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# espida

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*"Many of the things that you can count, don't count.  
Many of the things you can't count, really count"* – Albert Einstein

## Current State of Digital Preservation

- Much energy has gone into technology
- Technology is now to a greater or lesser extent a done deal
- Often funded by short-term projects
- Digital Preserver speaketh unto Digital Preserver
- Digital Preserver engageth not with strategic planning (top down)  
... or with the sharp end - the revenue earners (bottom up)
- Doom has been predicted often

## Basic Truths

- Benign neglect is unlikely to work over extended periods
- There is an ongoing cost for preservation
- Material has always been lost
- Preservation is selective
- There is risk in failure to preserve and in preservation

## Obstacles to Progress

Lack of:

- An understanding of the issues amongst asset creators and senior management – *a cultural problem*
- A common language for discussing Digital Preservation – *a communications problem*
- A commitment to sustainable funding – *a resource problem*
- A appreciation of the value of information assets – *a general problem*

## Cost, Value and Risk

As Laurie Hunter has said, digital preservation is an investment decision and as such needs to have the benefits weighed against the costs and risks. He has also indicated that in some sense there must be a return on that investment. What we are doing in *espida* is looking very carefully at the nature of that return and being very clear that the return (or benefits if you prefer) may take forms other than the directly financial.

Information assets have costs, value and explicit risks associated with them.

**Cost** of creation, acquisition, access, management, preservation, destruction, ...

**Risk** associated with loss, disclosure, retention, ...

**Risk** of looking after assets that fail to deliver any return

**Value** as intellectual property, evidence, resource, process, ...

### Costs

- Easily engaged with as they result in bills or tying up of resources.
- Once identified, costs are relatively easy to measure.
- Costs take resources away from other activities such as primary production

### Risks

Are readily identified when something unpleasant happens to you or someone else.

Consist of three aspects:

- the contingency
- the likelihood of occurrence
- the consequence

### Value

- Poorly understood as we tend to take it for granted – it is generally implicit.
- Assessing the value of intangibles is hard.
- Difficult to measure in an objective way.

### Cost/Benefit

- Cost and Risk appear in the '**Cost**' side of Cost/Benefit
- Value appears in the '**Benefit**' side of Cost/Benefit

## The Balanced Score Card

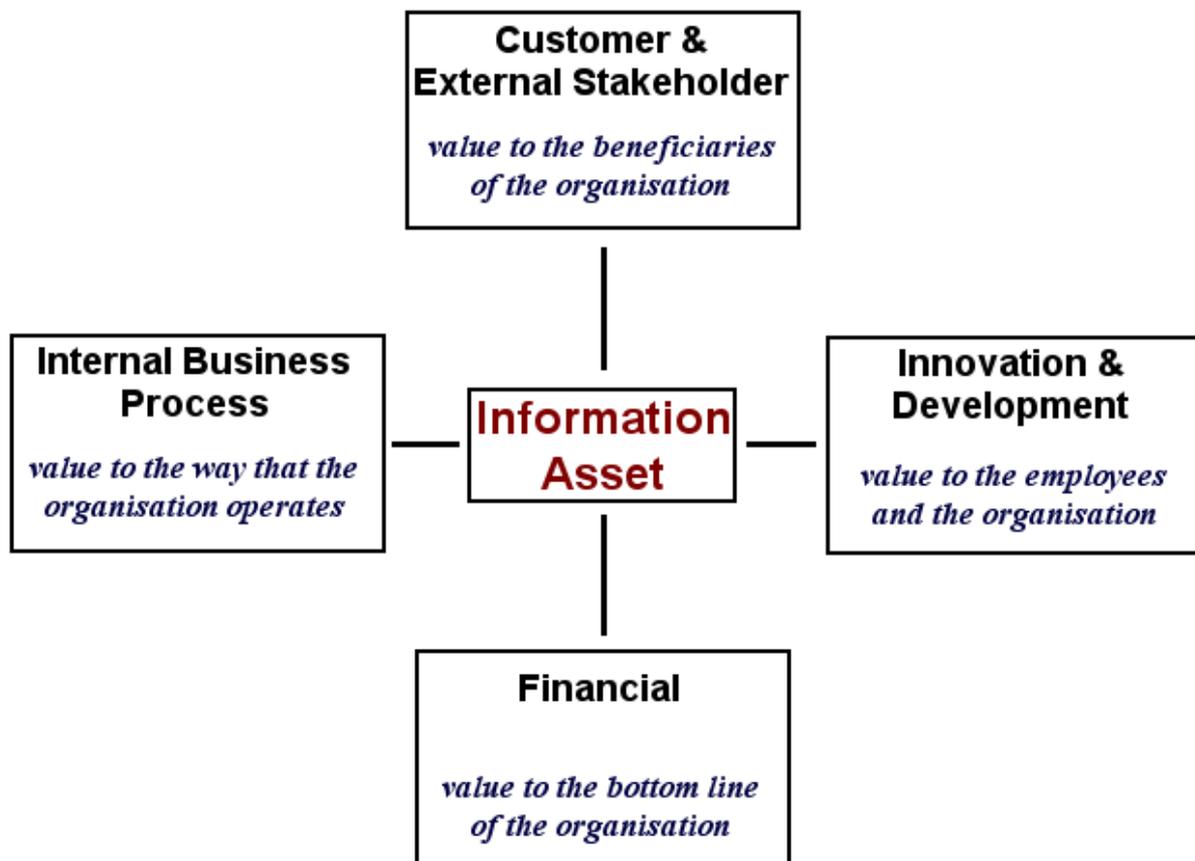
The Balanced Score Card was developed by Kaplan and Norton in order to assess the overall health of an organisation – not just its financial health.

