

---

**BUSINESS MODEL**  
**INNOVATION**  
CULTURAL HERITAGE

---

---

**BUSINESS MODEL INNOVATION  
CULTURAL HERITAGE**

AMSTERDAM & THE HAGUE

THE DEN FOUNDATION  
KNOWLEDGELAND  
MINISTRY OF EDUCATION, CULTURE AND SCIENCE

2010

---

---

## INHOUDSOPGAVE

CH 1 — Introduction	4
CH 2 — Business Model Innovation	6
CH 3 — Organisation	26
CH 4 — ICT Infrastructure	44
CH 5 — Copyright	62
CH 6 — Revenue Models	84
Acknowledgements	105
Bibliography	106
Colophon	111

# 1 INTRODUCTION

Over the past decade, museums, archives and other cultural heritage institutions have made a good start at digitising important cultural heritage collections and developing digital services. Some of these services are still experimental in nature, yet continue to gain more strategic significance as they strengthen the role of cultural heritage in digital society.

The sector has also become significantly more professional over the past ten years. This development has resulted in an increased level of expertise found within the walls of cultural heritage institutions. ICT service provision has also become embedded in policy plans within organisations. However, there is an increasing recognition that these digital services are not yet perfectly suited to the needs of today's users, who expect to be able to request, retrieve and adapt cultural heritage content through popular interactive sites like YouTube, Flickr, Facebook and Wikipedia.

Both the institutions themselves and policymakers on national, regional and local levels consider the broad accessibility of cultural heritage materials to be an important contribution to our common social capital. But, in carrying out these activities, various barriers are encountered, such as copyright restrictions, organisational changes and technological challenges. The institutions are also often encouraged by governments to demonstrate an entrepreneurial approach to their digital services in order to recoup some of the costs of developing new techniques and services. An important question is therefore how revenue models can be developed for digital cultural heritage without interfering with the aim of broad accessibility. In other words, the heritage sector currently faces the challenge of reassessing its underlying business models and developing innovative approaches to funding and sustainability.

The publication "Business Model Innovation Cultural Heritage" is the result of a project run in the Netherlands in 2009 by the DEN Foundation and Knowledgeland. It aims to provide cultural heritage institutions with better insight into obstacles to be overcome. Analysis of the various challenges provides an overview of solutions that can help institutions make the right decisions concerning the further development of their digital services. This publication can therefore be viewed as a practical manual for cultural heritage innovation in the digital age. We hope that institutions that have already gained the necessary experience as well as those that are taking the first steps on the digitisation path will find this manual both helpful and informative.

Marco de Niet (The DEN Foundation)  
Harry Verwayen (Knowledgeland)  
Janneke van Kersen (Ministry of Education, Culture and Science – Directorate Cultural Heritage),  
December 2009

## Study objectives

This publication has two objectives:

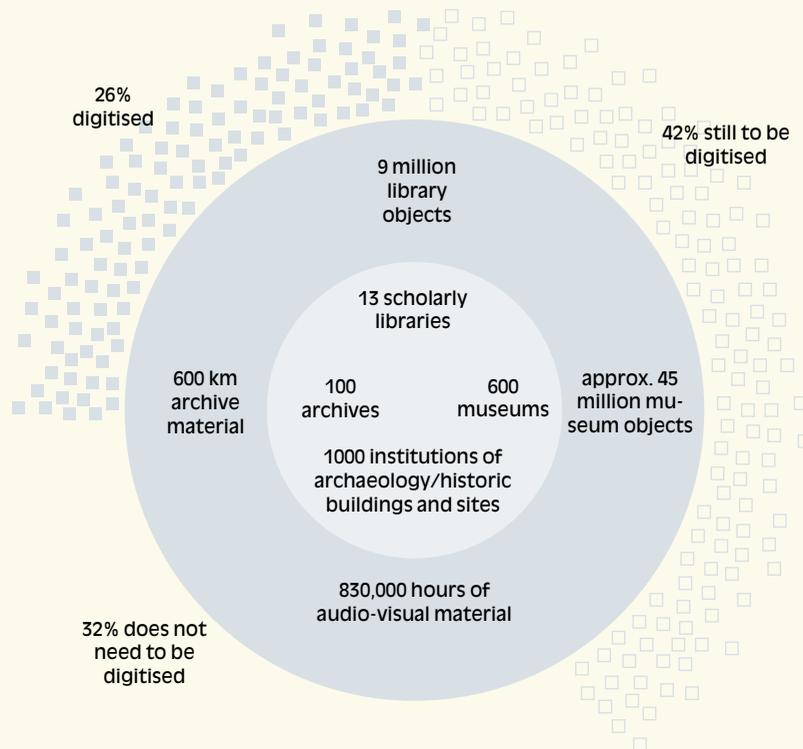
1. To provide insight into the choices facing the heritage sector in the digital age.
2. To provide tools that enable heritage institutions to make well-grounded decisions regarding their role(s) in the digital age.



## 2

# BUSINESS MODEL INNOVATION

## Situation outline in the Netherlands

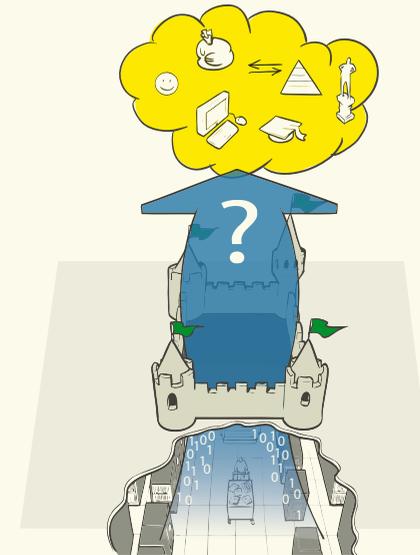


**Figure 1:** Of all collections held by 130 front-runners in the sector, 26% have already been digitised, 42% still need to be digitised and 32% do not require digitisation (percentages derived from Digitale Feiten, 2009).

The digital collections represent significant potential economic and social value, provided they are made accessible in the best way possible.

## Access leads to value creation

As the Internet has risen to prominence in the past decade, cultural heritage institutions have invested increasingly in their digital services in order to make their collections accessible to a wider audience. Digital cultural heritage is not only of significant cultural interest, but has also brought new economic and social benefits within reach (Anderson, 2006).



**Figure 2** The potential of digitised cultural heritage.

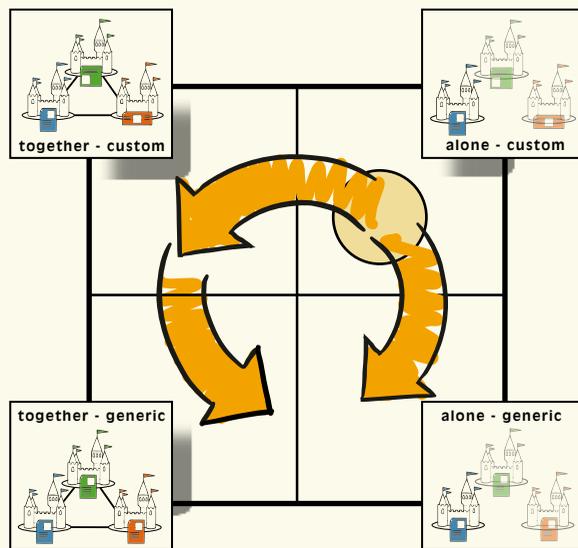
The Dutch Foundation for Economic Research carried out an analysis of the economic and social costs and benefits of making cultural heritage available digitally for a number of mass digitisation projects (Baten in Beeld, 2006). Not only 'hard' figures like additional income were quantified, but also the 'soft' effects of the accessibility of cultural heritage, such as an increase in well-being and quality of life.

These analyses show that, on balance, the total benefits of digitisation and accessibility outweigh the costs. The heritage sector, creative industries, the education sector and consumers will all experience immediate benefits from the widespread availability of cultural heritage objects. Indirect social benefits include an increase in digital literacy and a strengthening of the knowledge-

based economy. In other words, digital collections represent significant potential economic and social value, provided they are made easily accessible.

**Four distribution rings**

For a clearer understanding of the various forms of access to cultural heritage, the study developed a model with four clearly defined distribution rings (Figure 3). These rings represent four ways that cultural heritage collections can be accessed.



**Figure 3**  
Distribution rings showing the various forms of access to cultural heritage.



**1. Analogue in house**

The work is displayed physically or made physically accessible in an archive, exhibition or reading room.

**2. Digital in house**

The work is described digitally and may be digitised. It is made available within the walls of the institution by means of a closed network (or through digital data carriers), such as a computer or terminal at the institution that visitors can use to search through the collection database.

**3. Online**

All or part of the digital collection of the institution is offered online through the institution's website, but without explicit rights of use or reuse.

**4. Online in the network**

All or part of the digital collection of the institution is offered online. Rights of use are granted to third parties (the public, other institutions) for use or reuse.

The more heritage institutions move outside their comfort zones, the greater the value that is created.

The study De Digitale Feiten (2009), the Dutch contribution to the EU Numeric project ([www.numeric.ws](http://www.numeric.ws)), reveals the current situation regarding the accessibility of digitised heritage materials within these four rings. The figures show that the majority (61%) of digital materials is available within the physical walls of the institutions, while a considerable percentage (41%) of the materials is available online, but only on the institution's website and without granting any explicit user rights for, for example, reuse. Although hard figures are lacking, it appears that cultural heritage institutions are not yet active within the outermost ring.

### Focus on the user

An important task of the heritage sector is to make the material as broadly accessible as possible. To do so in a meaningful way, it is essential to consider the user's point of view (Van Vliet, 2009). For example, what does a student expect from digital content and where does he or she look for it? What are the paths taken by amateur photographers as they search for new material? Where can one

Figure 4  
Model for user needs



find amateur historians online who are willing to invest their time in tagging and adding metadata to content? To achieve the desired added value, cultural heritage institutions need to step outside their comfort zone and take their cue from their target audiences.

### Cultural heritage 2.0 initiatives

A great deal of experimentation is currently taking place in order to make digital heritage broadly available. TNO (Organisation for Applied Research) recently carried out a mapping of web 2.0 interaction pilots and services (Limonard & Staal, 2009). The initiatives addressed two questions facing cultural heritage institutions: Who is the intended target group of these initiatives and to what degree is the institution in control? The results are shown in Figure 5.

This information was used to cluster initiatives with similar content based on how their various audiences use the service. The clusters are explained briefly in Table 5a.

The TNO study was exploratory in nature. This means that it was an initial attempt to obtain insight into the numerous initiatives. Although TNO does not make any conclusive statements about financial feasibility, the study does comment on the intended target groups and organisational model behind the service concepts.

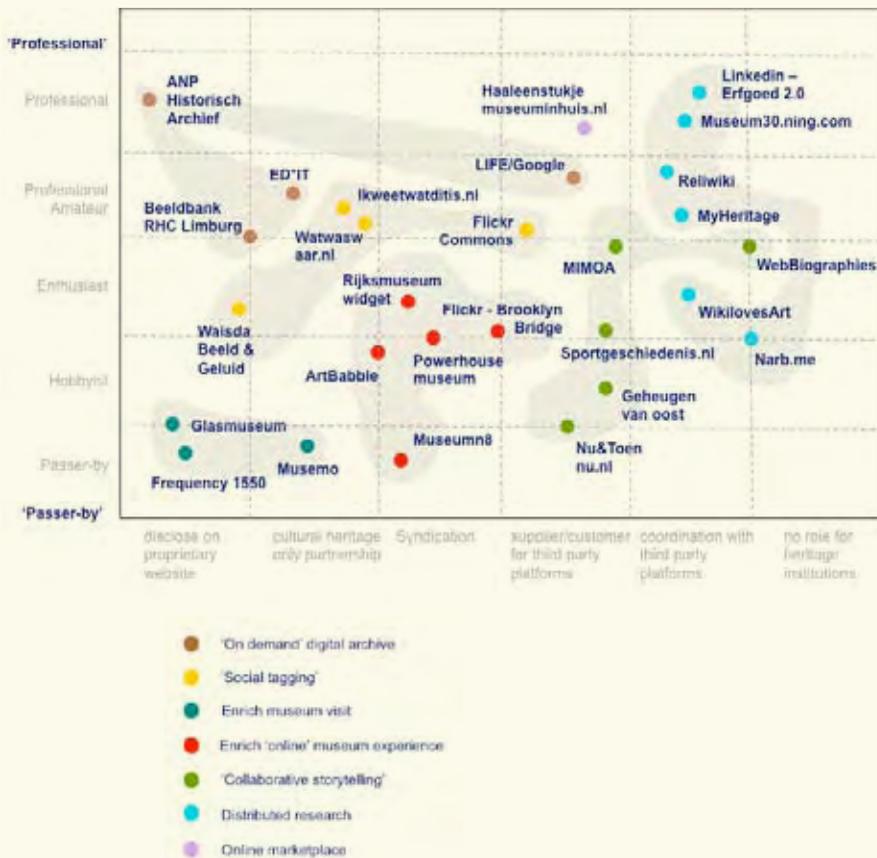
### Target groups: between laypersons and professionals

Another relevant question when establishing new services is who should be in charge. It is sometimes desirable to allow the public to have considerable influence. In such cases, the service is 'open' in nature and control on the use and reuse of digitised cultural heritage sources is often relinquished. In other instances, the institution maintains control over the service ('closed' in nature). The analysis shows that the majority of services are currently developed on the borderline between these two extremes.

