

DIGITISATION IN ARTS & CULTURE

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STORY...

National Policy on Digitisation. Department of Arts & Culture
2009-11.

Policy needs to be extended to accommodate arts, culture, and the sciences.

Selected policy statements are discussed.

Two situations are covered in more detail

- Personal Digital Archives,
- Museum of Mathematics.

Conclusion and Discussion:

- Our **research work** in arts, culture, and heritage
- Key issues for the **future of digital culture.**
- Implementing the National Policy

THE DIGITAL TSUNAMI

Key trends

- UBIQUITY OF TECHNOLOGY
- UNBOUNDED RANGE APPLICATIONS
- UNQUESTIONED TRUST IN SEARCH RESULTS

Key challenges

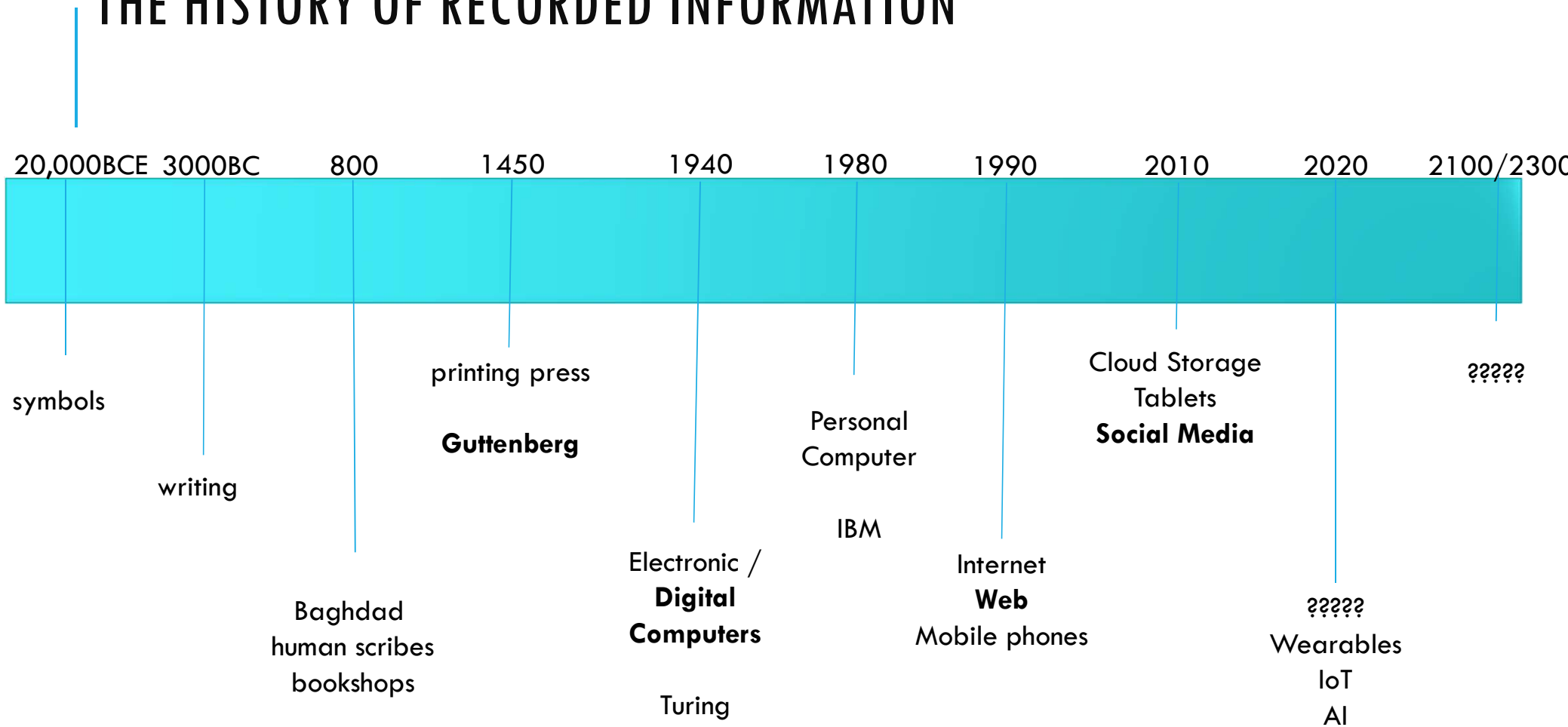
- UNCONTROLLED TECHNOLOGY ADVANCES
- DATA LOCKED IN INSTITUTIONS – NOT OPEN AND SHARED
- LACK OF GUIDANCE



