The LIFE^2 Project

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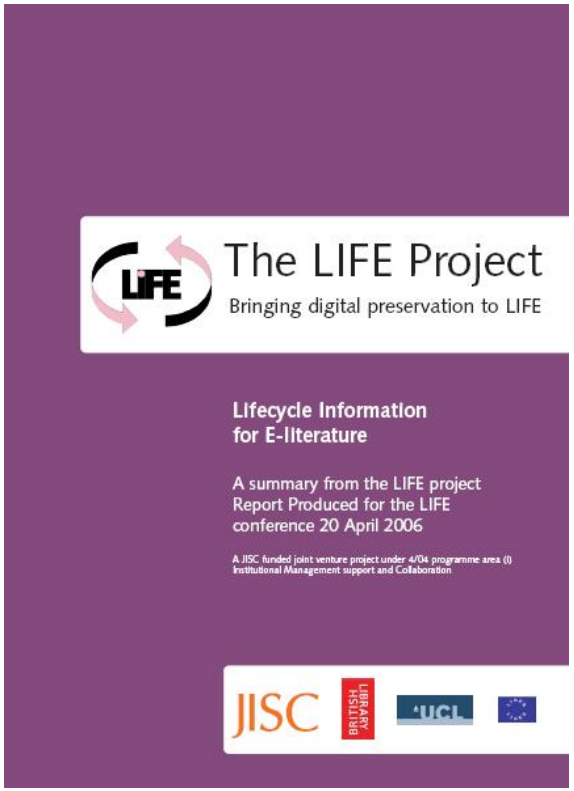
Overview

- LIFE[1] and LIFE[2] Case Studies
- BL Newspapers Case Study
- Analogue and Digital Lifecycles
- The LIFE model

LIFE[1] Case Studies

e-Journals

Web Archiving



Voluntary Deposit of Electronic Publications

→ www.life.ac.uk/1

LIFE² Case Studies

Digitisation as Surrogacy:

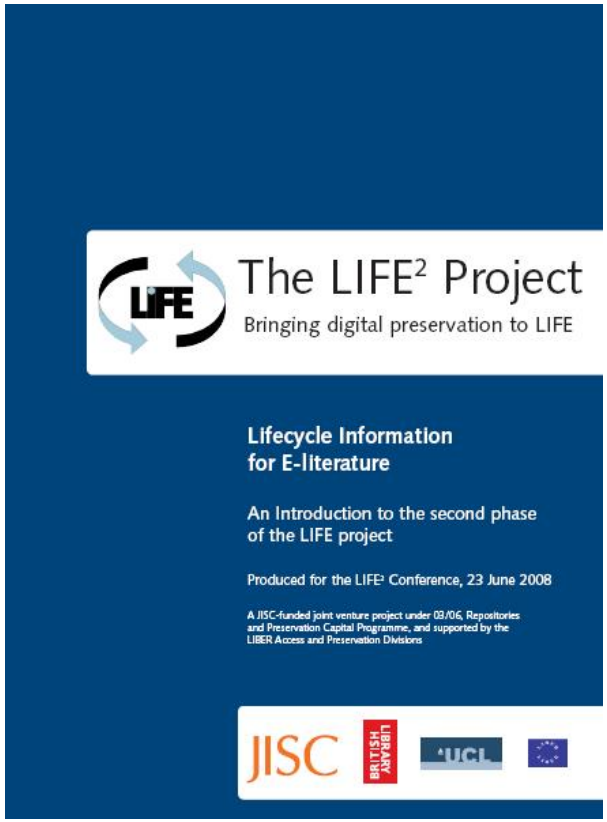
- BL Newspapers

Institutional Repositories:

- SHERPA-LEAP
- SHERPA-DP

Primary Data:

- Medical Research Council

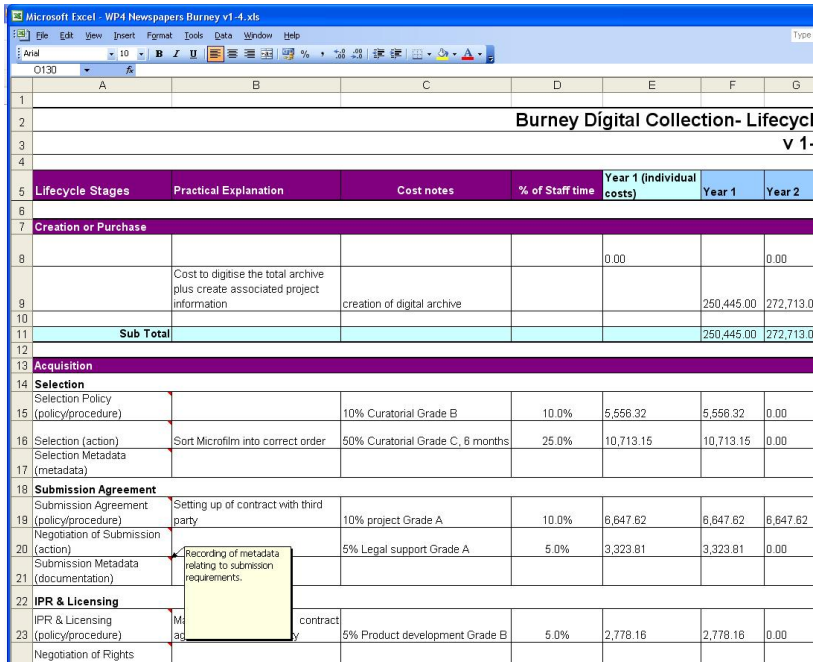


LIFE Model v1.1: Stages and Elements

Lifecycle Stage	Creation or Purchase	Acquisition	Ingest	Metadata Creation	Bit-stream Preservation	Content Preservation	Access
Lifecycle Elements	....	Selection	Quality Assurance	Re-use Existing Metadata	Repository Admin	Preservation Watch	Access Provision
	....	Submission Agreement	Deposit	Metadata Creation	Storage Provision	Preservation Planning	Access Control
	....	IPR & Licensing	Holdings Update	Metadata Extraction	Refreshment	Preservation Action	User Support
	....	Ordering & Invoicing	Reference Linking		Backup	Re-ingest	
		Obtaining			Inspection		
		Check-in					

Case Study Outputs

- Full Case Study Write-up
- Workflow diagram
- Costing Spreadsheet



- Website www.life.ac.uk
- LIFE Blog www.life.ac.uk/blog

Digitisation as surrogacy in detail

To develop a method of comparing analogue and digital lifecycles

and then test the approach by applying it to analogue and digital lifecycles from British Library collections

The Burney Collection

- Purchased by the British Library in 1818 for £13,500
- 1,100 volumes of the earliest known newspapers
- 1,000,000 pages from 17th, 18th and 19th Centuries.
- Re-scanning or re-microfilming is not possible.
- Microfilmed in the 1970s
- Digitisation started in 1995-96 and ran until 2004.

Issues that arise from Newspapers Study

- Comparing digital and analogue lifecycles
- What is the lifecycle cost to an institution of producing digitised surrogates?
- What are the key preservation issues common across digitisation projects of differing scales?