**Control: neither open nor closed**

Another relevant question when establishing new services is who should be in charge. It is sometimes desirable to allow the public to have considerable influence. In such cases, the service is 'open' in nature and control on the use and reuse of digitised cultural heritage sources is often relinquished. In other instances, the institution maintains control over the service ('closed' in nature). The analysis shows that the majority of services are currently developed on the borderline between these two extremes.

**Figure 5**  
Cultural heritage 2.0 initiatives (TNO, 2009)



**Table 5a**  
Description of the different clusters (TNO, 2009).

<b>On-demand digital archive</b>	Users can search, call up and/or order cultural heritage sources using various search functions. This is the only cluster of initiatives in which a revenue model is a fixed element of the service concept.
<b>Online museum experience</b>	Alternative to or expansion of the museum using web 2.0 tools and platforms. The target group is approached actively by offering widgets, setting up discussion groups on social networks, and so on.
<b>Collaborative storytelling</b>	Users tell their own personal stories on platforms. Heritage institutions often provide specific archive material that users can then integrate into their narrative.
<b>Distributed online research</b>	Technical platforms, tools and social networks where users can jointly conduct and present research. This guarantees a certain degree of reliability with regard to the information, the relationship between the sources and the members of the community. An example of this is wikipedia.org.
<b>Social tagging</b>	Users are given the facility of tagging digitised cultural heritage sources. The tags can contain a description or can express some appreciation, and they make the collection easier to search through.
<b>Enhancing the offline museum experience</b>	Users can take advantage of new media, either prior to and during their visits to the museum. Using applications on smartphones in particular can make the museum visit more interactive and personal.
<b>Online marketplace</b>	This offers users the chance to bid online for cultural heritage objects and works of art.

### The need for business model innovation

As described above, experimentation in the heritage sector is currently taking place on various levels. However, most of these initiatives are short-lived exploratory projects aimed at testing service concepts in a very broad domain. To achieve the (potential) value of digital cultural heritage in a structured manner, it is important that deliberate decisions be made with regard to concepts and target groups. The most successful pilots can also be scaled up to become an integral part of the activities carried out by the institutions. However, this puts pressure on the working methods and protocols of the institutions and requires a different form of collaboration, both within and outside of the sector.



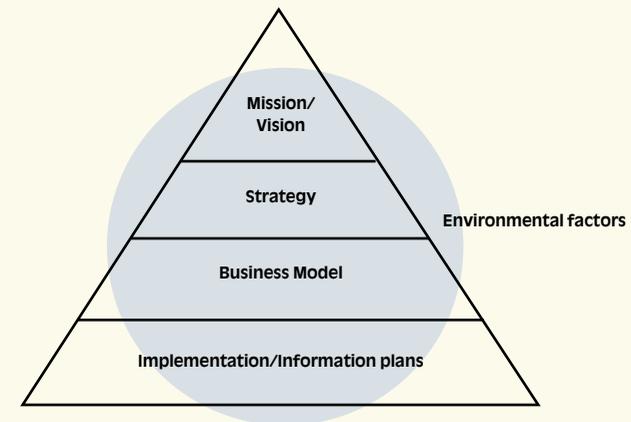
<http://www.geheugenvannederland.nl/>



<http://experience.beeldengeluid.nl/>

## Possible solutions

Designing business models is not a stand-alone process. It is embedded in a larger strategy that starts with an organisation's mission and vision. Together with the prevailing external factors (such as the increasing digital literacy in society), it serves as a guiding principle for the strategy. The course charted within this strategy (such as reaching new target groups) serves as the foundation for a successful business model. The business model must then be further refined with the business and information plans needed to carry it out.



**Figure 6**  
The business model as part of the strategic change process.

### The business model canvas

#### Definition of business model

In this study, 'business model' refers to the framework (or logic) used by an organisation in creating social and economic value (Osterwalder and Pigneur, 2009).

Digital developments result in opportunities that were never before available. Who would ever have imagined that you could talk to someone in Japan and Brazil simultaneously absolutely free of charge (using Skype)? These kinds of possibilities have a significant

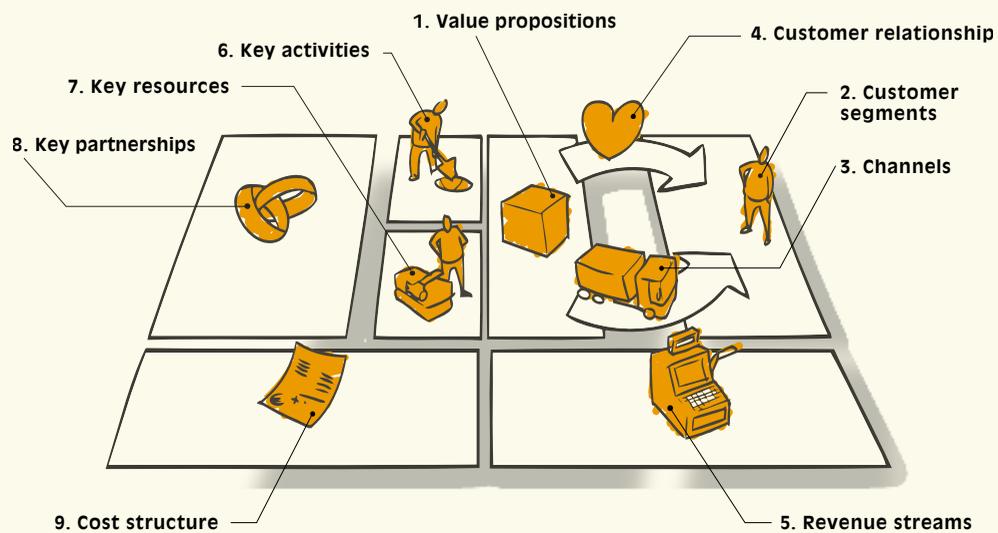
effect on the set-up of organisations and, as a result, their business models.

In recent years, considerable research has been conducted into business model innovation. Various methods have been developed, each with its own unique perspective. Some focus on the earning potential of the Internet (including Rapa), while others concentrate on the relationship between the market and the organisation, such as the STOF method (Faber & De Vos, 2008).

For this publication, we use the model developed by Osterwalder and Pigneur as a manageable framework for innovation. It combines elements from the various methods mentioned above, making it possible to gain keen insight into the effect within an organisation of changing one of the elements of the business model (such as the proposition). The business model consists of nine building blocks that are related directly to one another, with the whole being referred to as a 'canvas'.

**Figure 7**

The business model canvas consists of nine building blocks.



The proposition is what makes the organisation distinct; it serves to resolve customer problems and meet customer needs. The focus in the business model is always on the customer. Without customers there can be no revenues. The organisation can focus on specific, well-defined customer groups. This allows deliberate decisions to be made about how people and resources can be used to strengthen the proposition. The distribution channel that is used to deliver the service determines both the communication to and the experience of the customer. There is a difference, for instance, between buying an item of clothing at a chic boutique or from an online mail order company. This determines to a significant degree the organisation's relationship with specific customer groups. This might be a very personal relationship, which entails high costs - but also justifies a higher price. These four elements taken together determine what customer groups are willing to pay and, as a result, how much revenue can be earned by the organisation. This group of building blocks (what the organisation delivers and for whom) is shown in this publication as the front part of the model.

The other side of the model comprises three key building blocks. Achieving the proposition requires the carrying out of activities. Clothing for example must be designed, manufactured, packaged, priced and shipped. An organisation can opt to carry out these activities (resources) itself or to purchase them in full or in part from other parties (partners). In an increasingly complex world, it is becoming more and more attractive to enter into strategic partnerships for activities that are not among an organisation's core competences. The combination of these activities, the use of company resources and the costs of purchasing from partners determine the cost structure of the organisation (Osterwalder, 2009).

### Business model innovation

The canvas shows that there can be various drivers for business model innovation. An organisation may, for example, decide to update its activities and resources in order to create new value propositions. A good example of this is TNT Post, which discovered that they were not only good at delivering mail, but also logistics,

prompting them to establish a consultancy division. Reaching new customer segments can also serve as a foundation for innovation since it impacts the organisation's activities.

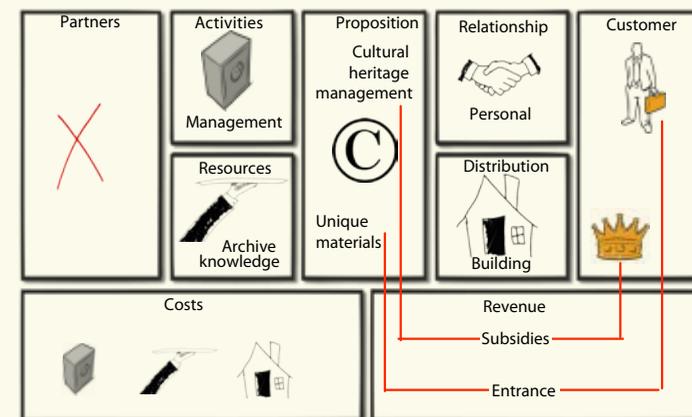
In the case of cultural heritage, the impetus to innovate comes from the same drive towards the Digital experienced by both institutions and society.

The digital cultural heritage proposition is different from the analogue material proposition. Searchability is improved significantly (proposition) and the marginal costs of distribution are virtually zero (Anderson, 2009), making it possible to serve entirely new customer groups. The earlier mentioned social and economic benefits that are achieved through this increased accessibility make this innovative process particularly beneficial for this sector. The opportunities arising from the model, however, have significant implications for the behind-the-scenes functions of the organisation.

### National Archives of the Netherlands example

The effect of changes in the back-office can be illustrated using an example from the world of archives.

If we were to plot the traditional archive situation on the canvas, it might look like this:

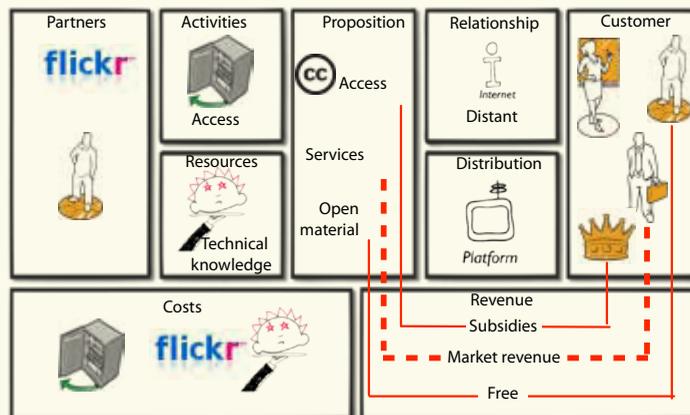


**Figure 8**  
Analogue business model for archives

The Archives' target group previously consisted mainly of scholars, those interested in genealogy and, because of its formal relationships, the Government (which usually grants a subsidy to finance the core activities of storing the archive material and making it available). The proposition and core activities for these customers consisted primarily of managing and providing access to the analogue material stored in the physical building. This required few partners since the activities could be carried out to a large degree by the organisation itself.

In the spring of 2008, the National Archives of the Netherlands decided to experiment with making a small selection of its extensive image database available to the public through Flickr The Commons (<http://www.flickr.com/commons>). The goal of this pilot was to encourage user participation and to experiment with making materials available. The results were remarkable. Over the course of six months, the 800 photographs generated more than one million page views, nearly 2,000 comments and more than 6,800 tags, reason enough for the archives to decide (after a detailed evaluation) to include this experiment in its line organisation (Taking pictures to the public, 2009).

**Figure 9**  
Digital business model for archives



Due to the digital developments, an archives' future business model will resemble the one described in Figure 9. The proposition has changed from analogue to digital material, which is made available with different user licences. Various digital services can also be developed, more and more often through generic platforms. These serve

