Towards the Digital Institution

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University of the Witwatersrand
Initial Summary

► Digitisation is about the ENTIRE PROCESS OF TRANSITION from physical to digital institutions
  ► It is not only about capturing and storing of reproductions
► This is a fundamental responsibility of our generation .... and to pass this onto future custodians
► This requires a 20-500 year envisioning horizon
► This transition impacts on user experience, collection management, and governance structures
► The critical skills to ensure success are multi-faceted
► I present the context of this transition, and highlight some key examples and actions we are making to ensure success
► This includes a mention of some of our products and services

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Positioning ourselves into the history of recorded information

- 20,000BC: symbols
- 3000BC: writing
- 800AD: Baghdad human scribes, bookshops
- 1450AD: printing press, Guttenberg
- 1940AD: Personal Computer, Turing
- 1990AD: Internet, Web, Mobile phones
- 2010AD: Cloud Storage, Applications, Tablets

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Predictions/scenarios of the future of recorded information (RL 2009/10)

Information Society gains momentum

The birth of the “digital institution”

- All new records born-digital
- Internet of Things as largest producer of data
- Information Society universal
- All pre-existing physical records digitised
- Time-capsule storage systems
- XML is still the most important base language

2012-2015

2030-2060

2200-2500

- Intelligent agents gather and preserve information
- Repositories protected against every possible form of human or natural disaster.
- The inherent capability to reboot humanity’s knowledge at any time in the future and from anywhere.
- Holographic/quantum storage systems

Transition from Physical to Digital
A sample 10-year vision

Q: What is the nature of the Digital Institution?

NOW


PHYSICAL

DIGITAL

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The Nature of this Transition

- **TIMING**
  - Did not occur in previous generations - will not occur in future generations
  - **IT IS OUR GENERATION’S RESPONSIBILITY TO GET THIS RIGHT**
  - Should be completed within 20 years

- **CREATING THE DIGITAL INSTITUTION**
  - Every physical institution will have a digital counterpart which encompasses the entire institutional operation
  - **Required a total re-engineering of the institution** - not only capturing of digital images and the creation of repositories

- **WHAT TO BE DONE**
  - Capacity development: transformation of the skills base, capacity development
  - Digitisation must become a CORE skill of the memory institutions - should not be outsourced except for specialist work

- **WHAT IS THE SCOPE?…**
Scope of Digital Heritage

Tangible
- OBJECTS
  - Museums

SITES
- Archaeological
- Geological
- Palaeontological
- Built Environment
- Marine

Intangible
- Oral History
- Indigenous Knowledge
- Living Heritage

Documentary
- Libraries & Archives
- Born-Digital
- Administrative Records

Knowledge
- Scientific
- Engineering
- Health
- Data Sets
- Research

WITHIN THE DIGITAL WORLD, ALL HERITAGE OBJECTS START TO LOOK THE SAME
Draft National Policy on Digitisation : 2011

Policy
27 core statements
- Strategy
- Repository
- Contracts
- Access
- Preservation
- Metadata

Mechanisms
Implementation recommendations

Digital Heritage Body of Knowledge (DHBOK)
Best-practice framework to create the Digital Institution in line with policy

Created by Roger Layton Associates for the Department of Arts & Culture (2009-11)
Elements of the **Digital Heritage Framework** in the Digital Heritage Body of Knowledge: DHBOK V3

**Principles**

**Participants**

**Processes**

**Practices**

**Problem Areas**

**Products**

**Cross-cutting themes**

**Digital Heritage Framework in DHBOK V3**

**DIGITAL HERITAGE FRAMEWORK**

**IN**

**DHBOK V3**

Created by The ETHER Initiative and being prepared for peer-review during 2013
### Participants, Processes, Products

<table>
<thead>
<tr>
<th>Participants</th>
<th>Processes</th>
<th>Products / Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custodian</td>
<td>Scoping</td>
<td>Audit, Status Quo, Digital vision, Gap analysis</td>
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<tr>
<td></td>
<td>Strategising</td>
<td>Digitisation strategy: Programmes/Projects/Plans</td>
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<tr>
<td></td>
<td>Planning</td>
<td>Project plans: Deliverables, Resources, Schedules</td>
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<tr>
<td>Producer</td>
<td>Preparing</td>
<td>Project start: facilities, resources, in-process</td>
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<td></td>
<td>Capturing</td>
<td>Digital objects: reproductions, administrative records, born digital</td>
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<tr>
<td></td>
<td>Describing</td>
<td>Metadata: context, creation, preservation, ...</td>
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<tr>
<td>Repository</td>
<td>Loading</td>
<td>Digital masters, digital provenance, Identification/naming</td>
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<td></td>
<td>Storing</td>
<td>Digital repositories: long-term preservation, reformatting</td>
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<tr>
<td>Consumer</td>
<td>Accessing</td>
<td>Search requests / results / user interfaces</td>
</tr>
<tr>
<td></td>
<td>Using</td>
<td>User content, fair use, licensing, repackaged products</td>
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</tbody>
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This model created by Roger Layton as the basis for the analytical framework for the National Policy on Digitisation and was later incorporated into the DHBOK.
The three areas for transitioning to the Digital Institution

1: Governance
- owners
- board
- senior management
- staff
- friends
- community

2: Collection Management
- inventories, documenting
- databases
- digitising / repositories
- physical exhibitions
- virtual exhibition
- SPECTRUM procedures
- ICA standard
- mobile visit support systems
- mobile/tablet/glasses access
- web site