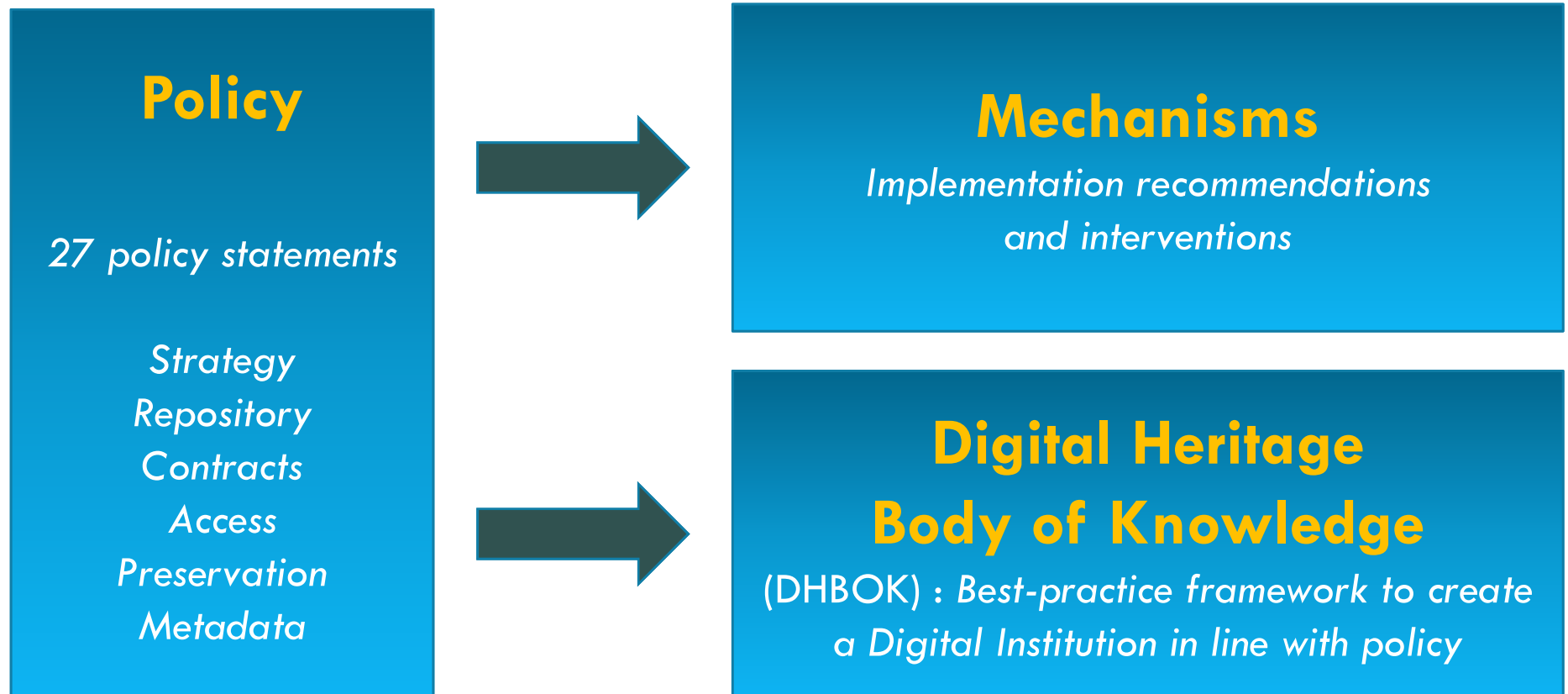
FUTURE THREAT:

ARE WE CREATING THE DIGITAL DARK AGES?

