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The Case for Investment in Digital Archives

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ABSTRACT This paper is intended to be a resource for those who are making a policy case for digital archives, for digitisation programmes or for projects designed to exploit the corresponding digital content. It sets out, in a schematic way, arguments that have been rehearsed in recent years to support the case for more investment in these areas, covering the nature of the case to be made, the concepts of market failure, contingent valuation, public value and the internal business case. Summaries are given of the main policy developments in the area at an EU level and of some prominent case studies. A core theme throughout the paper is the need to articulate a more specific (and preferably quantitative) justification for investment in Digital Archives.

KEYWORDS Investment in Digital Archives, digitisation, digital content, creative economy, cultural economy, market failure, contingent valuation, public value, the business case, Balanced Scorecard, espida.

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1. Document Scope

The PrestoSpace SAM website – AV Archive Digitisation and Storage Guide presents a series of tools, tutorials, guides and documents to assist those preparing for digitisation and preservation projects. This document, which will be available through this site, is intended to assist with the business case for such projects.

It is structured so that it can be further elaborated over time.

2. Executive Summary

This paper is a resource for those making a case for the development of digital archives. It is to be made available through the PrestoSpace SAM web site and it is structured in such a way that it can easily be elaborated further.

3. Overview

This paper is intended to assist those making a case for the development of digital archives. It presents, in schematic form, a review of the arguments on their economic and business significance. It provides an overview of the role of digital archives in the cultural economy and a summary of the arguments based on concepts such as market failure, contingent valuation and public value. It also considers the presentation of a business case within an organisation, making use of the Balanced Scorecard approach. There is then a brief review of EU policy on Digital Libraries and the latest commitments of the Council of Ministers, along with summaries of significant case studies, primarily in the Netherlands and the UK. Finally an outline is given of business case tools made available by the espida project.

Within this framework a novel argument is made about the significance of digital archives as inputs into other processes and particularly of their growing importance as an inspirational resource.

4. The Case for Investment in Digital Archives

4.1. Making the Case

This document is intended to be a **resource** for those who are making a policy case for digital archives, for digitisation programmes or for projects designed to exploit the corresponding digital content. It sets out, in a schematic way, arguments that have been rehearsed in recent years to support the case for more investment in these areas.

Most of the material presented is in the form of a review of developments in thinking about the **cultural economy**. The reason for this is that, although there is a particular case for public and private investment in archives of still and moving images, there is a broader argument to be made that relates to the significance of cultural resources more generally in a modern economy. Ultimately, this puts the case for visual archives in a considerably more powerful position.

The document will attempt a review of current developments in **an increasingly persuasive case**. Inevitably, the review will be rather partial and because developments are gathering pace, in its initial form, it will quickly be out of date. However, the approach adopted takes this into account.

The intention is to provide a **flexible structure** within which material can be amplified over time, **building an ever-stronger case**. The presentation will therefore be rather schematic - deliberately structured in sections that set out what has been achieved so far, while also making it easy to add further material that supports or elaborates the arguments in a particular area. Indeed in this first presentation, certain sections will look rather bare.

First, a framework will be presented for categorising differing arguments. Then existing evidence will be set out in the separate sections that correspond to the categories provided by the framework. Hopefully, this approach will also highlight the scope for further work and better articulation in certain areas.

4.2. Document Structure

The structure of the document is as follows :

The Case for Investment in Digital Archives
Making the Case
Document Structure
Definitions & Assumptions

Identifying Value – The Economics in the Background

The Value of Culture
The Problem of Market Failures
Non-use Value
Public Value

Application to Digital Archives
Classic market Failures & Digital Archives
Non-use & Public Value in Digital Archives

The Business Case

Policy & Case Studies
EU Policy
Cases at a National Level
Beelden voor de Toekomst
The Royal Theatre in Copenhagen
The BBC and Public Value
British Library – ‘Measuring Our Value’

Building the Business Case
Espida

Glossary

In effect, the document first sets out some tools for analysing the concepts used by policy makers and by those making a successful case for funding, then suggests some direct applications to Digital Archives, before outlining a few cases in areas close to Digital Archives, where the concepts have been successfully applied. Clearly all sections could be amplified further.

4.3. Definitions & Assumptions

There are certain assumptions that are made during the course of this exercise and it is as well to set them out.

In using the term ‘**Digital Archives**’ we are referring not to any archived material that happens to have been digitised, but initially to a sub-set of this material - that is, **archived digital material that is of broad cultural interest**.

‘Cultural interest’ in this context refers to anything that provides an example of, or an insight into, ‘high’ or popular culture or history of various kinds, and particularly social history, or, more generally, anything that helps to create or inform a **social identity**, including material created for entertainment purposes.

By referring to ‘archives’ we would generally not include material that is still being used in its initial application, but the term should be understood to refer something **broader than a digital counterpart of traditional archives**. Particularly for this exercise, it should refer to any repository of data that is of cultural interest in the sense just defined.

Finally in the PrestoSpace context, there is a particular interest in digital repositories of moving images and parallel and associated repositories of audio material and still image collections.

It should be said that we also tend to assume that **digital archives are ‘a good thing’** and that they are undervalued. We hope to make the case that they have a major potential for the cultural, social and economic life of modern societies.

5. Identifying Value – The Economics in the Background

5.1. The Value of Culture

It is argued that digital archives should be seen and appreciated as part of a more **general cultural provision** with which they have a lot in common.

There is a gradually increasing appreciation of the significance of the cultural sector for modern economies, especially in Europe, which is relatively well endowed with the raw cultural material and with the institutions and professionals that deliver both heritage services and contemporary culture.

Not so very long ago, the contribution of the cultural sector to the economy was largely thought of in terms of its contribution to **tourism**, along perhaps with the notion that it absorbed a few otherwise unemployable individuals. In fact culture was often seen as a drain on the economy rather than as a contribution. That at least is beginning to change.