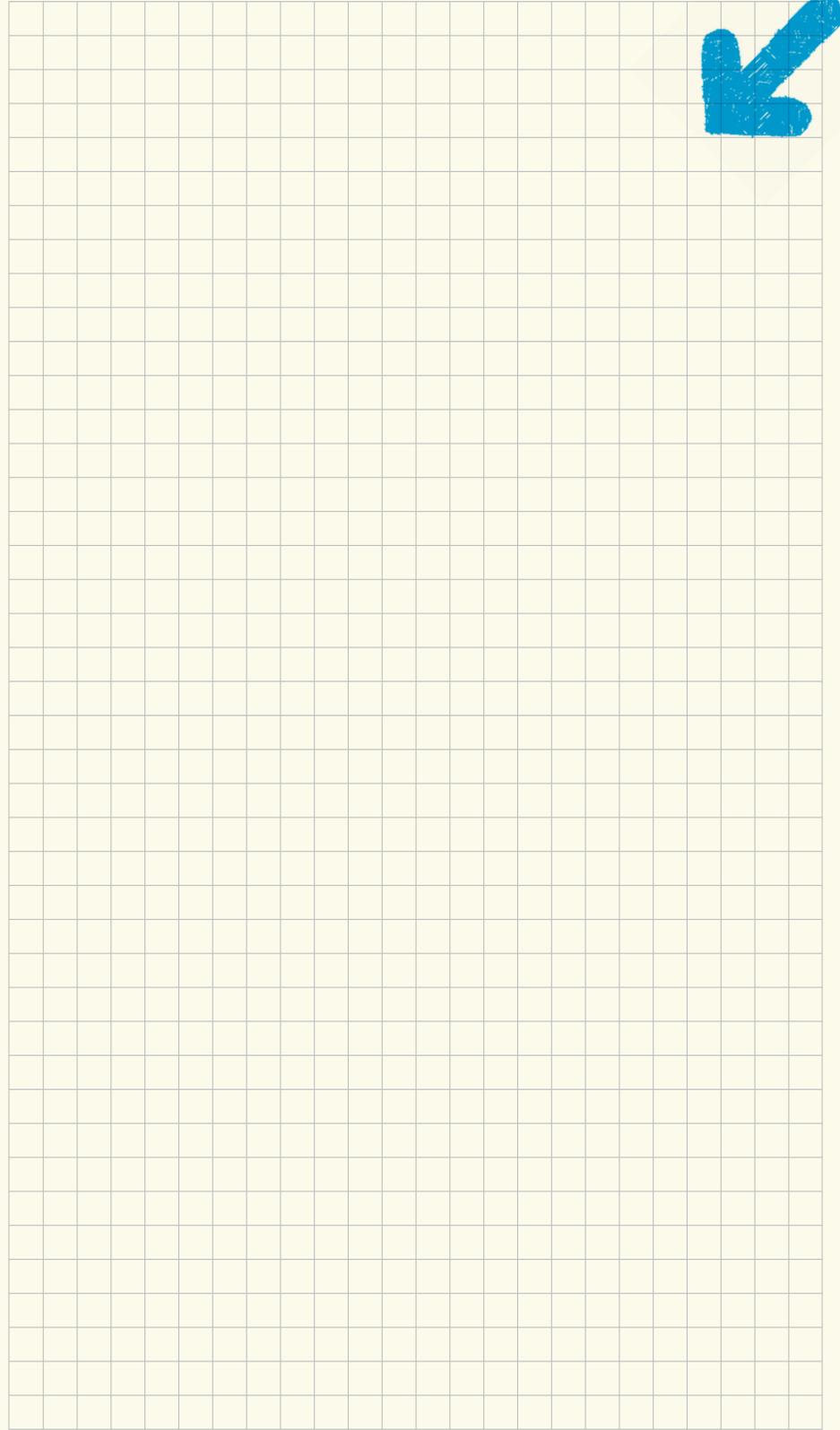
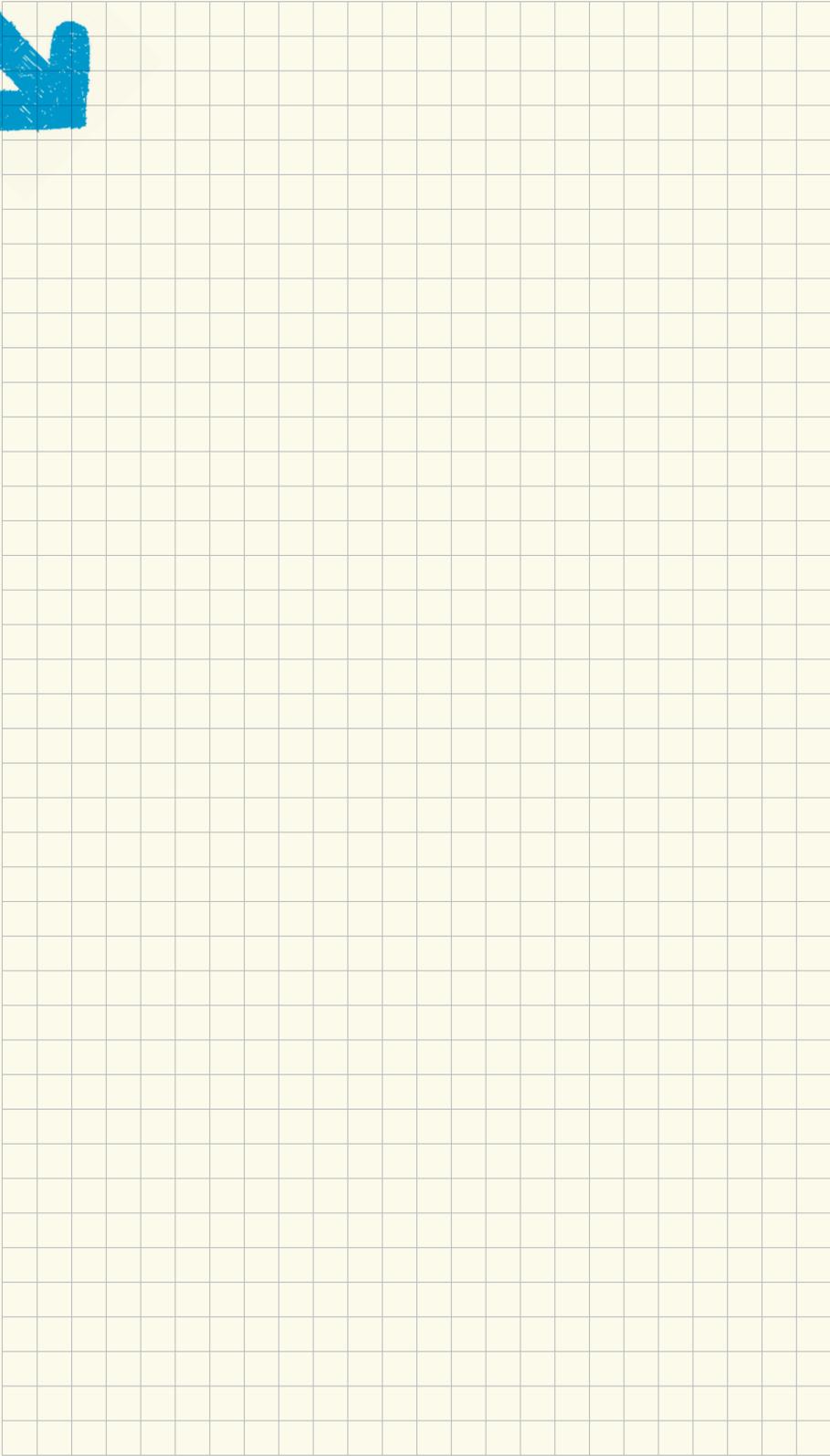
a wide range of target groups. Activities will be more targeted than in the past towards providing access to the material. This will demand a different type of expertise and a strong partner network.

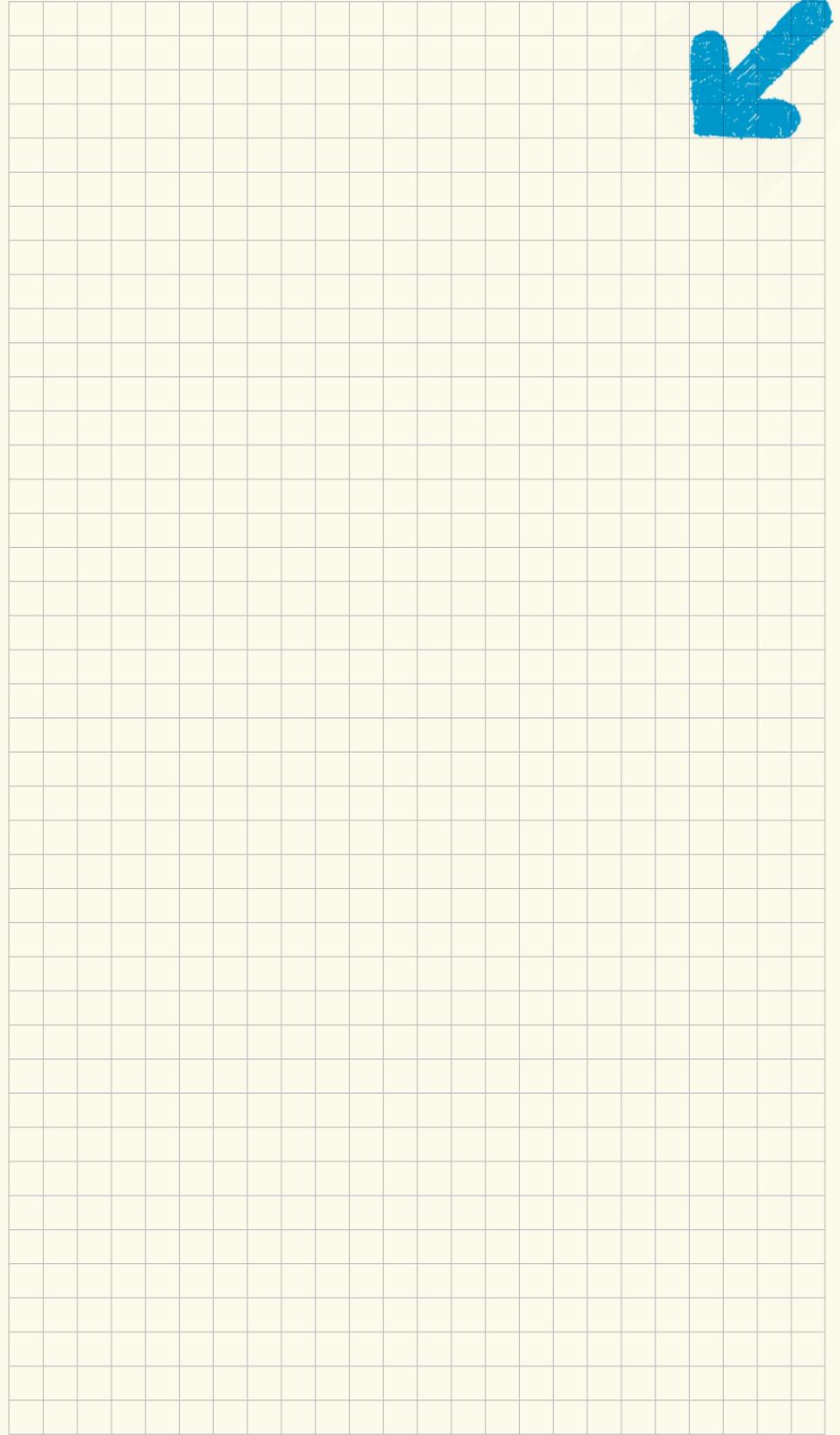
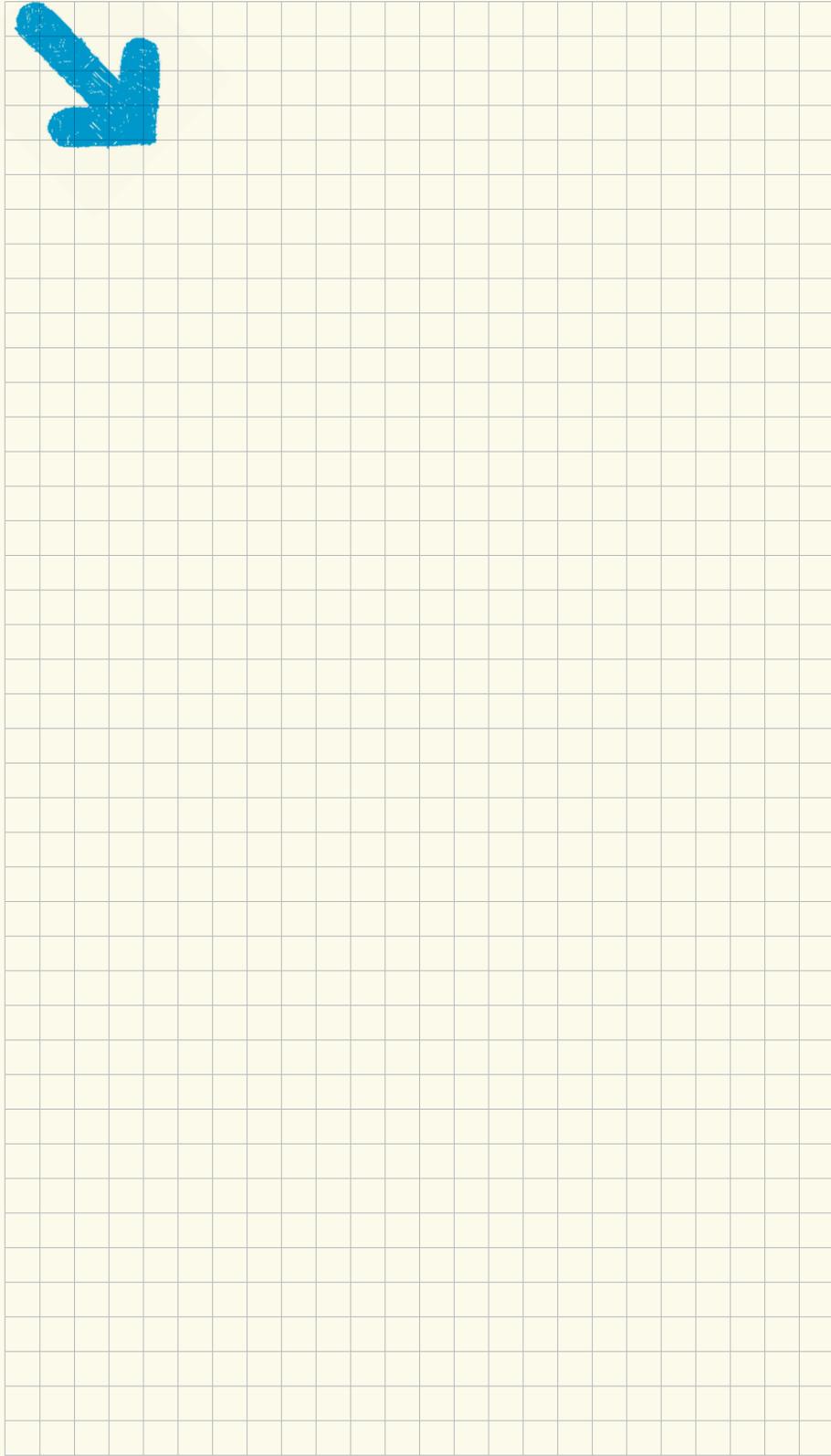
## Conclusions

### Obstacles

The transition from an analogue to a digital proposition offers numerous opportunities to create social value, but this change is not without resistance. Virtually all components of business operations at institutions will be affected by the transition as digital services take on a more central role within organisations. This requires business model innovation. The next four chapters delve deeper into those elements of the business model that present obstacles: Organisation, ICT Infrastructure, Copyright and Revenue Models.

