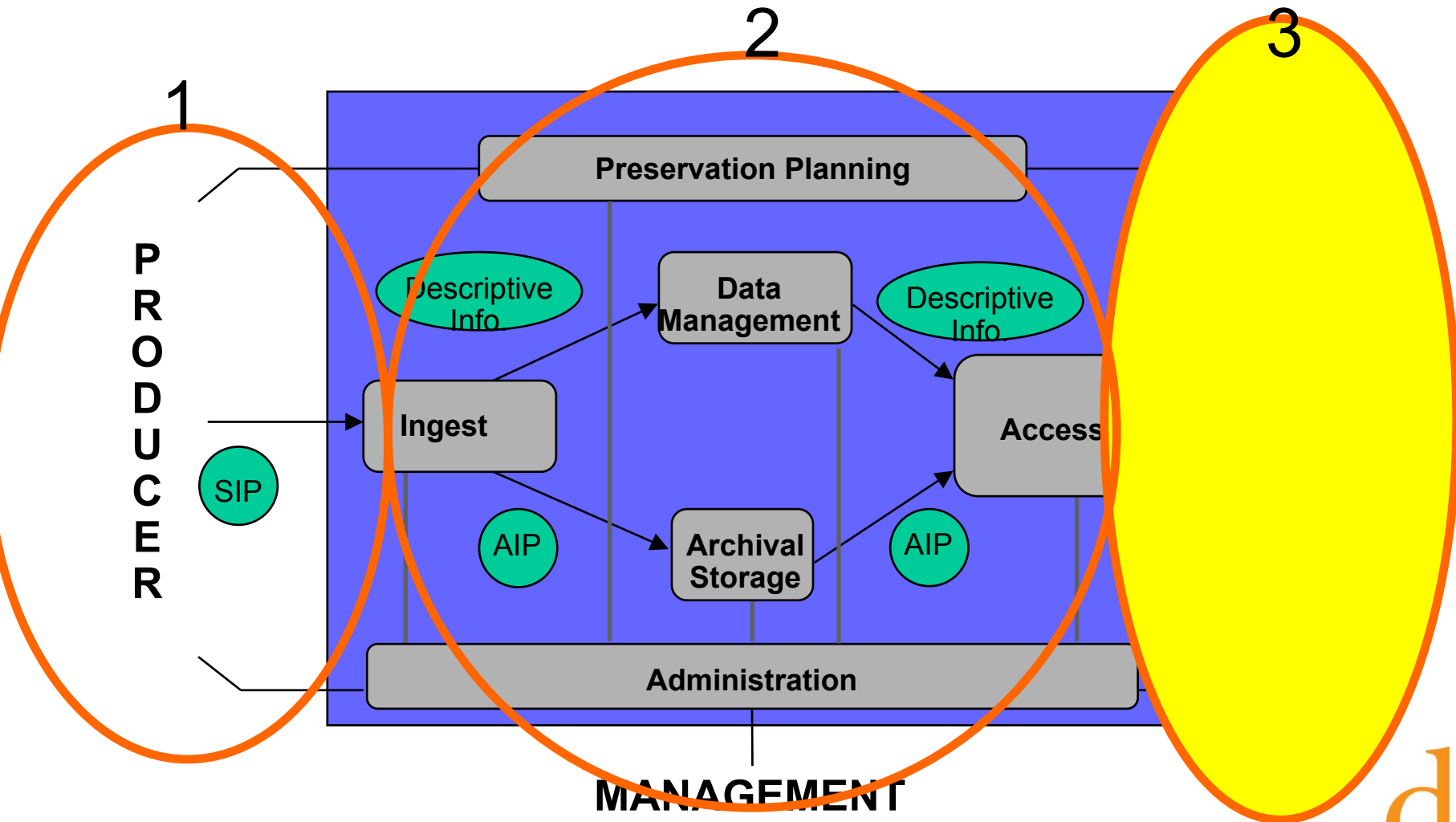


"maintaining and adding value to a trusted body of digital information for current and future use"

# Focus of talk

- Examines what future users expect and need when using digital archives and libraries.
- Of course we must begin by asking:
  - Who is the User?
  - In what timeframe should we think about the user?
- Are not most of these questions Digital Library Questions?
- Does answering these questions have implications for how we should design preservation environments?