The cultural sector is important to the tourism sector. Museums and galleries, theatres, concert halls, opera houses and even cinemas are a significant factor in attracting visitors and the numbers directly using these institutions are growing steadily. Traditionally libraries and archives have had a more difficult time in attracting visitors, but new possibilities in providing access and a growing interest in local and family history are changing the situation even here. In any event, this is only part of the picture.

First of all, there is the significance of **visitors of a virtual kind**. Cultural institutions are recognised as major providers of sophisticated content and the increasing amount of material that they are making available electronically represents a huge service to the millions of users. Moreover, archive material is more easily presented in this medium and cultural institutions with largely unseen repositories have a particular interest. Consequently, digital archives can play a more active part in current provision alongside other cultural institutions, especially as the spread of broadband and developments in technology make it easier to access large digital files.

However, all this tends to be seen as an end service - **services to consumers**, (which they may or may not pay for - an issue to be considered in the next section). This is only part of the picture.

The **dynamic effects** of cultural centres on the economy may be just as important as the services provided to end-users, perhaps more so.

The role of **iconic buildings** in the re-generation of declining industrial areas is now well established, not least among property developers. The Guggenheim in Bilbao and the Imperial War Museum in Manchester were among the first generation of iconic buildings to play a role in changing the image of an area and promoting follow-on investment. Lessons learned from these projects now mean that the economic impacts even of more modest schemes can be more pervasive and more sustainable over long periods.

This is particularly the case if the contribution of cultural institutions as **attractors and trainers** of people with high-level and modern skills is taken into account. In effect cultural institutions can act as a **focal point for talent**. The media and IT skills required in digital archives present a good example.

However, the real potential of cultural repositories becomes apparent when they are seen as the custodians of **resources** that are of great value for modern economies and particularly as inputs for the creative sector. Picture libraries serving publishing, the broadcasting media and advertising and publicity have been making digital material – still images primarily – increasingly available for a decade now and have contributed to marked increases in productivity in this area. Increasingly more packaged resources are being made available for education and training at all levels.

This material is usually presented as ‘information’ and better information is critical in a knowledge economy. Cultural material, however, is also characterised by its **inspirational quality**. There is an extra dimension therefore to the resources that the cultural sector can often make available to inspire the creative effort that constitutes a large part of value-added in a modern economy. This role for cultural institutions is not exactly a novel idea. The Victorians in the 19th century saw the potential of museum collections to inspire designers and craftsmen. This function is, however, being rediscovered. The Land of Lost Content¹ web site, for instance, was created specifically with the intention of providing inspiration for designers.

More generally, for digital archives, the concept of the **Digital Gallery** can bring together a number of these elements in order to generate some very interesting dynamic effects.

Sometimes these inputs are not direct and among some economists and social scientists, at least, there is a new awareness of the significance of institutional arrangements in successful economies. A market economy needs a sound legal and administrative framework and well-functioning social structures, if it is really to work well. This appears to be becoming increasingly the case as business processes depend on increasingly vulnerable social and physical infrastructure. For this reason there has been a lot of attention paid to the notion of **social capital** the structures that promote cohesion in society both within social groups and between them.

In a rapidly changing world, with its risks of social fragmentation and alienation, cultural institutions have an increasingly central role in promoting **social and cultural cohesion**. Interestingly, this suggests a greater need for access to some of the broader areas of social and popular culture, again suggesting an increased relative importance of archives and libraries in relation to high art and performance, since the archives’ resources in their repositories of material on social history allow them to reach a wider audience. The challenge, though, is to do this in a way that is more than administering a palliative. The task is not to provide entertainment and diversion for the disaffected; it is to bring **real engagement**.

These considerations relate to processes that are of major significance for the development of modern economies. They indicate that there is real value in cultural

¹ <http://www.lolc.co.uk/indexplus/page/home.html>

provision in general and increasingly in digital archives in particular. However, of themselves, they are unlikely to persuade any but the most far-sighted of policy makers to part with funds – or at least not on the scale required. It is necessary to mount a much more detailed argument. The following sections are intended to assist with the development of more substance to these general arguments on **the economic value of culture**.

5.2. The Problem of Market Failures

A core argument for the public funding of cultural provision in general and of the creation of digital archives in particular is that the sector is beset with 'market failures'. Because of certain **characteristics of cultural goods**, determining the extent of cultural provision solely by 'normal' market mechanisms would leave the provision at a level that is markedly other than the social optimum. The implication is that **public policy should provide a remedy**.

This type of argument is clearly located within the domain of economic policy and is expressed in the terminology of 'neo-classical' economics - the dominant paradigm within that domain. At first sight, this type of discussion may appear to be overly technical, but its significance arises from an important consideration in public policy. It is a fundamental assumption of economic policy in modern market economies that **government action should avoid disrupting market processes**. Any departure from this general assumption needs a specific justification. The arguments about market failure have provided that justification in well-targeted terms.

In the terminology of economics, then, **market failures** are said to arise, when consumer preferences cannot be expressed effectively through normal market mechanisms and in consequence there is a distorted allocation of resources.

Two types of market failure are particularly relevant in the current context :

Public goods : public goods are goods (and services) that it is difficult to get individuals to pay for, because they are characterised by *nonrivalry* and *nonexcludability*. Using them does not use them up and therefore allows other people to benefit from them (**nonrivalry**) and access to them is difficult to restrict to particular individuals (**nonexcludability**). The classic examples of such goods are roads and parks. Why should anyone pay for them when everyone else can then benefit ? This is known as the 'free rider problem'.

The existence of significant **externalities** : externalities arise when the effects of an economic transaction are not restricted to the benefits felt (or the costs borne) by those directly concerned with the transaction. There are said to be externalities when the social benefits/costs diverge (significantly) from the private benefits/costs of economic activity.

The possible significance of externalities has been recognized for a long time and it is easy to make a general case, for instance, that the benefits of the creation of a cultural institution, like a museum, are greater than those indicated by what individuals are prepared to pay to visit the collection.