The chapter on organisation focuses on the problems that come with organisational innovation, including the re-allocation of people and resources. How does a public institution deal with the changing demands of the outside world? How can the value creation of digital cultural heritage be maximised? And what are its implications for the sector? These issues are explored in the next chapter by more specifically examining possible approaches for ICT infrastructure. It has become apparent that the current, often institution-specific systems no longer meet the requirements of integrated solutions. In Chapter 5, four approaches are provided for dealing with copyright issues and the final chapter explores a number of revenue model options for the heritage sector.





---

## 3 ORGANISATION

---

### Overview

The emergence of a Digital society has a considerable effect on the services provided by organisations, whether commercial or non-commercial in nature. Current services must sometimes be changed in their entirety to remain of value. Consider the methods currently used to print photographs. And who would have imagined 20 years ago that we could reserve airline tickets ourselves using the Internet? The developments taking place within the ICT domain compel organisations to make changes across the entire chain, from concept to production, distribution and use/reuse.

Cultural heritage institutions are also faced with the necessity to make changes, both on an institutional and sector level. How can digitisation help cultural heritage institutions in fulfilling their role in society? And what kind of organisational obstacles does this present?

#### **Cultural heritage and public interest**

Cultural heritage institutions are part of the public sector and are therefore non-profit. Profit maximisation is not an issue and does not serve as a point of departure for business model innovation. Governments invest in the cultural sector in order to safeguard public interests. When it comes to archives in the Netherlands, their organisation is even more interwoven with the government. "The archive sector is largely a government sector that is factored into policy decisions with regard to improving the provision of services and decisiveness of the government and for which numerous digital solutions are developed." (Raad voor Cultuur, 2007)

Cultural heritage institutions that are entirely or largely dependent on government financing must take into account policy goals in the areas of culture and media. The Dutch Ministry of Educa-

tion, Culture and Science has established five primary goals ([www.minocw.nl/cultuur](http://www.minocw.nl/cultuur)):

1. Monitoring and, if necessary, promoting the diversity of availability and use.
2. Maintaining a consistent level of quality.
3. Ensuring accessibility to all citizens.
4. Remaining independent from disproportionate market pressure and content-related government interference.
5. Protecting the cultural heritage from harm and destruction.

Digitisation makes it possible to develop services that create value in each of these areas. This includes a diverse and high-quality supply of information on the Internet. After all, the Internet reaches far more people than do physical locations like reading rooms and exhibitions. It also makes it possible to protect fragile original materials by making them available in digital versions. In other words, the digitisation of cultural heritage offers excellent opportunities to give culture a permanent place in the information society and knowledge-based economy.

A condition placed on cultural heritage institutions by governments is that they carry out their activities efficiently and cost-effectively. As with the private sector, the costs of digitisation must also be recovered in the public sector. After all, ICT is not only used to enable new services but also to achieve more efficiency and even cost savings. That is why, for example, the National Archives and Regional Historic Centres in the Netherlands are currently developing a joint e-repository.

However, the Dutch government, like many Governments throughout the European Union, also expects more (private) revenue to be generated. Dutch institutions are encouraged through the Benefits of Culture scheme to generate at least 17.5% of the government budget received from their own revenue annually. An important challenge for this sector is therefore to link, wherever possible, increased social value to revenue models relevant to this sector.

**Physical or digital?**

Generally speaking, digital heritage services are an extension to, not a replacement of physical services, as can be the case in the private sector. The large-scale closure of second-hand music shops is a perfect example the latter. A complete digitisation of heritage services without direct personal contact is not likely. Museums and archives are offering more and more information digitally, but a large percentage of their collections will be accessible only on location. This is not only because of the unique value of the originals, but also because it is simply unfeasible to digitise every physical cultural heritage object (De Digitale Feiten, 2009).

The decision as to whether or not to digitise services is related directly to decisions concerning the structure of the organisation.

This hybrid form of service provision will force cultural heritage institutions to continuously make policy-related decisions between investing in physical or in digital services. On the one hand, the intention is to reach a broad public through digitisation while, on the other, the physical collection must remain easily accessible. From now on, a continuous consideration which channel offers the greatest value will be necessary. This consideration can be based on social goals, but efficiency within the organisation can also be taken into account. Archives, for example, expect an expansion of their digital services to lead to a reduction in physical services. This in turn results in the availability of additional manpower to develop or manage new services.

The decision as to whether or not to digitise services is related directly to decisions concerning the structure of the organisation. Working procedures are becoming increasingly more digital in nature, knowledge about the institution's collections is being recorded digitally more and more often and collaboration with partners and target groups in networks is becoming more important. In a nutshell, digitisation places pressure on the entire organisation.

## EXPERT MEETING ON BUSINESS MODEL INNOVATION

'In the public sector, you need to continuously compete for subsidies, i.e. revenue. In other words, public money needs to be earned continually.'

**Knowledge within and outside of institutions**

In the past, an institution's expertise was the only recognised source of knowledge about a collection. But that has changed. Naturally museums and archives are still responsible for describing and making available the contents of their collections. The results of these activities are recorded by their staff in databases. By linking these databases to the Internet, they can be accessed by interested parties. These databases can also be linked to one another, as is the case with the cultural heritage portals such as Europeana and the Memory of the Netherlands.

But the influence of the social web (web 2.0) places pressure on this working method. The focus of the social web is not on the institution and its collection, but rather on the users, who play an increasing role in enhancing the value of the collection. Cultural heritage institutions are currently experimenting extensively with 2.0 services in order to take advantage of the knowledge and enthusiasm of user groups. Part of this means allowing users to add keywords or annotations to individual objects within their image databases. Another example is the Wiki Loves Art project in which museum visitors are encouraged to take photographs of non-copyrighted museum pieces for inclusion in Wikipedia.

In spite of these activities, most institutions are still not sure how to best deal with this decentralisation of information. What do you do with information on online platforms that has been added by

visitors? Do you leave the user-generated content on the platform or combine the information with data from the traditional information systems? Does the institution have to verify the quality and reliability of the information provided by users? Or do you leave that to other users? Meticulousness and verifiability are traditionally considered important aspects of the work carried out by a cultural heritage institution. It is a challenge to safeguard these same values in the interactive knowledge exchange with user groups.

In addition to the question of the extent to which the knowledge generated in the social web should be controlled, there is also the question of the degree to which institutions can determine which cultural heritage is made available in the social web. Cultural heritage institutions possess numerous unique materials and, in that sense, are monopolists to a certain degree. This brings with it considerable social responsibility to provide and maintain knowledge in the public domain on the cultural heritage they manage. If there is no concrete demand from society for digitisation of specific cultural heritage, the institution can determine which information is made available on the social web and, as a result, over which objects knowledge can be acquired. If a museum or archive decides against making part of their collection available digitally, there are few, if any, alternatives to the digital use and reuse of cultural heritage objects. Given that selection is an unavoidable part of digitisation, institutions should provide clarity regarding the manner in which they make such selections.

## Possible Solutions

The above outlines ways in which cultural heritage institutions are digitising their services in the year 2009 and describes areas of tension in the organisation of such services. The following is an overview of possible solutions relevant to institutions wanting to innovate their business model.

### Organisational development and digital expertise

Cultural heritage institutions have always been oriented towards the long term, i.e. 'preserving for eternity'. As a result, working traditions have evolved that are at odds with the growing need for change within organisations. A first step that institutions can take to reduce this tension, is to analyse the degree in which the organisation is able to manage digital services and how new tasks relate to the working traditions. Are the digital services managed as part of projects or as structural tasks? Which department/staff member is most suitable for managing digital services? What knowledge and skills are lacking within the organisation for effectively serving digital customers?

To properly map out the necessary changes, institutions are encouraged to formulate an information plan in which the organisation's mission is linked to its vision on the digitisation of services. This includes an analysis of the available resources, both in terms of material and use of personnel. An important task for branch organisations is the promotion of expertise in new media. New positions are also required within organisations for which distinct profiles must be developed.



[www.thuisinbrabant.nl](http://www.thuisinbrabant.nl)



[www.europeana.eu](http://www.europeana.eu)



### Quantification of (social) benefits

The digitisation of cultural heritage is largely funded by temporary financing (Bishoff, 2004). New services with digitised cultural heritage collections are often developed as part of short-term projects. For the longer term, resources are generally not allocated for keeping cultural heritage available digitally (NCDD, 2009). It is desirable to obtain more insight into the social benefits of digital cultural heritage over a longer period. What, for example, is the value increase for education, tourism and the creative industry? How do the benefits compare to the original investments? Further research is needed into how digitisation can be restructured from an activity with a short-term goal to a strategic tool for the long term.

A clear-cut description of the added value is not only necessary for individual digitisation projects, but also for the institutions as a whole. What role do we play in a society undergoing digitisation? It is important to formulate and establish a clear vision in order to make well-founded decisions regarding the redistribution of available resources. This redistribution appears to be inevitable if digital services are to be guaranteed in the longer term.

### Collaboration with target groups

A clear vision of the institution's role is therefore an important pre-condition for making sound choices on the development of services. Another crucial aspect of business model innovation is the involvement of the user group(s). In the social web, the focus is on the user. It is not the quality of the information provided that determines the success of the service, but rather whether or not the customer feels well served. In other words, target group satisfaction is an important element for justifying the investments made, certainly in such a public sector as cultural heritage.

It is not the quality of the information provided that determines the success of the service, but rather whether or not the customer feels well served.

One of the greatest ICT-related changes in the private sector is 'open innovation', a reversal from product development to user-driven service development. Development in the telecom sector, for example, no longer takes place exclusively in company laboratories, but more and more in direct dialogue with users. This change is so great that it is often referred to as 'disruptive innovation' (Bloem, 2006).

The concept of open innovation in which the provider and user collaborate is also attractive for the digitisation of cultural heritage. After all, the heritage sector is looking for possibilities to optimally combine the three elements of ICT, service provision and user groups. However, few services are currently being developed in practice in which user groups actively contribute to development from an early stage. This is because digitisation for many cultural heritage institutions is tantamount to the creation of a digital supply of information without it being clear beforehand which user groups will be reached. Users are usually not brought into the equation until the testing phase has started for assessing functionalities already developed. But these functionalities are often based

on the manner in which staff members view the collection and how they would want to search the collections themselves.

As a result, the degree to which value creation for third parties can take place is of secondary importance to the institution's need to make the collection visible digitally. If this is the case, the cultural heritage institution will have difficulty making the switch to a service and user-oriented approach. Open innovation methods can help institutions increase the contributions of user groups at an early stage.

#### **Collaboration with strategic partners**

Collaboration with end users is therefore an important part of the development of digital services. Collaboration with other institutions and parties outside the sector can also be considered an essential pre-condition for creating added value in the digital society. Back in 2003, the Dutch Culture Council wrote: "The added value of cultural organisations in the virtual domain depends strongly on the degree to which they are able to integrate knowledge sharing, crossovers and structural collaboration with others into the core of their activities." (Culture Council, 2003)

Collaboration in the area of ICT offers numerous advantages (Bishoff, 2004):

- Optimisation of processes through cost distribution/savings.
- Reaching a larger audience by interconnecting target groups.
- Increasing the quality of a service by combining knowledge.
- Increasing the content-related scope of a service, thereby making it more attractive for use.
- Developing activities that the institution is unable to offer independently.

There are numerous forms of collaboration both big and small within the heritage sector, often involving shared digital services. Nonetheless, it turns out in practice to be difficult to embed the collaboration structurally within an organisation. Much collaboration is project-based and ends after a certain amount of time. This

can be explained partly by the strong need for autonomy in the heritage sector. Although the government encourages collaboration in subsidy arrangements, many projects still revolve around the digitisation of individual collections.

To support the development of an individual business model, the institution can analyse how the collaboration is embedded within the organisation. What is the nature of the relationship with the other parties? To what extent is the collaboration valued by staff members? And is the value proposition promised by the collaboration achieved as intended?

Cultural heritage institutions have always been oriented towards the long term, i.e. 'preserving for eternity'. As a result, working traditions have evolved that are at odds with the growing need for change within organisations.

Within the framework of collaborative efforts beyond the borders of the sector, the relationship between public and private organisations is an interesting one. The European Union encourages the formulation of public-private partnerships, primarily in the areas of infrastructure and services (European Commission, 2008). In these partnerships, the private parties assume part of the financing and risks of the public sector, e.g. the healthcare industry.

Another type of relationship between public and private parties is that of the contractor/client, such as collaboration with a web developer or, for example, between a data supplier/data developer and educational publisher.

EXPERT MEETING ON BUSINESS MODEL INNOVATION:

‘Collaboration enables you to create a massive offer of content; without that you won’t be able to offer useful services at the front.’

An important focal point with the latter form of collaboration is the conditions under which the private party can exploit the digital data offered by the cultural heritage institution. Is it in the form of an exclusive (Google Books) or non-exclusive (Creative Commons) licence? Can the service provider use the data without limitation if the service helps the institution achieve its policy goal (such as increasing its public reach)? Again, the role played by the institution and the added value of its digital service must be clear in order to help the institution make the right decisions.