POSITIONING OURSELVES INTO THE HISTORY OF RECORDED INFORMATION



DRAFT NATIONAL POLICY ON DIGITISATION : 2011



Created by Roger Layton Associates for the Department of Arts & Culture (2009-11)

SELECTION FROM THE 27 POLICY STATEMENTS

Focus on Heritage – archives / libraries / museums

Policy 1 : All institutions MUST create and publish the **digitisation strategy** – template provided

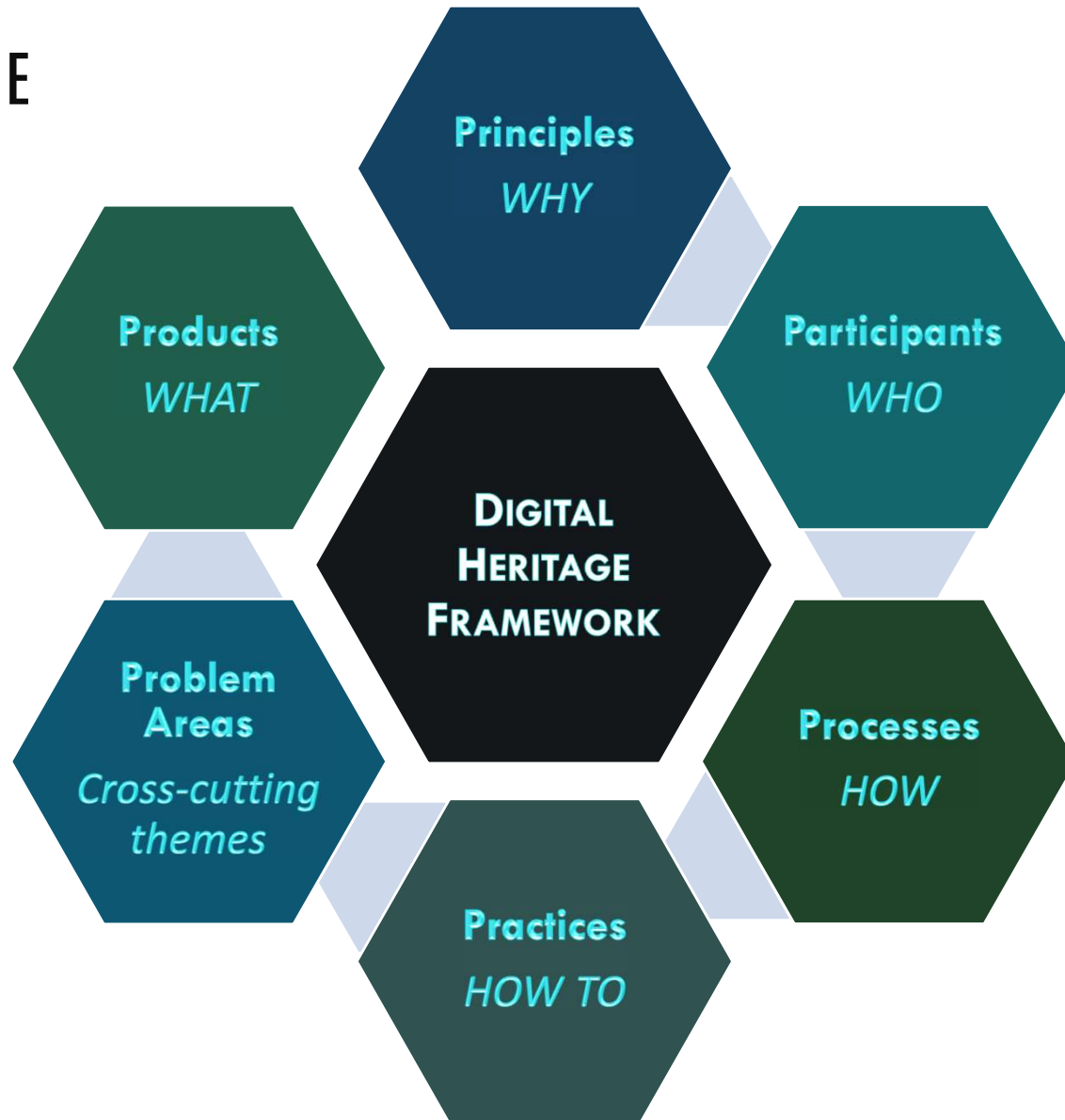
Policy 13 : **Create National Digital Repositories (NDRs)** – as the trusted and sustainable legal depositories of digital content.