The problem has always been, however, to bring the concept to bear in **operational decision making**. It was easy to recognise that many economic activities had spill-over effects, but what was the nature of these effects and how could they be evaluated ?

In fact, much of what follows can be regarded as a process of making the notion of externalities more precise and substantial.

For, in the last twenty years or so, there has been substantial progress, both in developing **analysis of external effects** at a conceptual level and in conducting practical evaluation exercises. Much of this has been driven by a growing public and professional awareness of an area where there are major instances of external effects, namely, in the impact of economic activity on the **environment**.

Often the focus of the development of work on environmental impact has been the conduct of cost-benefit analyses, which have aimed to evaluate all the costs and benefits associated with a particular project or event. The developments in thinking, therefore, have often arisen from debates about the methodology employed in these exercises, particularly in relation to the estimation of benefits.

5.3. Non-use Value

One approach to evaluating benefits that has attracted a lot of attention, and some controversy, has been **Contingent Valuation** (CV) methodology. This basically consists of asking people how they value – what is their '**willingness to pay**' for – a broad range of the wider benefits associated with specific goods, services or amenities – those benefits that go beyond those that directly benefit the individual.

The methodology is, of course, more structured in its application than this suggests and it has developed over time, but it does have certain characteristics that should be noted :

- in looking at what individuals are prepared to pay, the logic of CV is close to that of **conventional market analysis**;
- nonetheless in looking at benefits, it can address not only the current market value of goods, but **other aspects of their overall value**;
- CV produces **clear identification of benefits** and the values associated with them.

Among the benefits included in CV exercises have often been those associated with elements that are said to have '**non-use**' or '**passive**' value.

Essentially the argument here is that objects, places, the environment, can have value for an individual, even if they are not used directly by that person.

Non-use values can include :

option value - the value of having a facility that may be used in the future;

bequest value - the value of having a facility preserved for future generations;

altruistic value – the value of knowing that a facility is available for others to use;

existence value – the value of knowing something exists, even if it can not be used directly (a fragile object, for instance);

potential value - the value derived by being able to retain something that may have a value in the future.

It should be apparent that these concepts are **readily applicable to the case of cultural collections** and that there are particular applications to the case of digital archives. The analysis of non-use values has established both a methodological approach and specific concepts that can be very helpful with the issues with which this discussion is concerned. However, the position is not entirely satisfactory. The analysis does betray its origins in debates about environmental concerns and requires further elaboration if it is to apply to the general range of areas where there is an important public interest. In large measure, this is provided by the concept of Public Value.

5.4. Public Value

The idea of Public Value owes a lot to the analysis briefly explained in the previous section and shares a number of **common assumptions**.

Like the earlier analysis of non-use value, public value analysis attempts to provide a way of determining, in economic terms, the benefits (and potentially costs) of activity that otherwise is only subject, through the market, to evaluation on the basis of the willingness to pay of individuals who only consider direct private benefits and costs.

The approach of public value analysis is also to make use of Contingent Valuation (CV) methodology – asking people about their ‘willingness to pay’ for – a range of identified benefits. In this respect it reflects the **‘consumer’ orientation** of conventional economic analysis.

Then, there is a similar **public relations benefit** from both approaches, in that estimates of the benefits are given in precise quantitative terms – ready-made for media headlines and public policy debate.

There are, however, also some significant **differences** – more in general approach than in the methodology applied.

First, Public Value analysis aims to take a global approach and hence to capture **the whole range of benefits arising**, both private and social, in relation to the activity analysed. Among the social benefits, it attempts to capture all the significant externalities of the activity concerned. Importantly, these will include the social benefits of an activity in a narrower sense, like the effects on social cohesion, that tend not to figure in the analysis of projects with an environmental impact.

Secondly, Public Value analysis reflects a different **attitude to public services**, especially in those countries where there had been a tendency to regard them as an unproductive drain on the economy. In this sense, it is part of an approach that reflects a greater appreciation of the significance of **public and social institutions** in economic life, part of the realisation that modern economies need processes and institutions that build and promote a society's **social capital**, in order to ensure that there is a cohesive and stimulating environment to support and enhance the sometimes delicate relational links that are so important to a modern knowledge-based economic activity.

Public Value analysis therefore supports the confidence of people who feel that it is no longer necessary to apologise for the claims of the public services on resources, a confidence that is bolstered by the improved articulation and quantification of the benefits of these services that the analysis provides.

Some indeed have seen Public Value analysis as providing a **'new language for talking about' public services** generally, or even a new rationale.

In the UK, for instance, the Prime Minister's Strategy Unit held a 'Strategic Thinkers' seminar on Public Value in September 2002², and although the papers and discussion in this seminar did not strictly represent the views of the government, they do provide an indication of the way that the debate has been developing.

It is interesting that in this seminar, Public Value was defined in the following terms:

'The concept of public value is an attempt to measure the total benefits which flow from government action. Like private value, it incorporates the benefits derived from personal consumption of public services. However, it also reflects:

the public's perception of fairness and distributional equity;

implications of service provision for trust and legitimacy;

the benefits arising from co-production of services; and

the benefits arising from taking account of the needs of future generations.

A subsequent publication³ elaborated on the methodology to be employed and presented the approach as **a basis for public sector reform**.

The point at this stage, however, is that the analysis takes a fairly **broad view of the externalities** that arise with the provision of public services and attempts to achieve a global valuation. Some of the detail of the practical methodology in undertaking

² http://www.cabinetoffice.gov.uk/strategy/seminars/public_value/index.asp

³ Gavin Kelly, Geoff Mulgan and Stephen Muers 'Creating Public Value : An analytical framework for public service reform' Strategy Unit, Cabinet Office, October 2002 http://www.annual-report.gov.uk/files/pdf/public_value2.pdf

Public Value analysis is illustrated in the examples cited in later in the section on Public Value cases.