#### Coordination on a sector level

The organisation of the Dutch heritage sector is one of self-regulation. But due to the growing need for collaboration and interoperability, the question arises as to whether more control is desirable in promoting the development of central digital services that can benefit the sector as a whole (Berenschot, 2007). Services such as long-term storage and permanent access demand a national approach (NCDD, 2009). The same applies to the findability of certain types of sources that are scattered across numerous institutions (such as maps, biographic materials and newspapers) or assigning fixed names to digital files (‘persistent identification’) or the semantic enrichment of digital cultural heritage and standardisation in general. These are all important building blocks for large scale digital heritage services.

National authorities encourage digital collaboration. An important consideration is how willing the institutions are to adapt to national developments in the area of digitisation. To encourage

collaboration, it is necessary to exert a certain amount of pressure, such as through project financing. This creates a situation that can be termed ‘conditioned self-regulation’.

Collaboration with end users is an important part of the development of digital services. Collaboration with other cultural heritage institutions and parties outside the sector is also considered an essential pre-condition for creating added value in the digital society.

This enables us to rise above the institution level in innovating the business model. Improving social digital facilities requires organisational adaptations that can only be achieved through long-term collaboration between the heritage sector, government and market. The vision on the public interest of this type of social infrastructure largely determines the manner in which such improvements are made. It is up to the heritage sector as a whole to demonstrate the added social value of a joint digital infrastructure.

## Conclusions

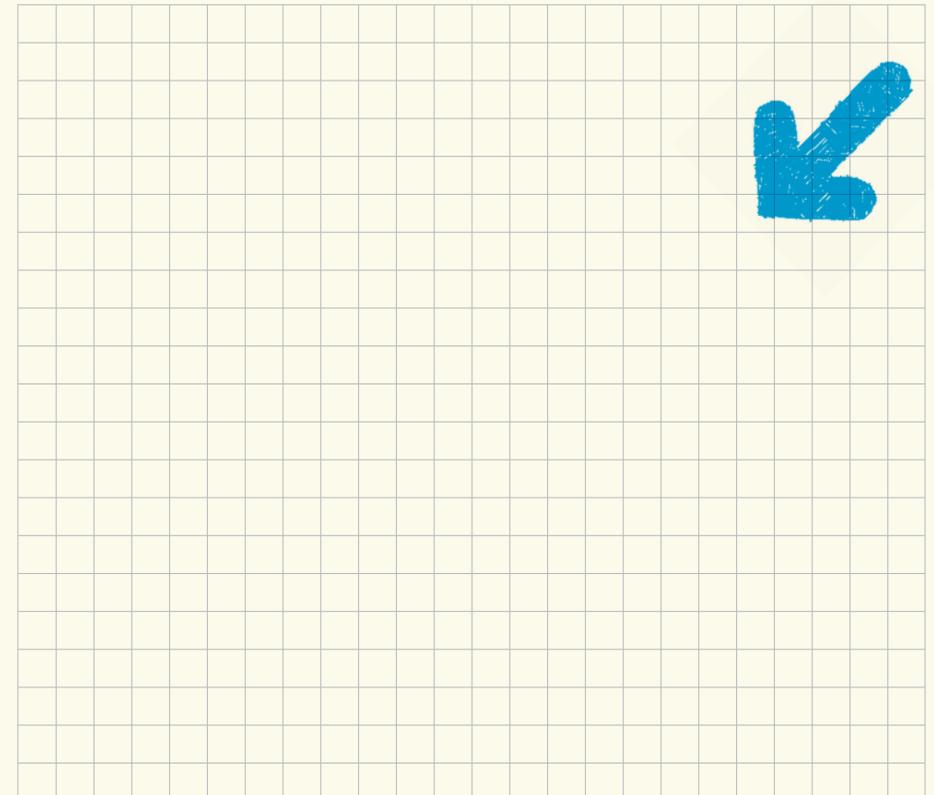
The digitisation of cultural heritage collections serves public interest. It makes it possible to offer broad and long-term access to unique cultural information. Cultural heritage institutions originally began digitising materials as an extension of their traditional tasks of management, preservation and public outreach. The institutions themselves were able to maintain control of the entire digitisation process. But rapid developments in the ICT field in general and the Internet in particular have put pressure on this traditional organisation.

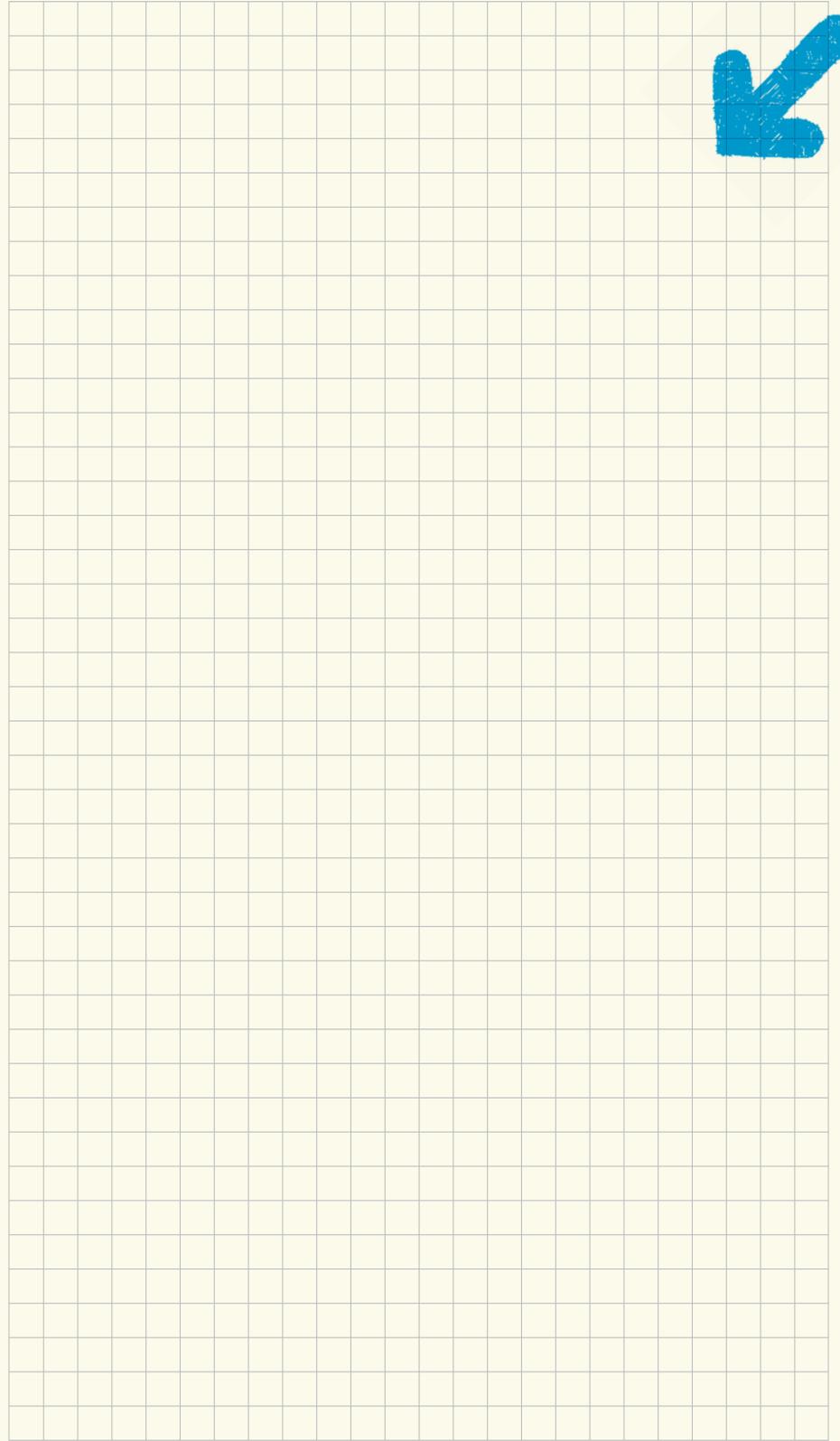
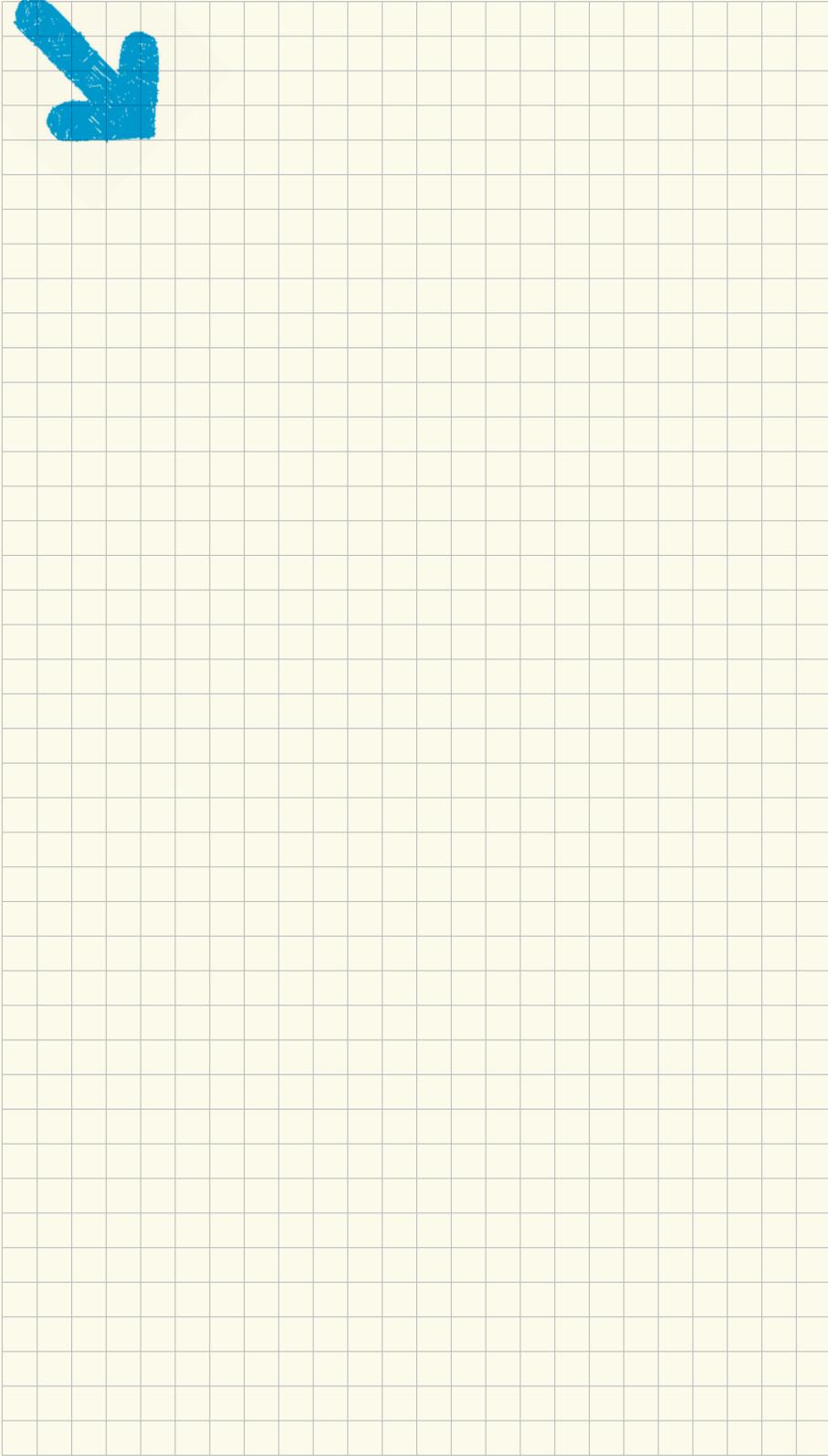
Expectations regarding the availability and usability of digital cultural heritage information are increasing. If it is not available digitally, it does not exist. But the cultural heritage institutions are no longer the undisputed authority when it comes to their collections, even though they are their unique selling point. Others also have knowledge that can be shared freely within the digital domain. Working traditions do not always fit in well with new forms of services. It has become evident that digitisation requires structural investments. Project financing is not sufficient to keep the growing amount of digital cultural heritage information accessible in the long term.