Policy 15 : **Protect the digital heritage.**

Policy 22 : **Create the Institute for Digital Heritage (IDH)** as the professional community of practice.

Policy 26 : **Promote Research and Development** in Digital Heritage.

ELEMENTS OF THE
DIGITAL
HERITAGE
BODY
OF
KNOWLEDGE



PARTICIPANTS, PROCESSES, PRODUCTS

<i>participants</i>	<i>processes</i>	<i>products / practices</i>
Custodian	Scoping	Audit , Status Quo, Digital vision, Gap analysis
	Strategising	Digitisation strategy : Programmes/Projects/Plans
	Planning	Project plans : Deliverables, Resources, Schedules
Producer	Preparing	Project start-up : facilities, resources, in-process
	Capturing	Digital objects : reproductions, administrative records, born digital
	Describing	Metadata : context, creation, preservation, ...
Repository	Loading	Digital masters , digital provenance, Identification/naming
	Storing	Digital repositories : long-term preservation, reformatting
Consumer	Accessing	Search requests / results / user interfaces
	Using	User content, fair use, licensing, repackaged products

EXTENDING DIGITISATION POLICY TO ARTS, CULTURE, SCIENCE, ETC.

EXTEND TO ALL DOMAINS IN THE “*FRAMEWORK FOR CULTURAL STATISTICS*” (FCS):

- Cultural (incl. Museums)
- Performance
- Visual Art
- Published Works
- Audio-Visual
- Design
- Tourism
- Sports & Recreation

EXTEND TO DOMAINS BEYOND CULTURE

- Science: Research data vs. research publications
- Humanities
- Education
- Engineering

EXPLORING TWO CASES...

Personal Digital Archives

(Virtual) Museum of Mathematics

PERSONAL DIGITAL ARCHIVES: CHALLENGES

HISTORICAL PERSONAL ARCHIVES:

- handwritten letters and diaries
- photographs
- audio cassettes / video cassettes

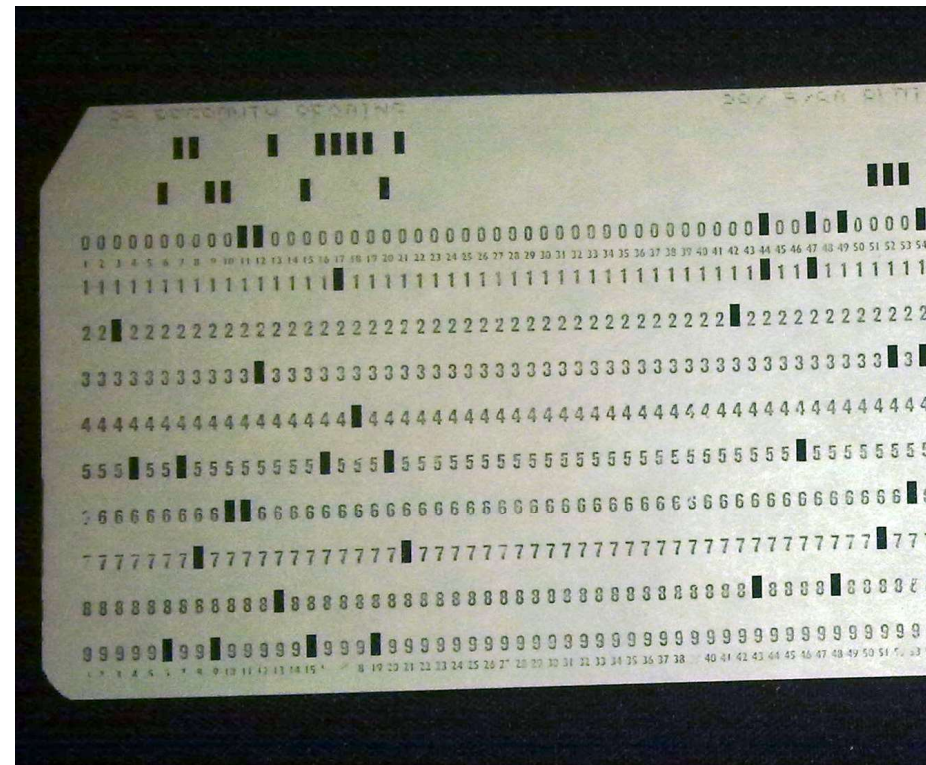
MODERN PERSONAL ARCHIVES:

- email archives
- multiple stores (memory stick, old computers, old storage media)
- multiple copies of same files – different versions
- may ALL be lost if not managed at time of creation



PERSONAL DIGITAL ARCHIVES: RISKS

- ageing hardware / media / formats
- media failure – cannot read
- format failure – cannot interpret / render
- loss of cloud-based host (remember GeoCities? MySpace?)
- loss of prior knowledge about organisation of files / emails
- digital archives stored everywhere – Facebook / multiple email addresses / cloud storage / own files / various backups....
- may be encrypted but no key available.



YOUR OWN DIGITAL ARCHIVES



When you are gone what do you want to happen to your digital archives:

1. destroy them all
2. allow these to be used by anyone / or selected group of people
3. provide them to an archival organisation

HOW to tell others what to do with your digital legacy?

So what should WE be doing NOW?

THE CHALLENGE OF MATHEMATICS KNOWLEDGE

Where is mathematics knowledge located?

Why is South Africa among measured as the worst in the world for mathematics education?

What knowledge and in what form will help?

How can we best protect mathematics knowledge for future generations?

Is a museum the right vehicle? Why not just a web site?

BUILDING THE MUSEUM OF MATHEMATICS



Collections	Types of Objects			
	Physical Objects/ Teaching Aids	Digitised/ Born Digital	Linked Objects	Intangibles
		Examinations		Mathematics Concepts
Calculation	Slide rule Logarithm books Abacus	User guides in PDF	Objects in other museums.	Biographies Mathematical jokes
Measurements	Rulers Scales Sextant, Quadrants	Size of computer memory: KB, MB, GB, TB, PB, EB, ZB, YB	Measuring instruments	Longitude Babylonians – 60
Shapes	Euclidean Solids Mobius Strips	Symmetry A4 paper size	Geodesic domes	Euclid Buckminster Fuller Golden Ratio
Indigenous mathematics	Patterns used on baskets, textiles, houses	Oral history recordings	Link to indigenous collections and architecture	Counting in different languages and cultures
Use of mathematics	Square Kilometre Array	Big Data	Transport Architecture	TV Series and Movies Numb3rs Good Will Hunting

MATHM 2014.10: Brunsviga Trinks Calculator. c. 1910



**Accession number
is unique across
institutions.**



OUR RESEARCH ACTIVITIES

African Digital Library (current): how to create a centralised body of knowledge of all arts, culture, heritage and science for South Africa, and perhaps Africa as a whole. (self-funded)

Museum of Mathematics (current): a virtual museum to enhance the teaching and learning of mathematics. (self-funded).

Museum Website Maturity Study (current): how well are museums exploiting the web for promotion and sharing of their content.

AI-based Collection Management System: a universal collection management system for all forms of collections (self-funded).

Guidelines for Management of Heritage Buildings (2015-16) : for the National Department of Public Works.

National Art Bank for South Africa (2013-14) : Defining the institutional framework and operational structure to promote the economic opportunities for young artists.

CONCLUSION / DISCUSSION / CALL TO ACTION

TAKE RESPONSIBILITY: Is it OUR generation's responsibility to manage the transition from physical to digital.

GET THE POLICY IMPLEMENTED: The absence of agreed policy will create silos and incompatibilities which will live with us for generations.

BUILD THE NATIONAL DIGITAL REPOSITORIES: Digital repositories are very expensive to build and maintain – this should be a core function government.

PROVIDE ACCESS TO DIGITAL CONTENT: Through a National / African Digital Library.

ENSURE THAT ALL INSTITUTIONS BECOME DIGITAL: To share their content as widely as possible – Open Data.