It has subsequently been deployed to measure performance (the thrust of Laurie's usage in the previous presentation) and to set targets.

We are adapting the concept to provide a focus for assessing the value of intangible assets.

## The Story so far in the *espida* project

The value of an information assets may be viewed from four different perspectives



## The Elements of Value within the Perspectives

Value is not an absolute. The value of anything depends on the objectives and goals of the individual or organisation – the value of a Constable painting is different for the art collector, the student of art history, the maker of jigsaw puzzles, the purveyor of chocolates or biscuits, the member of the public or Steptoe and Son.

The value to an organisation of an information asset is closely related to the organisation's strategy and goals. In defining our lists of value elements under each perspective, we have related focus group results to the University's Strategic Plan.

Currently our working set of value elements under the four perspectives is as follows:

### Customer and External Stakeholder Perspective

- Contribution to culture and community

- Reputation, brand and customer confidence (in all who deal with the University and in the public at large)
- Customer satisfaction and service delivery (students, parents, public, etc.)
- Academic attractiveness (to potential students, staff, academic partners and funding agencies)
- Commercial attractiveness (to potential sponsors and collaborators)

### **Internal Business Process Perspective**

- Information accessibility
- Efficiency of operation and productivity
- Effectiveness of decision making
- Process potential and organisational flexibility
- Compliance with legislation and regulation

### **Innovation and Development Perspective**

- Intellectual capital
- Motivation, fulfilment and satisfaction (of staff)
- Quality and potential of research
- Quality and potential of teaching
- Responsiveness to change

### **Financial Perspective**

- Income generation
  - selling assets
  - licensing/rights to assets
  - teaching and research
  - contracts, grants, fees, donations
- Cost saving
  - labour, time
  - space
  - return on investment
  - direct expenditure

This is a provisional working set, linked to the strategic plan of the University of Glasgow and we would welcome engagement with any individual or organisation as to the wider applicability, appropriateness and completeness of this set.

There is a probability (or likelihood) element in value – some assets will never deliver a return whilst others will deliver abundantly. Librarians know that some of the stock that they acquire will seldom if ever be used, whilst other items will be used extensively. There is probably a ‘law-like’ relationship such that 7% of the items are the subject of 84% of the accesses – this works for many other types of distributional problem.

## Metrics

Our current task is to define suitable metrics for these.