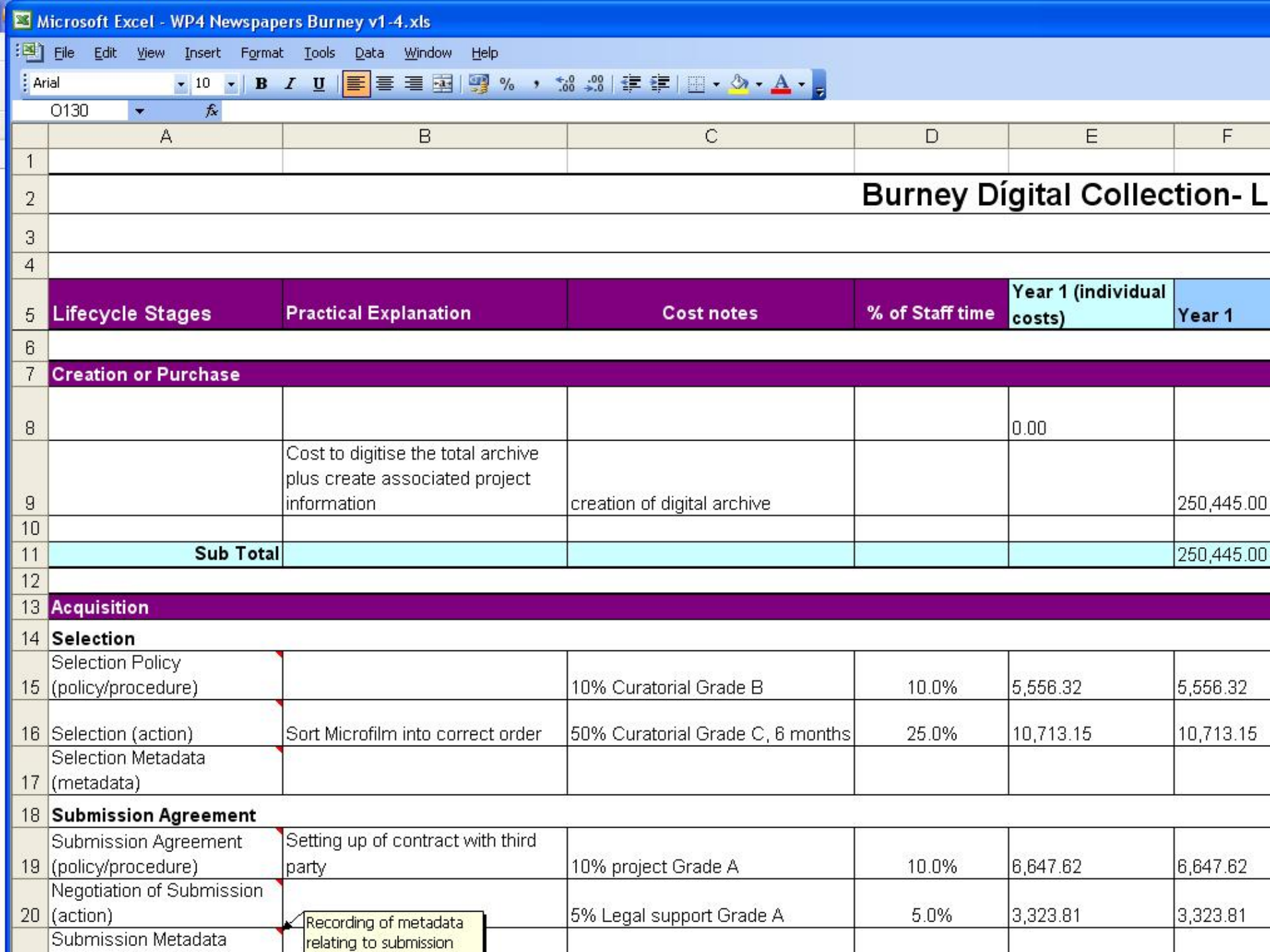
Case Study Process

- Develop analogue and digital workflows
- Terminology issues
- How can we get a meaningful comparison?
- Future digitisation costs (Creation Stage)