One final analytical point, though, before looking more directly at the situation of digital archives. It has been noted that most recent developments in methodology have been located firmly within the paradigm of neo-classical economic theory, with its orientation towards the choices to be made by individual consumers. One of the problems with this orientation in general is that it tends not to give sufficient weight to **the role of intermediate production** – production of inputs into other goods and services, as opposed to the production of final output for consumers. This is carried over into contingent valuation methodology, so that, although formally consideration of intermediate outputs is not excluded, in practice the exercises tend to concentrate on **estimates of value for final users**. This may be of particular significance in the case of digital archives, as will be seen subsequently.

6. Application to Digital Archives

This section considers how some of the analytical concepts outlined in the previous section can be used to throw light on the situation with digital archives.

6.1. Classic Market Failures & Digital Archives

Seeing a film does not use it up and once archive material is digitised, it is even more easily reproducible and made available and is less subject to deterioration. It might be argued that still images and some sequences of video can become over-used and therefore lose some of their immediacy and impact, but generally we would say that **digital archives are characterised by nonrivalry**.

The issue of **nonexcludability is not so straightforward**. A basic consideration is that, although the costs of digitisation and storage of digital archives can be substantial, the marginal cost of making digitised material available can be close to zero. This makes excludability even more important if free rider problems are to be avoided.

The release of digitised material can be controlled in a variety of ways. The legal framework of **copyright** and other intellectual property rights provide a formidable degree of excludability, in principle. In practice there are severe challenges to the enforcement of copyright, as modern information technology makes copying and distributing digital material relatively easy. Nonetheless it is clear that owners of digital material are able to sell copies. This is particularly the case with the many **picture libraries** that sell still images and the **video shop chains**, who do manage to make a business out of hiring out copies of certain kinds of digitised film and programme material.

It should be noted, however, that that digital material brought to market in this way is often restricted to specific kinds of still image or to copies of films or television series or similar well-differentiated material. Still image libraries tend to concentrate on **high quality images** in particular categories and many of them make most of their money from a relatively small proportion of the images in their collection. Furthermore, commercial image libraries put quite a lot of effort into maintaining excludability, by organisational, legal and technical means. There are, however, many digital images that are freely available over the web and, for public organisations that hold substantial collections of images, there is a real dilemma about whether the commercial route is appropriate or worthwhile.

When it comes to moving images, it is worth noting that film material made available commercially is usually clearly defined and presented in specific ways. Most of the market is made up of **feature films** or videos of popular television programmes. It is usually of a determinate length with a definite structure and is packaged so that it is relatively easy for a consumer to know what it is about. **The benefits from consumption are personal and directly felt by the purchaser.**

Most of the **material in film archives** is not of this kind. Generally it is less differentiated and packaged. Much of it may be unedited, but even when there has been editing, in news footage, for instance, it is not readily presentable in the same way. In consequence, it is more difficult to see the benefits derived from its creation in digital form as being directly felt by any one individual.

To an important extent, then, the services of **digital archives do have the characteristics of a public good** and there is reason to suppose that, if purely commercial considerations determined the nature and extent of digital archive services, market forces would lead to an under-provision.

Moreover, by exploring the nature of **external benefits provided by digital archives**, we can take the argument further. Digital archives have a value that is not captured by commercial market processes. This is particularly the case for the larger part of most digital archives that is not differentiated and packaged in the way that an old feature film may be.

How is the nature of this value to be articulated ?

Initially, there is simply the consideration that digitisation creates a resource that others can use at a low marginal cost (it will later be suggested that the significance of this 'resource' consideration has been underestimated).

Then there are the series of considerations that say that digital archives in the sense defined are **part of cultural heritage** and to this extent generate external value in disparate, but socially important ways. In modern society, for instance, expressions of cultural identity and particularly portrayals of shared experience can generate significant benefits in terms of promoting **social cohesion and interaction**.

Considerations of this type are real and are of growing importance in the knowledge economy, but there is a need to be more specific about the nature of the benefits and also to adopt an approach that is more systematic in evaluating them. It is here that the analysis of non-use value comes into play and more particularly the application of Contingent Valuation methodology within the broader concept of Public Value.

6.2. Non-use & Public Value in Digital Archives

It is easy to see that digital archives are associated with a **significant non-use value**. They constitute major repositories of social and cultural history and consequently have bequest value, altruistic value and existence value. Increasingly it is being appreciated that in a world with a growing visual presence, their re-use in a range of applications is likely to grow, perhaps in ways that have yet to be invented. The public is therefore likely to consider that they have considerable option or potential value.

Furthermore, when it comes to taking into account the broader range of externalities that figure in Public Value analysis, the arguments that apply to the generation of broadcast material also apply to digital archives to a greater or lesser extent. The whole of this type of analysis has opened up the potential for a highly varied case to

be made depending on the particular circumstances of each archive. Some of the possibilities will be apparent in the particular case studies below.

However, there is an area where digital archives have characteristics that may be overlooked by the usual Public Value analysis. As has been suggested, by concentrating on the value to consumers or end-users, Public Value analysis tends to overlook **the value of intermediate outputs**. There may be a tendency therefore to underestimate the value of digital archives, since archived material is often used as an input into other final products and, as was suggested in the introduction, the availability of this material as a resource can have important **dynamic effects** upon the economy.

It was pointed out earlier that certain digital resources are already being made available commercially – through digital picture libraries, for instance. But this is only part of the public value of these resources. A lot of digital material is now accessible for educational purposes, and the process whereby digital images are sold is also illustrative. Typically, potential users have relatively free initial access to the images. They can browse low-resolution image collections at will. It is only if they are going to use them in a publication or a television programme that a payment is made. The inspirational part is provided for free.

More generally, the provision of digital material as **an informational and inspirational resource** is slowly being recognised as an important public good and with its considerable non-use value, a strategic key to a more extensive development of the creative economy.