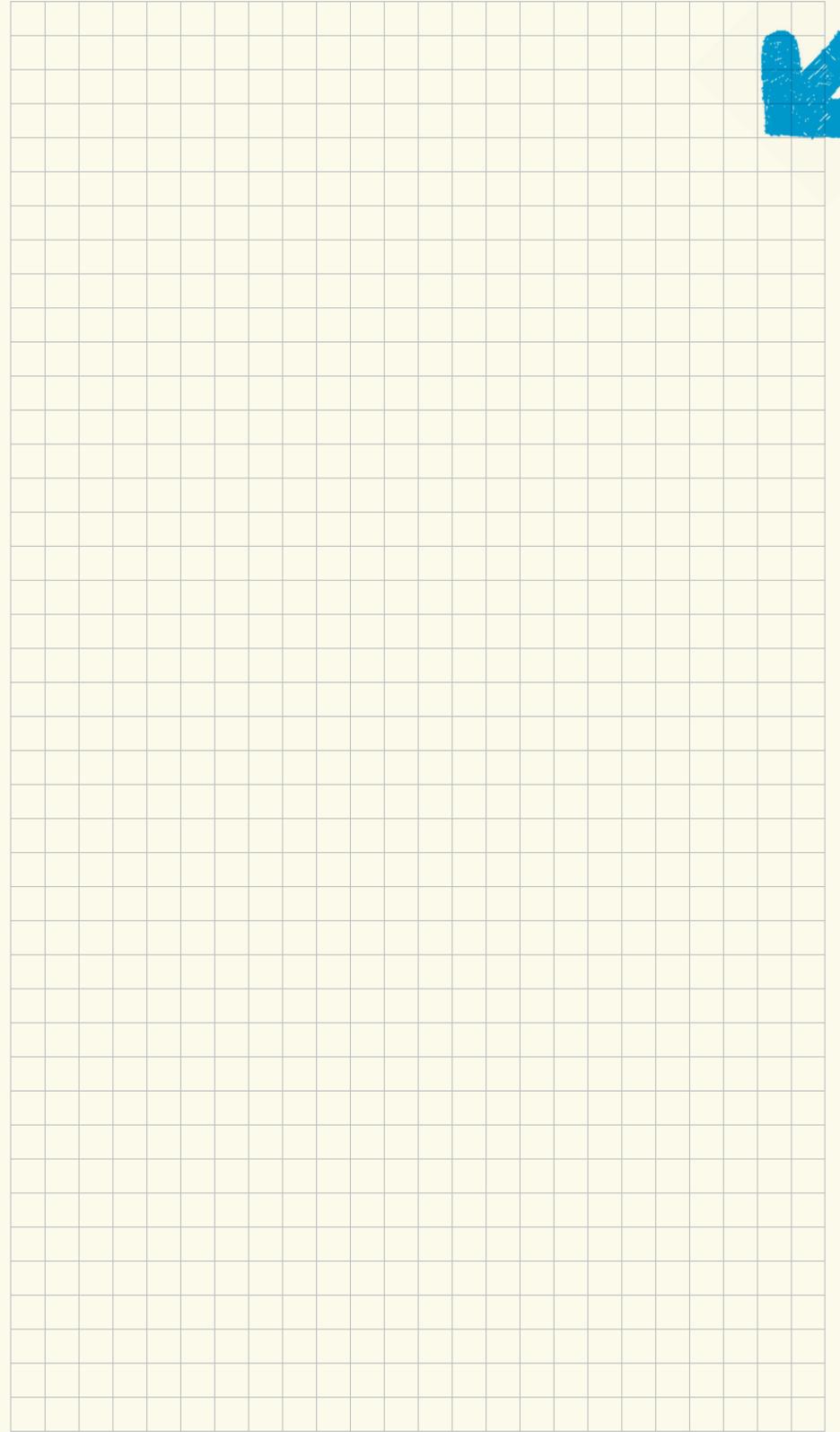
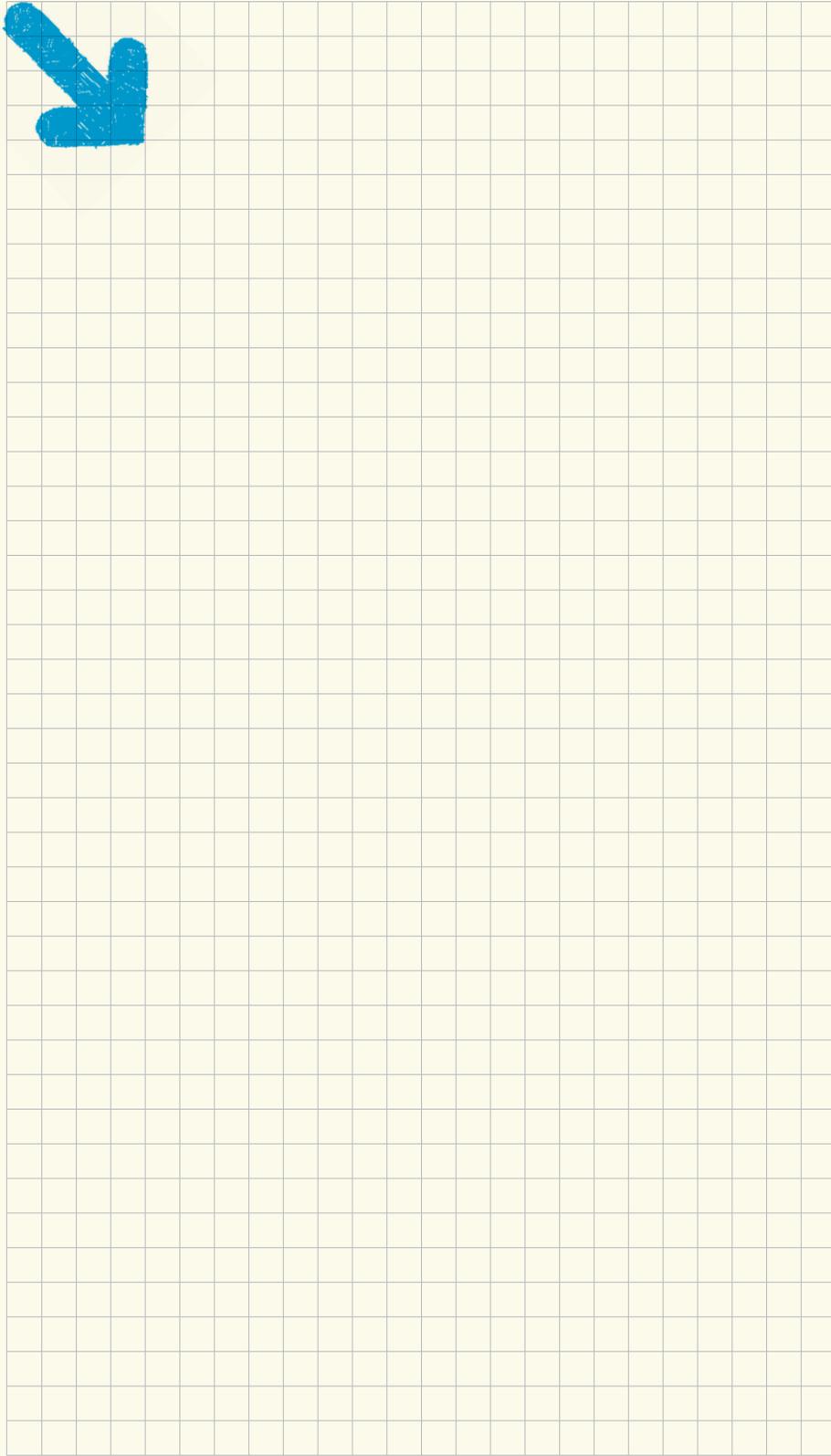
It has become clearly apparent that collaboration is essential for cultural heritage institutions, whether with other institutions, user groups, external companies, the government or other parties. Collaboration not only results in greater efficiency and cost savings, but also provides added value for the target groups by accumulating information and knowledge and placing them within a social context.

To ensure successful collaboration, it is important for institutions to have a clear vision of how their digital services provide added value and which adaptations to their organisation are needed to capitalise on this added value. It has become inevitable for cultural heritage institutions to have to make decisions continuously on

the relationships between physical and digital services. Which form yields the greatest value increase in a given situation? The main criteria are the degree to which customers feel well served and the manner in which the institutions are able to achieve maximum effect with minimum effort. Only then can the institutions properly fulfil their public role.







## 4 ICT INFRASTRUCTURE

EXPERT MEETING ON REVENUE MODELS

‘Infrastructure is just as important for your office as a building brick’



### ICT infrastructure

The following definition of ICT infrastructure is used in this publication: “The sum of technical facilities within an institution (local infrastructure), country (national infrastructure) or worldwide (Internet) for providing services digitally.” (ABC-DE, 2008)

### Front office – back office

An ICT infrastructure is usually layered. A common set-up is to have a front office and back office. The front office refers to that which is seen by user groups and where functions for reuse are offered. The interface, layout and user functions are all part of the front office. The back office contains the technical and organisational facilities that are found behind the scenes and which make it possible to offer the services. Storage, indexing and protocols for interoperability are part of the back office.

### Overview

The first step from analogue to digital was taken by the heritage sector back in the 1970s, when specialist systems were developed for staff members to describe and open up collections. These systems developed gradually into a new form of service in which visitors were given new possibilities to search through the collec-

tion and request objects. It was also possible to consult external information databases within a closed network of linked systems (De Niet, 2007).

With the advent of office automation in the 1980s, personal computers replaced terminal systems. Now it was also possible for smaller cultural heritage institutions to open up their collections digitally. Institutions created their own databases using specialist or standard software packages based on their own knowledge and the existing card index systems. When flatbed scanners and digital cameras became available, self-made digital images could also be linked to the descriptions of collection objects. In addition to collection databases, institutions also developed other knowledge systems, such as reference works, indexes, image and text corpora and exhibition catalogues.

With the emergence of the Internet in the 90s, the possibilities of information exchange skyrocketed. Connected institutions become part of a knowledge network on a global scale. The World Wide Web offered a standardised, easily accessible technology as a uniform, integrated interface for heterogeneous information systems.

### Legacy

As a result of these developments, a legacy of databases and other information systems are in use today that date back to before the Internet era. Some databases have since been provided with a web interface, but it is often difficult to connect them to other systems both within and outside of the institution. This obstructs the modernisation of the services provided, such as participation in large-scale online search services. It also makes it difficult to respond flexibly to current customer needs and to serve various target groups within the contexts that suit them.

In recent years, cultural heritage institutions have developed new web applications in addition to collection databases in order to be able to offer new types of services. These applications are often created on a project basis and with a specific goal, such as to sup-

port an exhibition or display selected pieces from the collection. These applications have often become a permanent part of the institution's ICT infrastructure due to the knowledge stored within them and because they meet the persistent demand for information from user groups. The results of this project-based service development are a jumble of different systems (e-Archief, 2008) and a management problem.

The hybrid composition of the ICT infrastructures currently used by most cultural heritage institutions significantly affects the quality of digital services. Due to the combination of multiple and sometimes outdated technologies, digital collections are often only partly available online. Research has shown that it is still not possible to consult many cultural heritage collections online, even though they have already been digitised (Digitale Feiten, 2009). Even if an institution already offers online access to its collection database, there remains the question as to whether it can be easily incorporated into the social web (web 2.0) or semantic web (web 3.0). The further development of the infrastructure would therefore have to support greater flexibility and connectivity.



Web 2.0, the social web, is the second phase of the development of the World Wide Web. It concerns the transition of the web from a collection of supply-oriented websites to a platform for interactive web applications that make it possible for any interested party to share information or knowledge (ABC-DE, 2008).

Web 3.0, the semantic web, is the third generation of websites that are able to exchange meaningful information between servers without human interference. In other words, it is a web that can 'understand' web pages. The definition is usually based on structured annotations or metadata. Content-related relationships within and between documents are created automatically by the corresponding structures. The semantic web is still under development (ABC-DE, 2008).

The current ICT infrastructure of cultural heritage institutions offers many more possibilities to improve the business model for digital cultural heritage.

Developments in the field of ICT are gaining momentum, with the Internet as the driving force behind these changes. Cultural heritage institutions currently stand at a crossroads. With the current hybrid situation, the potential value of digital cultural heritage is insufficiently exploited and the costs of ICT infrastructure for digital cultural heritage are inflated unnecessarily due to the required maintenance of multiple systems that are not well connected. Standardisation, the use of generic infrastructure and collaboration all offer possibilities to improve both the balance of costs and benefits of ICT infrastructure and the accessibility of such infrastructure.

## Possible Solutions

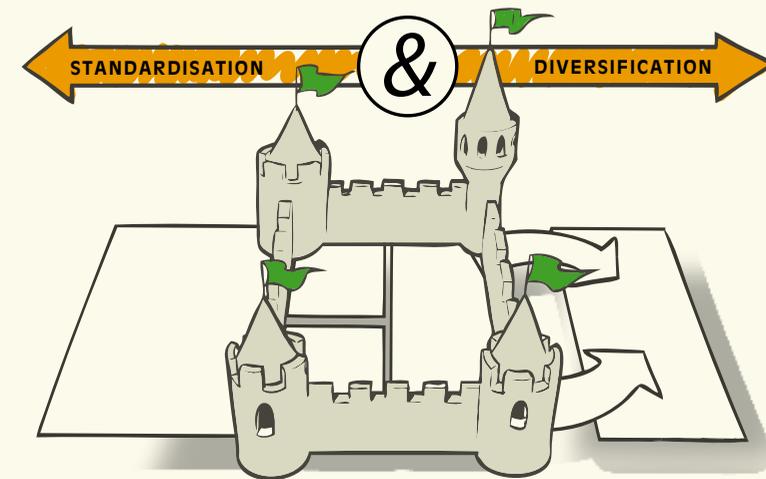
An ICT infrastructure requires continuous investment in order to maintain the same level of value creation within a networked environment. This makes the infrastructure an important factor of a business model. On the one hand, it is important to realise that the continuous development of ICT infrastructure can result in lower costs since, for example, the use of ICT enables staff members to work more efficiently and it is possible to easily build on investments already made. On the other hand, decisions must be made regarding the modernisation of the infrastructure for purposes of service development, so that the institution can create lasting value and, as a result, continue to successfully fulfil its role in the information society. The following are a number of approaches to make it possible to achieve these two aspects of ICT infrastructure: cost reduction and value creation.