# Using OAIS to Contextualize Users?



**SIP = Submission Information Package**  
**AIP = Archival Information Package**  
**DIP = Dissemination Information Package**

# If...

- digital preservation is about communication across space and time **who** will be the users of the future and how do we know what they will want.
- Machines become more common users does this change the way we should represent data and information

# Understanding Users in the Digital Age

- Sherry Turkle's, *Life on the Screen*
- Anthropological methods
- Evaluation, user studies (expectations and use)
- Examine changing trends

# Need to Study Users Overtime

- Understanding the changing nature of Users
- Understanding the changing objectives/expectations of users
- Current research is:
  - Fragmented
  - Methodologically inconsistent
  - Does not produce consistency overtime

# Current Work

- Data collected by large institutions and limited cross comparisons
- Large scale trends limited
- Use Statistics still given great play
- The Anecdote looms large

# We Need Approaches that

- Are responsive to changing environment of digital use, but are:
  - Relevant
  - Reliable
  - Meaningful
  - Accurate
  - Precise
  - Useable and practical

# How can we study Users?

- Surveys
- Experimentation
- Observation
- Focus Groups
- Watching trends, probably best way forward
  - YouTube
  - Flickr
  - Wikipedia
  - Blogs
  - del.icio.us
  - Folksonomy

# Perhaps it is All in Web 2.0

Tim O'Reilly - „Web 2.0 Compact Definition“:

„Web 2.0 is the network as platform, spanning all connected devices; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a continually-updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an architecture of participation', and going beyond the page metaphor of Web 1.0 to deliver rich user experiences.“

[http://radar.oreilly.com/archives/2005/10/web\\_20\\_compact\\_definition.html](http://radar.oreilly.com/archives/2005/10/web_20_compact_definition.html)

# DigiCult Thematic Issue 7

→ “interactive heritage” and “re-usable content”:

- Re-use of heritage resources in personalized environments
- Inclusion of collaborative and community activities
- Multimodal ways of interaction
- Building of new content based on re-arranging content of different institutions by using web technology

[http://www.digicult.info/downloads/dc\\_thematic\\_issue7.pdf](http://www.digicult.info/downloads/dc_thematic_issue7.pdf)

# What do Users Do?

- Collect
- Link
- Repurpose
- Create
- To participate in and to join communities
- Family Historians are a stellar example of the future to come.

# More Precisely

- Users create new information and contribute it
- Interpret existing information -gain and contribute insights
- Structure information and annotate
- Construct new virtual collections
- Be able to assess context
- Participate in the creation and growth of communities

# What Users Want, will be

- Community dependent
  - Scientists, citizens, historians, genealogists
- Objective dependent
  - Assessing accountability, making discoveries,
- Culturally dependent
- Time dependent

# Expectations

- Immediacy of Access
- Precision and accuracy of recall
- Participatory interfaces
- Personalisation
- Persistency of data and documents
- Multi-vocality of the Archives/repository holdings
- Facility to convert documents to data
- Analysis and representation technologies
- Access to visualisation technologies (e.g. information networks)

# Other Services

- Ability to annotate and markup
- Ability to interrelate datasets
- Discourse analysis
- Ability to process in different ways
- Knowledge of how representation affects content
- CONTEXTUAL Information
- Metadata

# Preservation Requires Access

- To design future *Access* we need mechanisms:
  - More user studies (e.g. demography, economics, processes, outcomes, cognitive and activity profiling)
  - Well-designed and repeatable investigations of specific issues (e.g. expectations of performance, significance of authenticity)
  - For putting in place metrics that are widely adopted

# Authenticity and Integrity

That digital objects are what they purport or claim to be

each rendition carries the same force as the initial instantiation (sometime called the original)

completeness

validation of integrity and authenticity

What about **Reliability**?