Further articulation of this role of digital archives as a significant resource does, however, require an elaboration of an account of their place as intermediate goods. In effect, in estimating the public value of digital archives, there is a parallel series of considerations to that deployed in other exercises. As well as asking about the non-use value of archives to final consumers, there are questions about their **non-use value for intermediate producers**.

In elaborating this case, it is encouraging that an appreciation of the significance of digital archives, particularly for the creative economy, is apparent at least a European level and that this has now moved to a timetable for action by the EU Member States. More information on these developments is provided in the policy section below.

7. The Business Case

Most of the previous discussion has been concerned with making a case to external funding agencies for investment in digital archives. In many cases, however, an **internal 'business' case** has to be made to persuade a hierarchy that the organisation's archives are worth preserving and digitising.

Essentially, parallel arguments to those for making a public case have to be deployed within the organisation. The case is usually much stronger if **the full range of benefits** to be derived from investment in digital archives is examined and explained, rather than relying simply on accounting for direct financial costs and returns.

In the case study section below, the results of the espida project are set out. Espida makes use of a common business methodology – the Balanced Scorecard approach that was developed by Kaplan and Norton in the 1990s⁴ - to provide a disciplined approach to putting the case for digitisation and similar projects. The broad principles of this approach are set out at this point.

The **Balanced Scorecard** is a tool but also a more general strategic approach that encourages management to address the whole range of issues faced by modern **knowledge-based businesses** and other organisations, in a structured and disciplined way.

It encourages management to look further than the traditional financial considerations, which primarily relate to **past activity**, to those internal and external developments that are **shaping the future** of the organisation. The aim of the Scorecard is to provide a way of **balancing the weight of financial factors with perspectives on factors in three other areas**, so that the principal elements of the Scorecard are :

- finance
- customer/market
- internal
- innovation & learning

The approach helps management to clarify its vision and strategy from each of these perspectives and translate them into action and develop corresponding measurements of progress.

Kaplan and Norton described their approach as follows:

'The balanced scorecard retains traditional financial measures. But financial measures tell the story of past events, an adequate story for industrial age companies for which investments in long-term capabilities and customer

⁴ Robert S. Kaplan and David P. Norton 'The Strategy-Focused Organization' Harvard Business School Press, September 2000.

relationships were not critical for success. These financial measures are inadequate, however, for guiding and evaluating the journey that information age companies must make to create future value through investment in customers, suppliers, employees, processes, technology, and innovation.'

The approach elaborates on what is required in each area :

The Financial Perspective : The traditional use of financial data remains an important part of the picture and, in most organisations, it is usually well established. Even in this area, however, there is room for supplementing traditional indicators with other financial data, such as risk assessment and cost-benefit data.

The Customer/Market Perspective : Customer focus and customer satisfaction are central to any modern business or organisation serving the public. Furthermore, as the pace of change quickens, indicators of customer satisfaction provide some of the most significant data for any forward-looking management. Analysis of the factors contributing to customer satisfaction is central to understanding the organisation's potential.

The Innovation & Learning Perspective : This looks at the factors influencing the organisation's ability to adapt and grow. It includes employee training and examination of the organisation's corporate culture and particularly attitudes towards the development of individuals and the skills and knowledge held within the organisation. It focuses on a core characteristic of a knowledge organisation – that people with their knowledge and skills are the organisation's main resource.

The Internal or Business Process Perspective : Under this heading a whole series of factors relating to the internal processes of an organisation are examined and indicators developed that can show how well these processes are operating. The perspective developed here concerns the internal efficiency of the organisation.

As will be seen with the espida case study below, this type of approach to modern management gives much greater scope for the managers of digital archives to explain their role as a knowledge resource within their own organisation and to demonstrate their potential **contribution to the organisation's strategic objectives**.

8. Policy & Case Studies

8.1. EU Policy

The European Union promotes and supports digital archives in a variety of ways, not least through the **Prestospace** project. However, in terms of the current discussion, a particularly significant initiative is that concerned with the promotion of '**digital libraries**' and related developments.

Following the enunciation of the '**Lund Principles**'⁵ in 2001, which identified a series of issues relating to the promotion of European content in global networks and called for a co-ordination mechanism for digitisation programmes across the EU Member States, there have been a series of actions at a European level.

In September 2005 a Communication from the Commission, entitled '**i2010: digital libraries**'⁶, set out an initiative, the aim of which was to make Europe's cultural, audiovisual and scientific heritage accessible to all, especially by making it easier and more interesting to use it in an online environment.

It was recognised that digital libraries provide considerable added value in terms not only of cultural visibility but also of **jobs and investment**. By increasing the use of libraries and archives and the visibility of their resources, digitisation was seen to be able to significantly increase their, already considerable, impact on the economy as a whole.

In order to ensure the survival of the library and archive material and to provide the widest possible access for the general public, three **priority areas** were identified as requiring attention :

- online accessibility;
- the digitisation of analogue collections;
- the preservation and storage of digital content.

And, given that only a small part of European collections have been digitised, a Europe-wide effort was needed to tackle the financial, organisational, technical and legal challenges inhibiting digitisation and preservation.

It was recognised that the individual Member States did not in general have a clear policy on these issues, so although the EU's powers in this area are restricted, it was suggested that there was scope for **galvanising the Member States** and for taking some actions within the EU's own competence.

Since the Communication the momentum at a European level has been building.

⁵ ftp://ftp.cordis.europa.eu/pub/ist/docs/digicult/lund_principles-en.pdf

⁶ 'i2010: digital libraries' Communication from the Commission⁶ of 30 September 2005, [COM(2005) 465 final] <http://europa.eu/scadplus/leg/en/lvb/l24226i.htm>

At a Community level, the research programmes, the eContentplus and Culture programmes and the Regional Funds are all being used for **actions promoting digitisation, digital preservation and accessibility of cultural content**:

- under the Seventh Framework Programme for research and technological development , the Commission will part-finance the establishment of a network of centres of competence for digitisation and preservation;
- under the eContentplus programme, € 60 million will be available in the period 2005-08 for projects improving the accessibility and usability of European cultural and scientific content;
- the Regional Funds already part-finance digitisation initiatives in some of the Member States;
- digitisation has been one of the principal objectives of the co-operation projects part-financed under the " Culture 2000 " programme. Part-financing is also available under the " Culture 2007 " programme. This is intended to improve the transnational circulation of cultural works and products.