### Standardisation

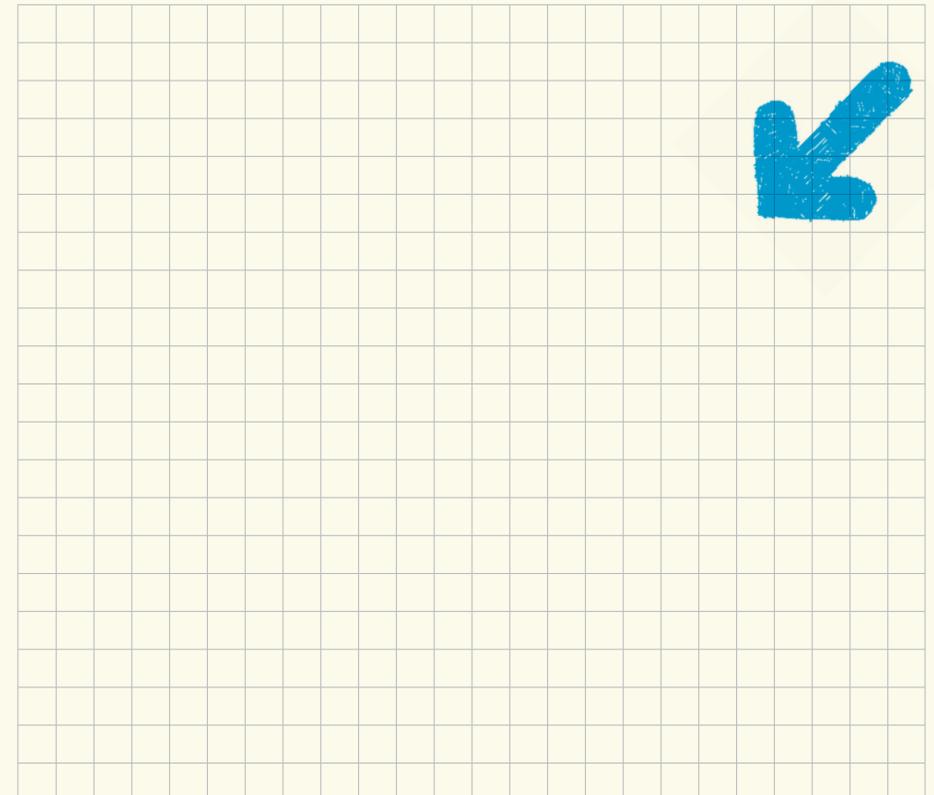
Many cultural heritage objects are unique. This uniqueness is an important aspect of the added value that a cultural heritage institution can provide in an information society. If the institution does not take the initiative to make the cultural heritage available (digitally or otherwise), there are few other possibilities to become acquainted with the objects. Cultural heritage institutions can and, to a certain extent, must distinguish themselves from others. The development of digital services in particular is a good way to draw attention. This attention is often translated to the Internet by displaying the cultural heritage in eye-catching interfaces with specific functions (De Haan, 2007).

This need for uniqueness and online diversification, however, leads to the question of the degree to which cultural heritage can or should be made available outside the context of the institution in question. After all, a value increase is only truly possible with the possibility of widespread use. The technology used to present cultural heritage digitally must therefore support this use. This pertains to ICT standardisation. Diversification at the front can entail a conscious decision to be distinctive, but it is well-advised to standardise the back as much as possible in order to achieve flexible reuse by both customer groups and the organisation itself.

Standardisation in the back office of many cultural heritage institutions is still lacking at present, such as with regard to communication protocols and data modelling. This is closely linked to the ICT legacy described above. The fact that digital cultural heritage is difficult to find in such large search engines as Google and Yahoo is a well-known consequence of a lack of standardisation (Van Kersen, 2004).



**Figure 10**  
Standardisation at the back supports diversification at the front

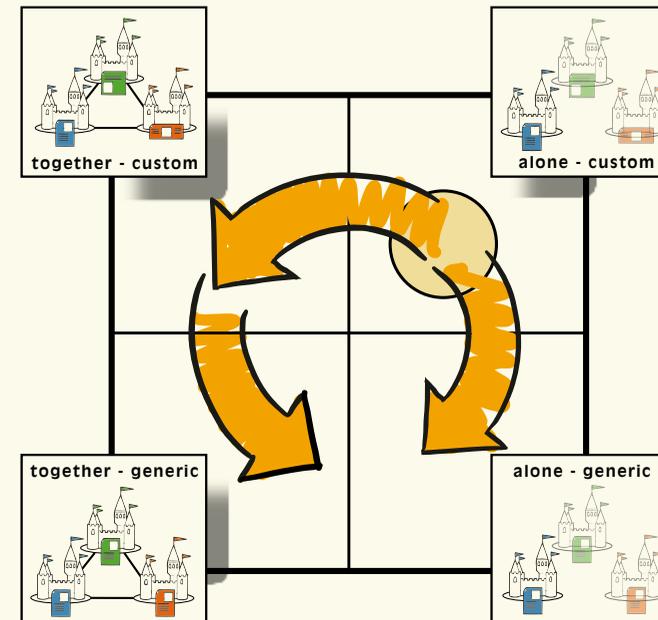


Digital services cannot easily link up to the current and changing needs of customers if adaptations to the ICT infrastructure must continuously be carried out on an ad hoc basis. This results not only in a fragmented online presence, but also in inefficient working procedures within the organisation. If links cannot be made automatically between information systems using mutual standards, specific knowledge is required to continuously develop the systems. A good separation between front and back office, but with mutual connection using (open) standards, increases an organisation's strength.

Inadequate interoperability is also found at the sectoral level. Diversification with specific digital services per institution or type of cultural heritage (visual material, geo-information, audio-visual material) only partly meets user needs. That is because the public also demands the facility to search transversely through collections and information systems in order to make unanticipated connections ('serendipity'). Broad and better use of open standards contributes to the possibility to make efficient and high-quality links between the various services that are already offered (Innoveren, participeren!, 2006).

#### Generic technology

Standardisation is an important means of creating flexible services. The use of generic ICT offers additional possibilities to increase the value of digital services. This includes such open technology as APIs, the use of web 2.0, and cloud computing options. As with the use of standards, the institution should not take its point of departure from the automation of its distinctiveness in creating a modern ICT infrastructure, but rather commonality. The use of generic ICT can reduce the costs of operating services considerably through scaling up or introducing a functionality that does not need to be developed separately (Inventarisatie Infrastructuur Digitaal Erfgoed, 2002).



**Figure 11**  
Various strategies  
for ICT infrastruc-  
ture.

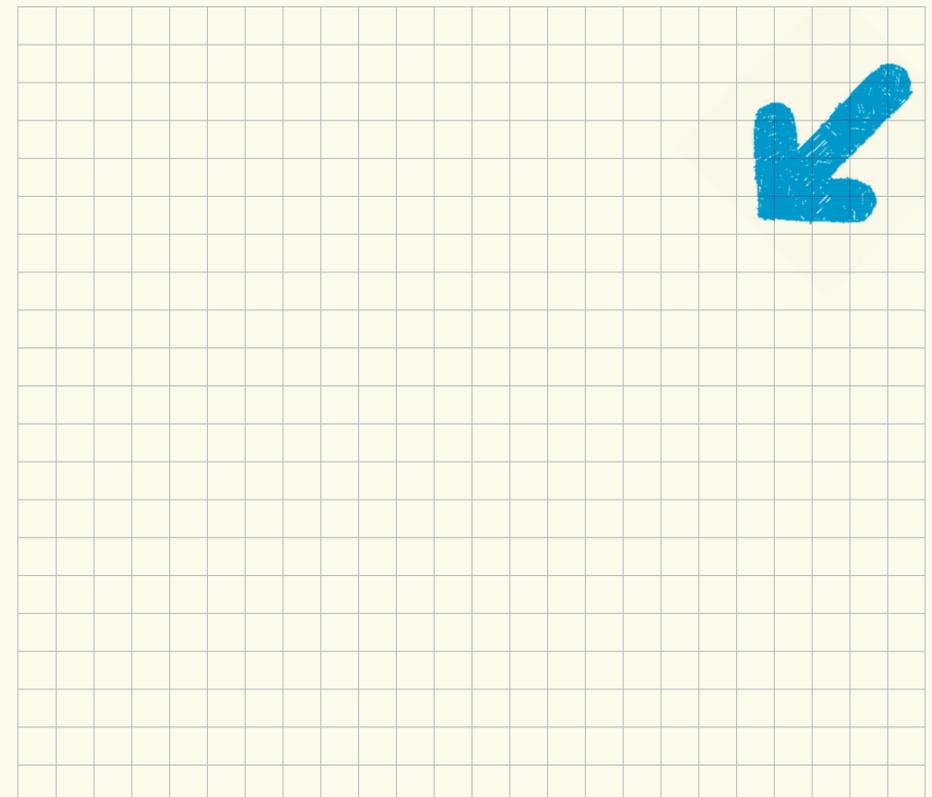


Figure 11 illustrates the trend in how cultural heritage institutions develop their digital services. Many institutions have started creating custom services (upper right-hand square in Figure 11). In recent years, various cultural heritage portals have been created on a collaborative basis (such as het Geheugen van Nederland, Genlias and WatWasWaar), although these also require a certain degree of customisation. The top two squares show the overall situation in the heritage sector. This concerns not only services offered to user groups, since typical back office tasks like management and the storage of digital cultural material are also found in the top half in general. Every organisation has its own ICT system that is custom-made to facilitate that organisation's working methods as best as possible.

In the lower half of the model is generic (market) ICT. The general trend in the information society entails a shift to the lower half of the model, i.e. the use of ICT is becoming more and more generic, primarily with publicly financed matters. This is expressed by the circular arrow in the model. A good example of this in the Netherlands is Wikiwijs. Wikiwijs has been developed as a Wikipedia-like web application that teachers (and others) can use to develop and share digital teaching materials. The teaching materials on Wikiwijs can be altered or improved. Anyone can retrieve and use these materials. This government-supported initiative is scheduled to be operational in 2010. The reuse of cultural heritage material that has been included in services like YouTube and Flickr is also a good example of the use of generic ICT.

Standardisation and generic technology contribute to increasing value through the flexible reuse of digital cultural heritage and a reduction in the costs of general services.

The development of *cloud computing* is an important one, also for the heritage sector. This is a form of large-scale online service provision in which the management of such technical resources as hardware and software is placed with a number of major parties, such as Google, Amazon or Yahoo. It is not likely that the heritage sector will opt to contract out the management of digital collections in the short term in the cloud, however. This is not only due to the need to control the 'knowledge assets' of the institution, but also due to the legal complications. What if Dutch collections stored on services in, for instance, the United States are not available for longer periods of time? This can endanger the primary services of an institution. The complications of lawsuits outside the national legislation are difficult to ignore.

But these drawbacks weigh less heavily for other, more dynamic activities like news services, project support and accessibility to collections. The use of cloud computing by taking part in existing services that are developed further in a market-based fashion provides cultural heritage institutions with considerable web 2.0 opportunities. If a service like YouTube or Flickr becomes obsolete, it should be relatively easy to incorporate the digital collections placed in the cloud into new services that replace YouTube or Flickr.

Thanks to generic technology, ICT is increasingly becoming a social commodity. As a result, detailed knowledge of ICT is no longer an issue for creating large-scale digital services.

LEO PLUGGE (WTR SURF):

'Today's students only use the e-mail address of the educational institution to divert messages to their general e-mail account. The management of e-mail accounts can therefore be contracted out to parties like Google or Yahoo'

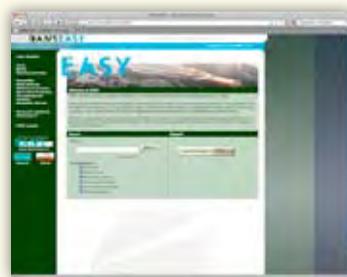
#### Collaboration

Standardisation and generic technology contribute to increasing value through the flexible reuse of digital cultural heritage and by reducing the costs of general services. Both methods are based on profiting from a concentration of strengths. Collaboration has become a core concept, also when it comes to ICT infrastructure (Archiveren is vooruitzien, 2009). Social and technological developments have made it difficult for cultural heritage institutions to operate fully independently. They are part of greater digital ecosystems in their region, their sector, the public sector and the global online knowledge system that is the Internet.

Institutions no longer have full control over those factors that determine the costs and benefits of digital cultural heritage and the necessary infrastructure. New ways to organise ICT infrastructure,



[www.watwaswaar.nl](http://www.watwaswaar.nl)



<http://easy.dans.knaw.nl/dms>

such as contracting out maintenance, applications (ASP: Application Service Providing) and even services (SaaS: Software as a Service), make costs more constant and the ICT infrastructure more flexible. Coordination and collaboration have become unavoidable as a result of the innovation and scaling-up of digital services. This section explains why we explicitly emphasise the importance of collaboration in establishing and managing infrastructure for digital cultural heritage.

As described above, public services involving digital cultural heritage that are the result of collaboration have been available for some years. Lately we are seeing more and more collaboration in the area of typical back office tasks, such as management and storage. The focus here is primarily on the possibilities of joint long-term storage, such as the collaboration between the National Archives and Regional Historic Centres in the Netherlands. Research has shown that cultural heritage institutions trust one another most when it comes to contracting out the long-term storage of digital data (Van Nispen, 2009). The institutions invest in these types of joint facilities in order to acquire more knowledge collectively and because they expect it to result in savings (in the long term).

EXPERT MEETING BMICE ON IT INFRASTRUCTURE

'Plans often state that content is to be offered in an 'open' manner, but a 'closed' environment is often chosen when creating the actual service.'