- InterPARES concluded that while Authenticity and Integrity were the responsibility of the repository and Reliability was the responsibility of the creator (see <http://www.interpares.org>)

# Authenticity

- Requires control of ingest and verification
- Depends on immutability of data store
- Migration may destroy original byte stream
- Provide mechanisms to enable use
  - technical context
  - semantic context
- Support audit of:
  - chain of custody
  - process history

# Long term Authenticity Crucial

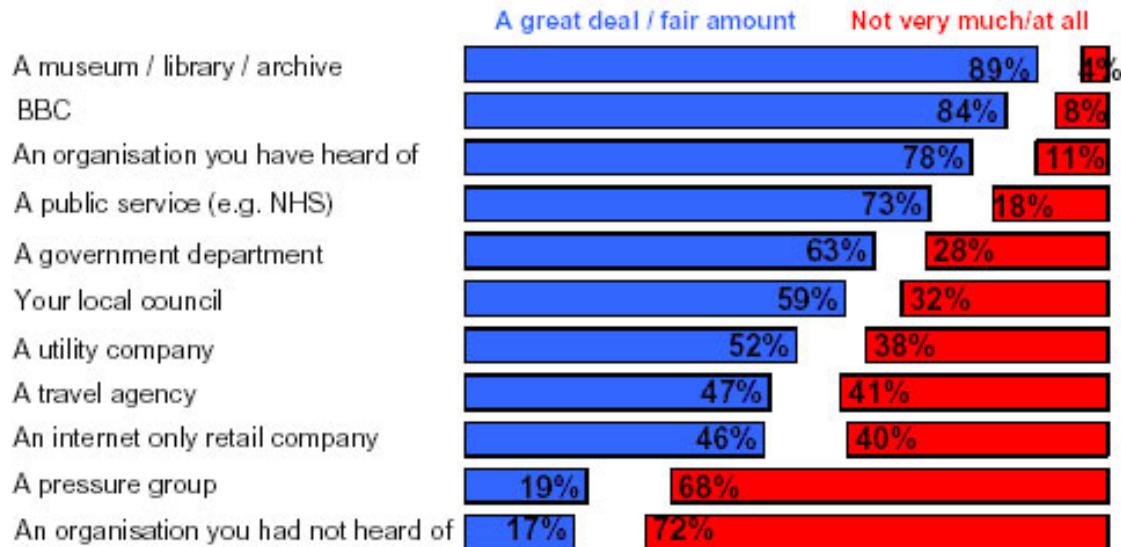
- Users need to know that digital objects are what they purport or claim to be.
  - The history of digital objects (i.e. chain of custody and process history)
  - That we can verify that they have not changed or been modified
  - That we can moderate and validate the ingest process
  - That they are stored in immutable data stores
  - That transformations maintain authenticity and 'initial reliability'



# Users & Trust

## Trust

Q41 To what extent, if at all, would you tend to trust the information provided by the following types of organisation?



Base: All (2,004)

Source: MORI

Press Release: MORI survey uncovers major new trends in web use in the UK (10 Feb 2005)

[http://www.jisc.ac.uk/index.cfm?name=pr\\_mori\\_news\\_090205](http://www.jisc.ac.uk/index.cfm?name=pr_mori_news_090205)

# Security and Trust

- Trust
  - How is it established?
  - How is it maintained?
  - How is it secured?
  - What happens when it is lost?
  - How can it be verified?

# Repositories at heart

- Archives must maintain trust over time
- Retrospective auditing of the chain of processing (e.g. management) essential
- Digital materials require archives be more transparent, public, and open

# Users are the Future

- Preservation without user communities will not be sustainable
- User communities change continuously and will continue to do so
- New concepts of rights
- New methods of citation - tomorrow's topic
- There will be many many more of them
- They do not know what they want until they discover it - this applies to content and services

# European Activities to Watch

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## DPE (Digital Preservation Europe)

<http://www.digitalpreservation.europe.eu>

## AHDS Performing Arts

<http://www.ahds.ac.uk/performingarts/index.htm>



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