In terms of galvanising the Member States, there have been a series of developments.

In November 2005, the Council made a Recommendation⁷ on '**priority actions to increase cooperation in the field of archives in Europe**'

At the same time, and of particular interest for present purposes, the European Parliament and the Council made a Recommendation⁸ on '**film heritage and the competitiveness of related industrial activities**' This made a series of recommendations to Member States, urging them to foster :

'an enhanced exploitation of the industrial and cultural potential of the European film heritage through systematic conservation and restoration measures by encouraging policies of innovation, research and technological development in the field of conservation and restoration of cinematographic works'

In August 2006, the European Commission made a Recommendation⁹ on '**the digitisation and online accessibility of cultural material and digital preservation**' in which Member States were encouraged to tackle three main areas:

⁷ Council Recommendation of 14 November 2005 on priority actions to increase cooperation in the field of archives in Europe (2005/835/EC):

http://eur-lex.europa.eu/LexUriServ/site/en/oj/2005/l_312/l_31220051129en00550056.pdf

⁸ Recommendation of the European Parliament and the Council of 16 November 2005 on film heritage and the competitiveness of related industrial activities (2005/865/CE) :

http://eur-lex.europa.eu/LexUriServ/site/en/oj/2005/l_323/l_32320051209en00570061.pdf

⁹ Recommendation of the Commission of 24 August 2006 on the digitisation and online accessibility of cultural material and digital preservation (2006/585/EC):

http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_236/l_23620060831en00280030.pdf

Digitisation of content

- setting up large scale digitisation facilities;
- clearly indicating what they have already digitised and quantifying their further plans;
- encouraging partnerships between cultural institutions and the private sector;

Online accessibility

- promoting the development of the European Digital Library as the multilingual access point to Europe's cultural heritage;
- looking at and working towards concrete solutions on copyright issues, for example mechanisms to deal with "orphan" works

Digital preservation

- establishing national strategies and plans for the long-term preservation of and access to digital material;
- adapting legislation, where necessary, to allow multiple copying and migration for preservation purposes, and to tackle the issues of web-preservation and the deposit of digital material for preservation purposes.

In response to the Commission Recommendation, **the Education, Youth and Culture Council**, meeting on 13 November 2006, adopted Conclusions¹⁰ which illustrate the commitment of Member States to working together towards the European Digital Library. In particular there is an annexed list of **Priority Actions**, along with an indicative timetable which includes :

- drawing up and updating plans and national strategies for digitisation of cultural material (target date : 2007);
- establishing national strategies for long term preservation and deposit (target date : Mid-2008) ;
- developing quantitative and qualitative targets including the associated financial planning on a multiannual basis for deposit, digitisation and online access of cultural material and long-term preservation (target date : 2007)
- investigating, and where appropriate initiating and promoting public-private partnerships for digitisation (target date : 2007-2008).

¹⁰ Council Conclusions on the Digitisation and Online Accessibility of Cultural Material, and Digital Preservation (2006/C 297/01)
http://ec.europa.eu/information_society/activities/digital_libraries/doc/culture_council/council_conclusions_nov_2006.pdf

The same Council meeting considered a study on the Cultural Economy, which pointed to the relevance of culture in achieving the goals of the **Lisbon agenda** and proposed that culture should achieve a higher profile by being raised in the meeting of Europe's leaders at the Spring 2007 European Council.

8.2. Cases at a National Level

The following section provides brief accounts of exercises that have made use of the concepts outlined earlier in relation to cultural provision or areas close to digital archives. They provide examples of how the concepts have been interpreted.

8.2.1. Beelden voor de Toekomst (Images for the Future)

In September 2006, the Dutch government decided to support a **major preservation and digitisation project** known as 'Beelden voor de Toekomst'¹¹. Over seven years a total investment of €154 million will be made to make 137,200 hours of video, 22,510 hours of film and 123,900 hours of audio material available digitally, along with 2.9 million photographs. The material is being brought together by a consortium of institutions, including Prestospace partners Netherlands Institute of Sound and Vision and the Netherlands Film Museum. A core collection will be available for education and creative adaptation on a royalty-free basis or with a Creative Commons licence. As part of the project, a **distribution system** will also be created.

The vision motivating the project was in part an appreciation of the need to act to preserve **deteriorating archive material**, but it was also an understanding of the **potential of the material as input into further creative activity** and consequently, in an even broader perspective, its significance for the Lisbon objectives.

Supporting this vision, there has been a more detailed **cost-benefit analysis**. This showed a net present value benefit (before taxes) of between € 7 million and € 43 million, even when using a relatively high discount rate (7%) on future benefits. Furthermore, **the estimate did not attempt to estimate any of the external benefits**, such as contributions to cultural awareness and multi-media literacy and a strengthening of democracy. If such elements of Public Value had been taken into account the positive benefits would have been even higher.

Further analysis of benefits is being conducted.

A great merit of the Beelden voor de Toekomst project is its recognition of the potential of digital archives as an inspiration to the creative sector.

8.2.2. The Royal Theatre in Copenhagen

One of the **early exercises in Public Value analysis** was a study by Trine Bille Hansen¹² on **the Royal Theatre in Copenhagen** in 1995. A Contingent Valuation exercise estimated the Danish population's willingness-to-pay for the Royal Theatre

¹¹ <http://www.beeldenvoordetoekomst.nl/home.html>

¹² Trine Bille Hansen 'The Willingness-to-Pay for the Royal Theatre in Copenhagen as a Public Good', available at : <http://www.springerlink.com/content/ku161438116706lm/>

through taxes and showed that, although only about 7 per cent of the total population actually visited the theatre, **non-users' willingness-to-pay** was quite substantial and was at least as much as the theatre received in public subsidies.