These metrics must be:

- Meaningful in strategic terms
- Measurable in some appropriate way
- Controllable in the sense that value can be increased or decreased by management action

These metrics do not have to be:

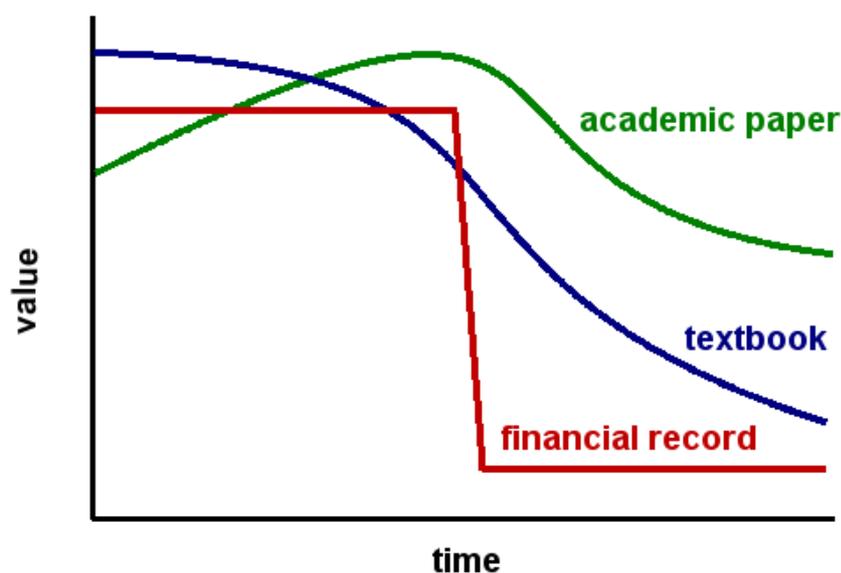
- All defined in or reducible to financial terms
- On measurement scales – they can be ordinal ( $A > B$ ) or rather fuzzier ( $A = B$  or  $A \geq B$ )

## Change in Value as a Function of Time

As will doubtless be reiterated in the next presentation, with specific reference to costs, value (and cost) is not static, it changes through time. Laurie Hunter has illustrated this very dramatically in relation to the value of patents.

We need to characterise how their value dimensions change through time (all of which could be described as lifecycles or perhaps more accurately life-paths or life-tracks). In value terms, the time axis does not have to be completely specified and may have the same shape for different asset classes but with a different time-scale. Some assets will exhibit an increase in probably demand through time, whilst others will decline or have a cut-off point where their value drops suddenly (financial records after then statutory period of retention has expired)

### Information asset value through time



## Asset Classes

At the centre of our BSC is an information asset. We are categorising different types of asset according to the cost and value characteristics. This has to do as much with how their value dimensions change through time as with the way that their costs do

This work has shown that it is not necessarily what type of asset we are dealing with:

- teaching materials
- research data
- research output
- journal
- monograph
- student record
- personnel record
- financial record
- cultural resource
- corporate publication
- etc.

but according to a number of other attributes:

- subject/discipline
- usage (external/internal)
- scale (personal/corporate/sector/discipline)
- format
- purpose

Assets may be described by significant attributes, which we are currently defining. Assets with the same or similar attribute sets will have similar value/cost/risk life-tracks. A class (in our terminology) is a combination of attributes that differs significantly from other combinations.

Cost attributes have rather more constancy across asset classes than do value attributes, but we are watching the work of the next project on the programme today with interest in this regard.

## Engagement

Engagement with the key actors in a rather wider compass than is typically the case at the moment is crucial for success:

- Originators/creators of assets – in HE/FE academics and administrators
- Managers of the preservation process – IT folk, records managers, archivists, etc.
- Decision makers/senior management – those who make strategic decisions for the organisation
- Beneficiaries of the preserved assets – those for whom value must be realised

Without a sustainable business model:

- Institutional digital preservation is a dead duck
- DP will be a minority/specialist interest

## **The Challenge**

- Understanding academic priorities
- Generating value:
  - direct revenue
  - increased business
  - reputation and brand
- Assessing risk:
  - what might happen?
  - how likely is it?
  - what are the consequences?
- Reducing liability
- Selling a credible case to
  - Engage decision makers
  - Motivate academics

## ***espida***

*espida* is contributing the following:

- recognising value in information
- modelling costs/risks and benefits
- producing a flexible framework for assessing value as part of making business cases
- trying it out for real to see if it works

## **Contact**

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