What's compared

Analogue	Digital
Legal Deposit Newspapers	Burney Collection

Per-entity cost



Microsoft Excel - WP4 Newspapers Burney v1-4.xls

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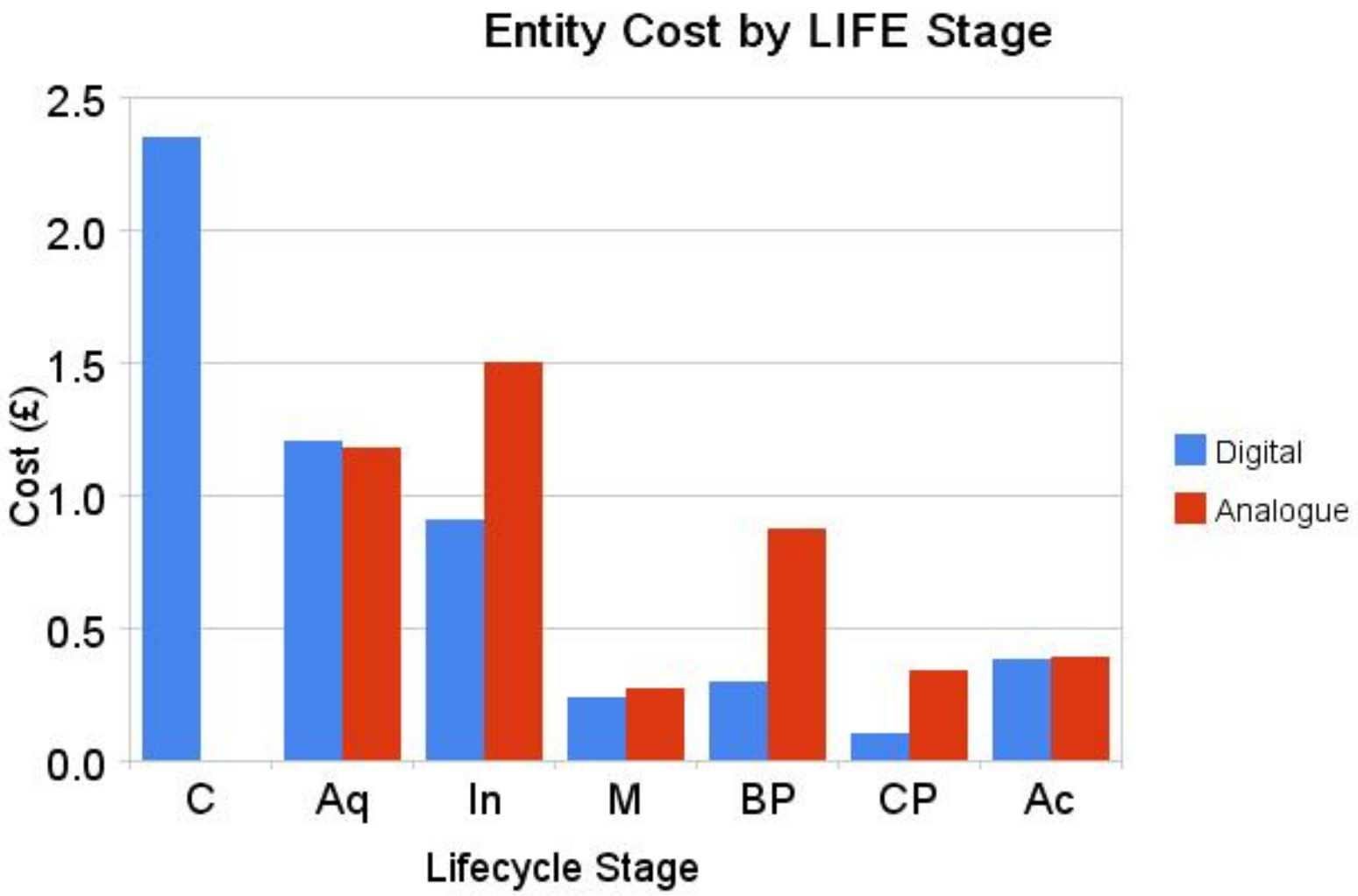
	A	B	C	D	E	F
1						
2						Burney Dígital Collection- L
3						
4						
5	**Lifecycle Stages**	**Practical Explanation**	**Cost notes**	**% of Staff time**	**Year 1 (individual costs)**	**Year 1**
6						
7	**Creation or Purchase**					
8					0.00	
9		Cost to digitise the total archive plus create associated project information	creation of digital archive			250,445.00
10						
11	**Sub Total**					250,445.00
12						
13	**Acquisition**					
14	**Selection**					
15	Selection Policy (policy/procedure)		10% Curatorial Grade B	10.0%	5,556.32	5,556.32
16	Selection (action)	Sort Microfilm into correct order	50% Curatorial Grade C, 6 months	25.0%	10,713.15	10,713.15
17	Selection Metadata (metadata)					
18	**Submission Agreement**					
19	Submission Agreement (policy/procedure)	Setting up of contract with third party	10% project Grade A	10.0%	6,647.62	6,647.62
20	Negotiation of Submission (action)		5% Legal support Grade A	5.0%	3,323.81	3,323.81
	Submission Metadata	Recording of metadata relating to submission				