The study thus presented an early and a clear example of an estimation of non-use value in relation to cultural provision.

8.2.3. The BBC and Public Value

Commitment to the concept of Public Value is something that has characterised a number of the BBC's policy pronouncements in recent years.

8.2.3.1. 'Building Public Value'

In June 2004, the BBC published '**Building Public Value**' which, while presented as a 'contribution to the debate' over the renewal of its Charter, was clearly a statement of how the BBC saw itself delivering its services over the next planning period and especially of how it proposed to respond to developments in the digital world. It is significant that the whole case is presented within a **Public Value framework**.

The BBC's public value is seen to have **three components** :

- Value to people as individuals. that arises with the 'consumption' of programmes that inform, educate and entertain;
- Value to society as a whole – to people as citizens, which is the additional benefits stemming from the BBC's wider contribution to the well-being of society, summarised as the contributions to the UK's democracy, culture and quality of life;
- net economic value the BBC's net contribution to the UK economy.

A large part of the document is then given over to an exposition of the nature of the public value that the BBC creates, initially in fairly discursive terms. But this is then followed by an explanation of a proposed **methodology for estimating public value**, where the power of this approach is evident.

The BBC is said to create public value in five main ways:

Democratic value: - supporting civic life and national debate ;

Cultural and creative value: - bringing talent and audiences and celebrating cultural heritage;

Educational value: by offering audiences of every age formal and informal educational opportunities ;

Social and community value: building social cohesion and tolerance through greater understanding ;

Global value: supporting the UK's global role and showcasing the best of British culture to a global audience.

The explicit aim in the exercise of calculating public value is to find a more rigorous way of assessing this value than has been available in the past.

Measurement approaches are set out in relation to each of the three elements of individual, citizen and economic value :

Individual value. Arriving at indicators of the value of BBC services to individuals is said to be relatively easy. The extent of this value depends on the quality of programmes, their reach and their impact and although not all of it will be captured, measurements derived by looking at willingness to pay and using conjoint analysis provide good indicators.

Citizen value Assessing citizen value is thought to be more difficult. It is the additional value that extends beyond the personal gain of individuals, perhaps even from services that individuals do not directly use. There are some indicators that are readily available – the reach of a service among disadvantaged groups, or evidence of its impact beyond the broadcast programme, such as follow-up educational courses, or participation in sporting or musical events. However, other methods are needed in order to answer the question 'how much should the BBC spend to achieve this outcome?' These involve asking people to put a value on the BBC's wider social contribution or estimating the spending that another public body would need to make to achieve the same outcome.

Economic value. Measuring economic value is relatively straightforward, and involves well-tried techniques of market impact analysis. These can be used to assess the positive value of the BBC's activities, such as their impact on digital take-up, off-set by the displacement effects on commercial businesses. An independent economic study on these effects was commissioned by the BBC.

A new performance measurement framework was proposed, focused on **the main overall drivers of public value** : reach, quality, impact and value for money..

Much of the discussion in 'Creating Public Value', of course, refers to the BBC's current output. However, **the BBC's 'rich archives'** are referred to several times and are clearly seen as part of the discussion. It is pointed out that the archives are owned by the British public and that while, in the past, they have been largely inaccessible, with digital technology there is the prospect of cost-effective access being provided. In fact, there is a promise to launch **a Creative Archive** with free access to BBC content 'for learning, for creativity and for pleasure'.

The document therefore provides a very solid endorsement both of the Public Value approach and of the case for digitisation of archives within this.

8.2.3.2. Current BBC Approach

More recently, the Public Value framework has been carried over into the **governance structures** of the BBC.

The BBC Trust has the role of representing the licence payers who fund the BBC and of judging proposals for new developments in the Corporation's activities in terms of the quality of the proposed output and its value for money. It also has the responsibility of ensuring that the BBC's activities do not unduly hinder the development of independent producers. The methodology employed in carrying out these responsibilities is very much framed in Public Value terms.

If BBC management proposes to launch a new service or make significant changes to an existing service, they have to submit their proposals to scrutiny and, in particular, to a **Public Value Test** (PVT) by the BBC Trust.

The Public Value Test weighs **public value against market impact** (and particularly the impact on other suppliers), taking into account :

- the value of a proposed change to licence fee payers as individuals
- Its value to society as a whole through its contribution to the BBC's Public Purposes
- Its value for money and cost.

Proposed developments can only proceed if they are seen to create positive public value.

Public Value is thus seen to be a **core methodology** for assessing the BBC's overall performance.

8.2.4. The British Library – 'Measuring Our Value'

The British Library conducted a similar study to the BBC's and this was published in 2004. Again the development was motivated by the desire to provide a **better quantitative assessment** of the contribution of the Library to public well-being. This aim was expressed in the following terms :

'Traditionally, attempts to assess these benefits have taken the form of qualitative case studies – telling good stories perhaps, but failing to provide a comprehensive evaluation. Now a technique, supported by the Nobel Prize winning economists Kenneth Arrow and Robert Solow, permits a coherent quantitative evaluation of the total benefit to the nation of publicly-funded institutions and programmes'.

The Public Value exercise consequently set out to discover both the value enjoyed directly by users of the Library and the value enjoyed indirectly by UK citizens.

It saw itself as trying to measure **consumer surplus**, so some 2,000 beneficiaries were asked

- how much they would be willing to pay for the Library's continued existence;

- the minimum payment they would be willing to accept to forgo the Library's existence;
- how much they invest in terms of time and money to make use of the Library;
- how much they would have to pay to use alternatives to the Library, if such alternatives could be found.