3: Users and their Experience
- scholars
- visitors
- tourists
- community
- friends
- mobile visit support systems
- web site
- physical exhibitions
- virtual exhibition
- SPECTRUM procedures
- ICA standard
- digitising / repositories
- mobile/tablet/glasses access
- web site

Three areas adapted from the UK Museum Accreditation Scheme, Arts Council, 2011
1 : Transitioning of Governance

- Review and revision of all governance structures and document to meet the needs of the future digital institution

- Statement of Purpose: why museum exists and who is it for?
  - User base can expand by factor of 10, 100, 1000 as a digital institution

- Constitution: including composition of board
  - Should include a 15-year-old to advise on the view of the youth - perhaps a top local Grade 10/11 history student
  - Clarify the purposes / objects in the light of the digital age

- Management Arrangements:
  - Managers/staff must be fully conversant with all modern digital technologies - if not then train them or replace them
  - Must have a comprehensive Digitisation Strategy
  - Premises for holdings must include where digital holdings are stored (cloud, servers, ...) since these represent the primary items being protected by the institution
1 : Transitioning of Governance: Case Study

**Winterton Museum, KwaZulu-Natal**

- Collections include local history, battlefields, Africana collections, San rock art
- Board: Part-time local member of the historical society, mostly older (> 50)
- Web Site: none
- Digitisation projects: none

**Initial Interventions**

- ETHER is offering a complete end-to-end support
- 1: To help to develop a representative board who have the right balance of viewpoints and the right mix of skills
- 2: Building up web site and a mobile web site (to be accessible by tourists and rural communities) (NOT Governance - this is change in User Experience)
- 3: Creating a digitisation strategy using our standard approach and template
- 4: Building up a complete electronic inventory using ETHER Base
2 : Transitioning of Collections Management

- Collection Development Policy: acquisitions and disposals
  - To include born-digital collections, and digital provenance records

- Collection Information Policy / Plan
  - Creating database inventories using standardised elements and structures
  - Plan for documentation backlogs
  - Using SPECTRUM and related standard for implementation of procedures

- Collection Care Policy / Plan
  - To include digital care / preservation / reformatting

- Digitisation of the Collections
  - Programmes and projects to build up the digital collections
  - Address the full set of the Ten Process of Digitisation / Framework
2 : Transitioning of Collections Management

Case Studies

- **Inanda Seminary, KwaZulu-Natal**
  - 50 years of archival history of the school
  - Another 100 years held by another custodian
  - Building up complete inventories as prelude to digitisation
  - Using our ETHER Base collection management system / digital repository
  - Creating Digitisation Strategy – implementation of Ten Processes model

- **Khulumani Support Group, Johannesburg / Eastern Cape**
  - 50,000 members with many having recorded oral histories
  - **Creating a “shared history” using digitisation** - high-level of connectivity between the records *(presented at NHC Conference on Liberation Archives, October 2012, East London).*
  - Using the digital records to create structures which are not possible using physical archives alone
3 : Transitioning of the User Experience

- **Know Your Users**
  - Current: mostly physical access
  - Future: what new users can be gained if there is good digital access

- **Creating the Digital Door to the Institution**
  - Digital access before, during and after physical visits
  - Also digital only visits
  - Support for mobile users and tablet computers
  - A welcoming, accessible digital environment to complement a welcoming, accessible physical environment

- Digital communication with users using modern tools
- **Digital access to stimulate and support learning, research and discovery**
During its restoration in 1973 painted friezes were discovered on the walls and recent scrapings have exposed details of even more layers. These paintings might have been the work of itinerant artists or resident slaves two hundred years ago.

The Manor House was declared a national monument and opened to the public in 1976. The presence of preceding generations is palpable in this fascinating home.

Contact Details

Website: www.boschendalwines.co.za
Open: 09.30-17.00 daily
Cost: R15 per person (self guided tour)
Guided tours available on request: R20.00pp for guided tours
Tel: 021.870.4279
3 : Case Study/2: ETHER Virtual Guide
Complement the Physical Visit

Alternative to Audio Guide/
Can use QR Codes

Access to unlimited depth
and breadth of content

Remember information
for access AFTER the visit
Our Integrated Approach to Digital Data
To support the transition to the Digital Institution

**COMMON DATA**
- ETHER Biographies
- ETHER Places
- ETHER Vocabularies

**INSTITUTION DATA**
- ETHER Base Institution 1
- ETHER Repository Institution 1
- ETHER Base Institution 2
- ETHER Repository Institution 2

**SHARED DATA**
- ETHER Community

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4 : Creating a Digital Community Case Study

- The ETHER Community Model: To support sharing of information between institutions
  - National Registry of Collections
  - Register of Disposals: to provide access by other interested museums
  - Inter-Collection Loans
  - Registry of Stolen / Lost Items
  - Request for Identification / Documentation / Help
  - Creating Special Interest Groups
  - Under development at present (due mid-2013)
Final Summary

- Three key elements required within the transition to the Digital Institution
  - Governance
  - Collection Management
  - User Experience
- Consideration for the full scope of the Digital Heritage Body of Knowledge within the institution
  - Principles / Participates / Processes / Practices / Products / Problem Areas
- Data management and user interface elements
  - Essential to have digital inventories and documentation systems prior to implementing the digitisation processes
- Improved user experiences
  - Will make the institution more relevant to an increasing number of users