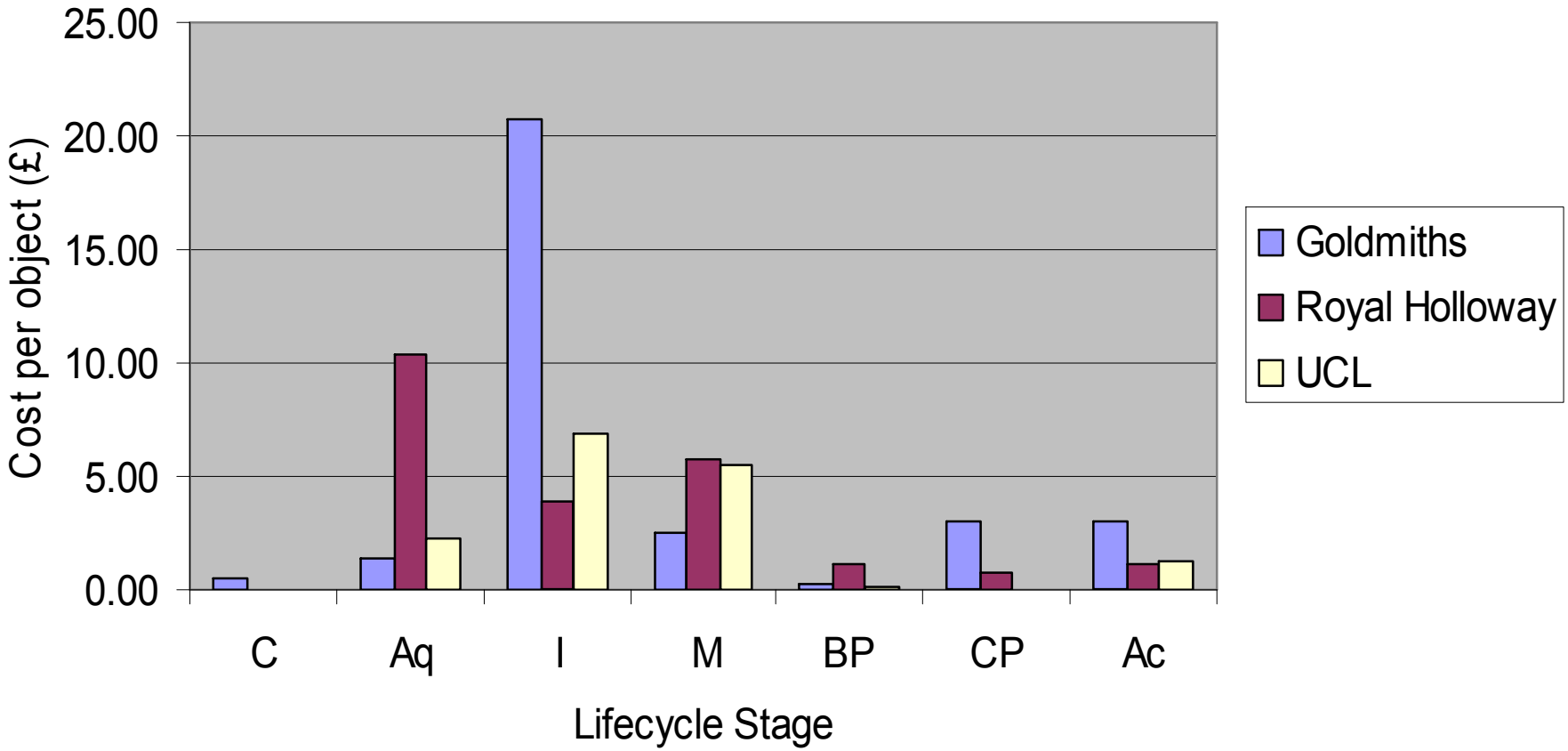
Overview of Costs



Overview of Costs

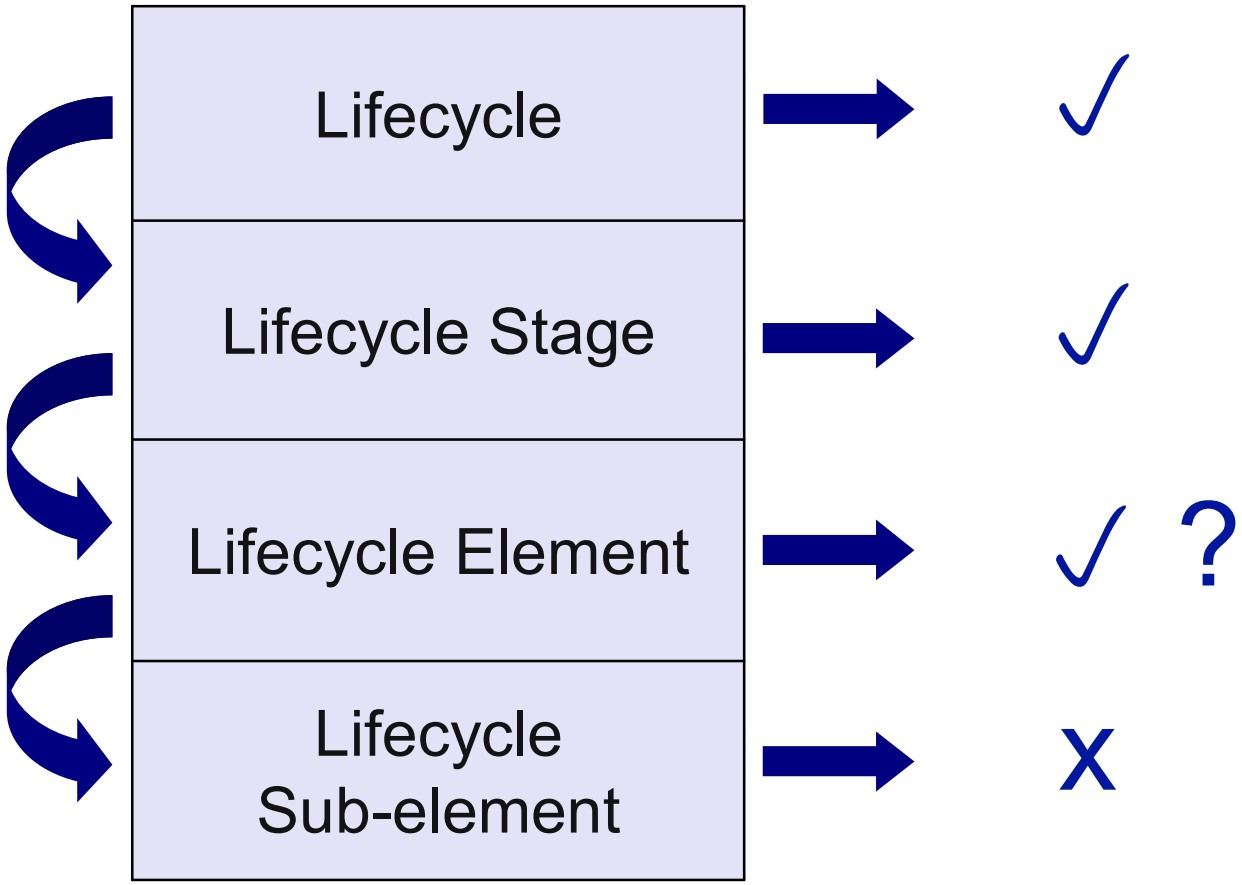
LIFE Stage	Aq	In	M	BP	CP	Ac	Total
Digital	£1.20	£0.91	£0.24	£0.30	£0.10	£0.38	**£3.13**
Analogue	£1.18	£1.50	£0.27	£0.87	£0.34	£0.39	**£4.56**

Repository lifecycle costs



Applicability of the model

$$L_T = C + Aq_T + I_T + M_T + BP_T + CP_T + Ac_T$$



the LIFE Model in more detail

What it does

1. Standard way of representing the key functions in a lifecycle
2. Provides sufficient detail to enable useful analysis of lifecycles
3. Remains broadly high level to ensure relevance across different lifecycles and content types
4. Enables like with like comparison between different lifecycles

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LIFE Model v1.1: Sub-elements

Ensuring the Model is clear and unambiguous to apply:

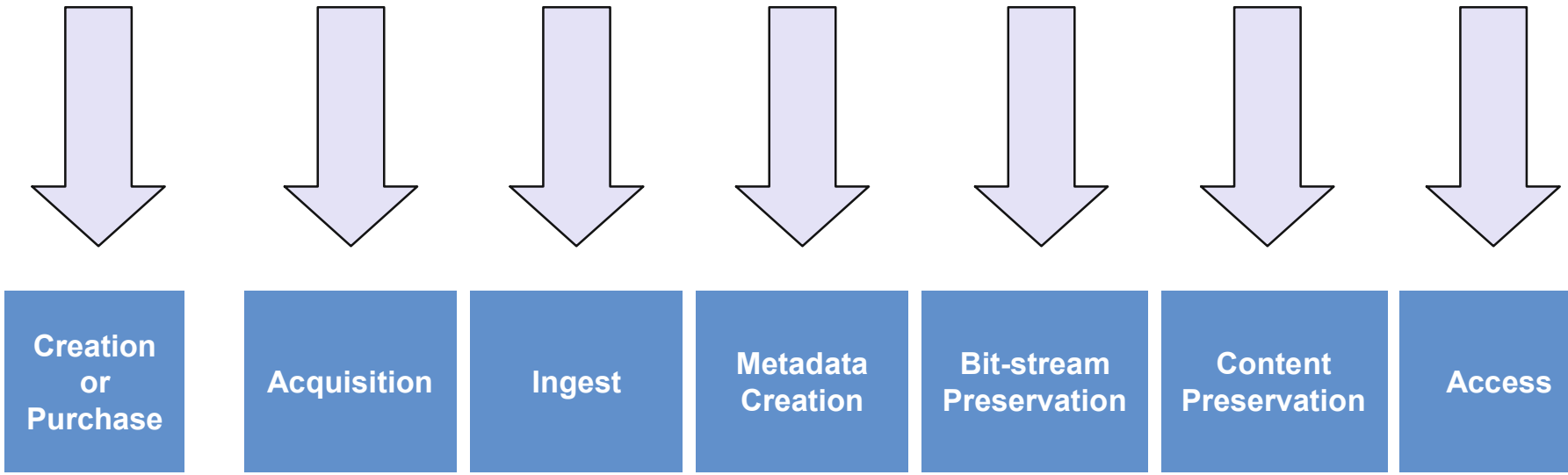
- Detailed definitions
- Sub-element descriptions

Sub-elements are suggested functions or activities only

Sub-elements of Quality Assurance	Explanation / notes
QA Policy (policy/procedure)	Description of quality requirements and required mitigation actions should quality requirements not be met. Policy for sampling of objects for QA (if appropriate)
QA Characterisation (action)	Characterisation of the digital object. Identification of file format, and assessment of whether the object is valid, well formed, and/or renders correctly with current access software
Content Examination (action)	Assessment of whether the content of the digital object is of an expected, agreed or sufficient level of quality. Typically, a manual process on a sample of the ingested objects
Mitigation (action)	Action to mitigate quality issues (might include virus cleaning or re-ordering or obtaining the digital object)
QA Metadata (metadata)	Record QA metadata

Looking ahead: "LIFE3"?

Estimative models for each stage of the lifecycle



Some Conclusions at this point

- Comparison is complex but workable. LIFE model provides a good mind-map across complex business and archival functions.
- Retrospective costing adds complications- knowledge is lost.
- Similar costs across a number of LIFE Stages- much more data required.
- Analogue lifecycles are well established compared to digital.
- Digitisation costs coming down - should we scan later?
- Preservation costs still largely estimated and unknown
- Sustainability therefore uncertain - If you don't know how much something costs, its hard to predict its future.

Thank you.

LIFE Team
Acknowledgements

- Richard Davies
- Paul Ayris
- Rui Miao
- Helen Shenton
- Paul Wheatley

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LIFE's broader strategic role

Blue Ribbon Task Force on Sustainable Digital Preservation and Access

See http://blueribbontaskforce.sdsc.edu/

Blue Ribbon Task Force on Sustainable Digital Preservation and Access

BRTF-SDPA

Funded by the National Science Foundation (NSF) and the Andrew W. Mellon Foundation, in partnership with the Library of Congress, the JISC (UK), the Council on Library and Information Resources (CLIR), and the National Archives and Records Administration (NARA – US)

Created in late 2007 to run for 2 years

4 Key Questions being addressed

1. How will we ensure the long-term preservation and access to our digital information, growing exponentially with each passing day?

2. How will we successfully migrate data as technology moves from one preservation medium to the next?

3. Who should determine which digital data should be saved, and what criteria will be used to make those decisions?

4. How do we ensure economic (and digital) sustainability

Economic Sustainability in a Digital Preservation Context- The LIFE aim.

The set of business, social, technological, and policy mechanisms:

- Encourage the gathering of important information assets into digital preservation systems
- Support the indefinite persistence of digital preservation systems, thus securing access to and use of information assets into the long-term future

Economically-sustainable digital preservation requires:

- Recognition of the benefits of preservation by key decision makers, as part of a process of selecting digital materials for long-term retention
- Appropriate incentives to induce decision makers to act in public interest
- Mechanisms to secure an ongoing allocation of resources, both within and across organizations, to digital preservation activities
- Efficient use of limited preservation resources
- Appropriate organization and governance of digital preservation activities