As a result of this work, the library was able to provide a calculation of its total value contribution. It estimated that the **total value** each year of the British Library is £363m of which £304m is *indirect* value and £59m *direct* value. It concluded that each year the British Library generates value around 4.4 times the level of its public funding.

Again this approach has become part of the normal framework within which the British Library operates. In the **funding agreement** with the UK government for 2006-7, for instance, commitment to the creation of Public Value is one of the **key themes**.

8.3. Building the Business Case

8.3.1. Espida

Espida¹³ was a project funded by JISC, the Joint Information Services Committee of the UK's Higher Education funding councils. JISC exists to promote advanced IT development in the UK **Higher Education** sector and this particular project was funded under JISC's digital preservation and records management programme¹⁴

Espida was completed in January 2007 and it had aimed to develop a **model** that

'can help make business cases for proposals that may not necessarily offer immediate financial benefit to an organisation, but rather bring benefit in more **intangible spheres**'.

The model was designed initially to be used within the area of **digital resource management**, although in its final form it has potential for far wider application.

An interesting characteristic of the approach adopted by the team at Glasgow University responsible for the project was that they attempted to address a **communication problem** between people proposing digitisation or similar projects and those who have to make financial and administrative decisions. Essentially, the model helps the former speak the language of the latter and it does this by making use of the well-known management tool, briefly explained above – Kaplan and Norton's **Balanced Scorecard**.

¹³ <http://www.gla.ac.uk/espida/index.shtml>

¹⁴ http://www.jisc.ac.uk/whatwedo/programmes/programme_preservation.aspx

The argument is that project proposals, for example to digitise material in an archive, are 'prospectuses for investment' in the future of the organisation. Good decision-making requires that the proposals clearly set out the **costs, benefits** and **uncertainties** surrounding the investment. With these in place, proposers, decision-makers and other stakeholders can fully understand what is involved and share expectations of **outcomes** and **impacts**.

The team goes on to explain : 'Costs of projects are relatively straight-forward to define, but benefits that are not simply expressed in financial terms can be very difficult to **express, communicate** and **measure**. These **intangible benefits** are frequently a major feature of business cases and are often expressed in vague, prosaic language. While the costs of two different projects can easily be offered for comparison, how does one compare the outcomes of projects where the benefits are not financial, but revolve around knowledge, information and processes? At the moment, communicating outcomes of proposed projects is often done through rhetorical prose designed to maximise the impact of the positives. This does not make for effective communication and cannot be said to offer decision-makers adequate information on which to base investment decisions. A common currency is needed so that these stakeholders can communicate effectively.'

Again we see the common theme throughout this paper – that rhetorical argument in favour of digitisation and similar projects is all very well, but to be really persuasive more **specific, preferably quantitative, arguments** have to be deployed.

The espida project claims to have developed an 'approach to help the proposer and decision-maker (or funder) enter into an effective dialogue about the character of **outcomes** (be they positive or negative) that an investment can bring to the organisation'. 'It frames proposals within an **investment context** that is directly aligned with the **strategic goals** of the organisation and offers a realistic approach to understanding and communicating **intangible value** and **risk**.'

In practice, then, the model proposes a close examination of the strategic goals and objectives of an organisation, as the first step, in order to set out how the proposed project can be seen to contribute to them. It then suggests that the identified benefits (and disbenefits) and corresponding indicators be expressed within the framework of a Balanced Scorecard. This will, of course, include the direct financial costs and any income that are associated with the project, but it will also allow the intangible benefits (and costs) to be articulated. In this way contributions from the project to its standing among its user community, its contributions to the organisation's capability and skills and the efficiency of its internal processes are taken into account.

In addition to the powerful analysis, then, and in order to assist those who are making such a case, espida offers a series of **practical tools** that can help structure the process and provide discipline,. These are available for downloading from the espida web site.

9. Glossary

Term	Description
altruistic value	the value of knowing that a facility is available for others to use
bequest value	the value of having a facility preserved for future generations
contingent valuation	the public's 'willingness to pay' for the wider benefits associated with specific goods, services or amenities that go beyond those that directly benefit the individual consumer
creative economy	those sectors in a modern economy whose success relies on the creative skills (in design and presentation) or those providing the goods and services
cultural economy	that part of the economy and economic development that that uses cultural resources (physical collections and archives, but also skills) to provide services to consumers and inputs into other goods and services
digital archives	archived digital material that is of broad cultural interest
digital libraries	term used in an EU context to refer to digital repositories, especially those relating to Europe's cultural, audiovisual and scientific heritage
existence value	the value of knowing something exists, even if it can not be used directly (a fragile object, for instance)
externalities	economic benefits or costs over and above those felt by those directly concerned with a transaction
intermediate producers	producers of goods or services that are used as inputs into other goods and services
knowledge economy	a modern economy that uses human knowledge as a significant resource, as well as the traditional 'factors of production' : land capital and labour
Lund Principles	Principles enunciated at an EU level in Lund in 2001, which highlighted issues relating to the promotion of European content and called for a co-ordination mechanism for digitisation programmes across the EU Member States
market failure	market inefficiencies that arise when consumer preferences cannot be expressed effectively through normal market mechanisms, leading to a distorted allocation of resources

nonexcludability	characteristic of certain goods, where it is difficult to restrict access and use to particular individuals
nonrivalry	characteristic of certain goods, where using them does not exclude use by others
non-use value	Value attributed by an individual to the provision of a good, service or facility, even though the individual concerned does not benefit directly from that provision
option value	the value of having a facility that may be used in the future.
potential value	the value derived by being able to retain something that may have a value in the future.
public goods	goods that everyone uses that it is difficult to get individuals to pay for, because, in technical terms, they are characterised by nonexcludability and nonrivalry
public value	the value of the total benefits derived by individuals from the provision of a good, service or facility, including both direct personal benefits and individual's valuation of social benefits
social capital	the structures that promote cohesion in society both within social groups and between them