A service that the sector wishes to develop and for which collaboration is essential is the persistent identification of digital cultural heritage objects. It is in the interest of the entire sector to provide digital cultural heritage objects with permanent names that everyone can use. This kind of permanent identification guarantees

<sup>1</sup> Software as a Service

<sup>2</sup> Application Service Providing

not only long-term traceability, but also supports the visibility of the object's origin, certainly if several digital copies of the object are in circulation. A prerequisite is that all parties involved use the assigned names. Additional (central) management is also required to ensure that the identification remains unique.

LEILA LIBERGE (STAP/WATWASWAAR):

'Identification standards are available, but they are not used.'

Collaboration is also necessary to strengthen the profile of cultural heritage on the Internet as such. The rapid growth of online information creates a need for thematic environments that offer a dedicated environment for original cultural expression. A service like Artbabble was established to prevent video art from drowning amidst the tremendous number of videos on YouTube ([www.artbabble.org](http://www.artbabble.org)). Likewise, Europeana was developed to create an information space in which European sources of information can be found and used more easily ([www.europeana.eu](http://www.europeana.eu)). Collaboration therefore not only benefits the participants involved, but also strengthens the entire sector, both nationally and internationally.



[www.artbabble.org](http://www.artbabble.org)



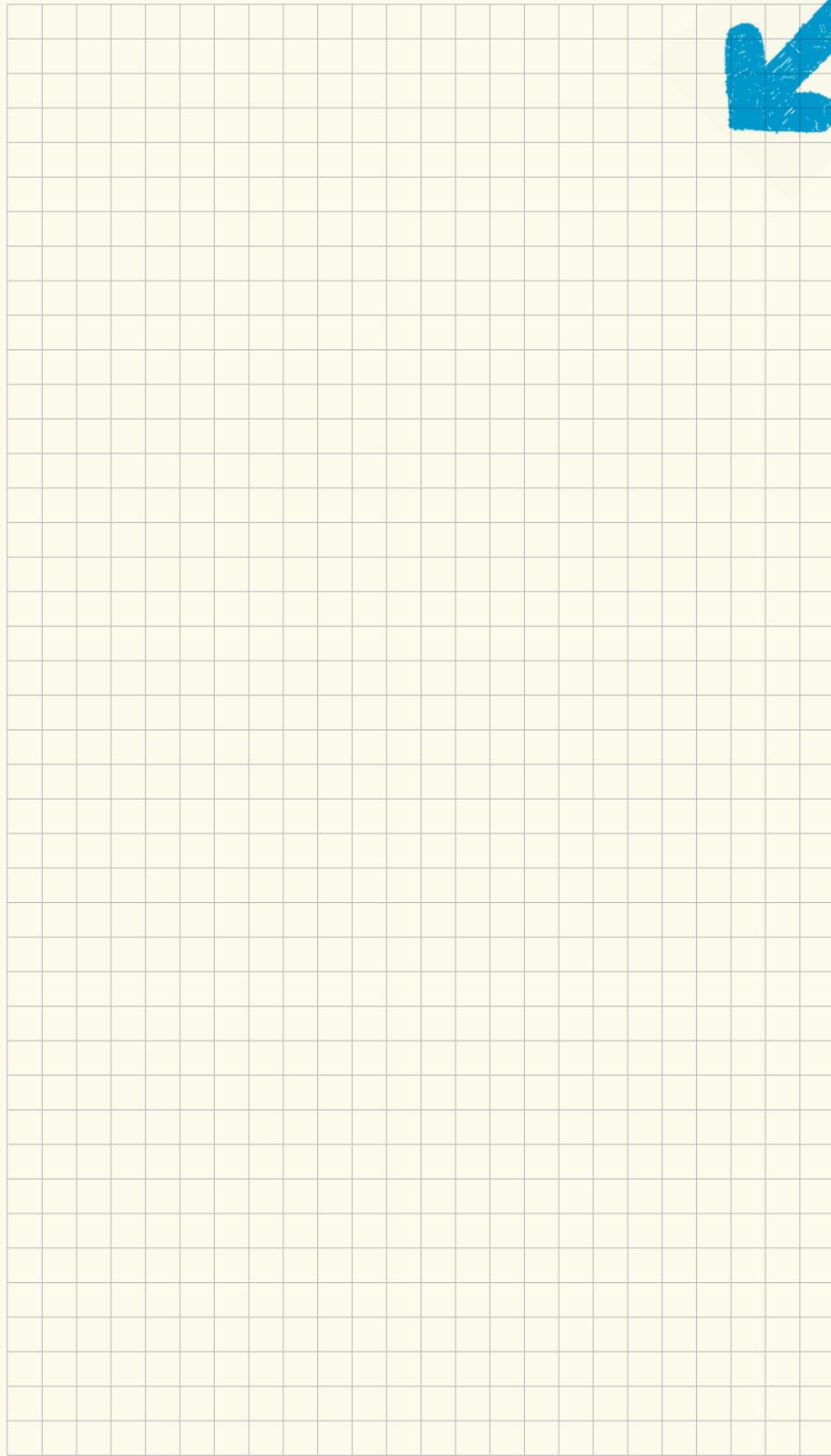
[www.europeana.eu](http://www.europeana.eu)

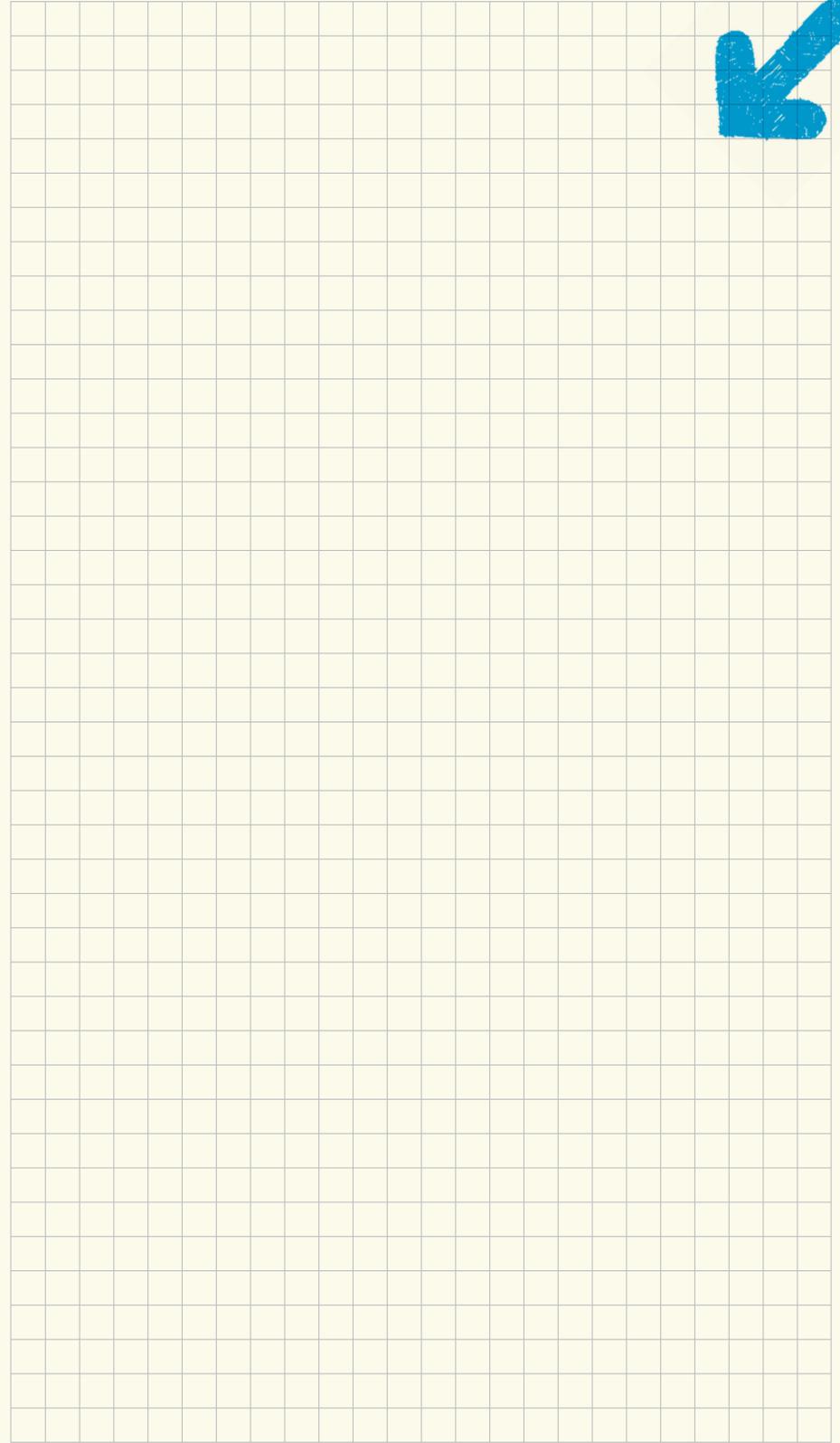
Collaboration between cultural heritage institutions provides the sector with opportunities for new business models as a result of scaling-up and shared costs for basic services.

## Conclusions

For cultural heritage institutions, ICT infrastructure is a critical factor in improving business models in the digital world. The current ICT infrastructure of many institutions continues to stand in the way of possibilities. On the one hand, the desired expansion of the existing digital activities entails high costs because the adaptations must be customised, while, on the other, the available ICT does not always form a good basis for capitalising on the potential value of digital cultural heritage in a networked society as a result of too little connection to the open technology of the web.

This chapter provided a number of approaches that can bring about change. Two factors determine the success of such approaches: 1) the degree to which the institution wishes to manage the technology and 2) the relationship between the institution's ICT infrastructure and shared services. An institution can create a distinct profile for itself in the digital world by using unique or exclusive forms of technology. This may generate considerable attention, but it can also present the institution with management problems. The possibility of reuse is not guaranteed if the technology becomes outdated. The use of open standards in the back office and generic technology for the long term are more sensible decisions for ensuring that digital investments pay off (Archiveren is vooruitzien, 2009).





## 5 COPYRIGHT

### Copyright on cultural heritage

Copyright is the right of the author or, in some cases, a beneficiary of a work in the fields of literature, science and art to determine how, where and when his or her work is published or reproduced. This exclusive right comes into existence automatically and remains in force for 70 years after the death of the maker (or 70 years after the first publication in the case of institutional authors). This means that a large percentage of works managed by heritage institutions are subject to copyright (Beunen & Schiphof, 2006). In addition, many works are subject to rights akin to copyright such as neighbouring and database rights. In this chapter, we use the term 'copyright' as a collective term for all copyrights and other related rights.

As far as copyright status is concerned, works in heritage institution collections fall into three categories:

1. Works in the public domain: these are not (or no longer) subject to copyright. Heritage institutions are therefore free to use these works for any purpose.
2. Works that are subject to copyright, where the copyright owner is known and approachable: permission has to be obtained from the copyright owner or his or her representative to use these works.
3. Orphan works: these are works that are still subject to copyright, but whose copyright owner is difficult or impossible to locate, either because his or her identity is unknown or there is no contact information. These works cannot be used because, under copyright law, permission is required for their use, even though it is impossible to obtain this permission from the copyright owner (Korn, 2009).

In this chapter, we focus on the second and third categories of works, since they are where the copyright obstacles arise when digitising and exploiting cultural heritage.

### Overview

When digitising and developing digital business models, heritage institutions are faced with copyright issues in a whole new way. In the analogue era, copyright played a rather minor role for many institutions (except for in the audio-visual sector). Displaying physical works (such as paintings) and storing them in archives do not require permission from any type of copyright owner. By contrast, the digitisation and online publication of digital reproduction requires permission from all rights holders. Most heritage institutions do not own these rights.

This means that, when developing digital business models, heritage institutions have to deal with a new group of stakeholders, namely, the authors (rightsholders) of the works in their collection. This means that the compensation payments to rights holders have to be added on to the operational costs of digitisation.

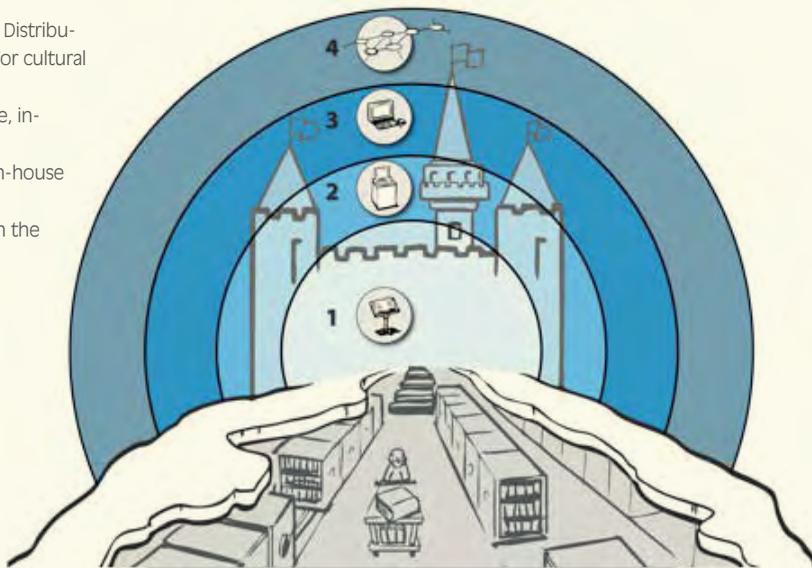
This creates a unique situation. Here is an example to illustrate the problem: a museum can organise a special exhibition of major works by modern artists (such as Piet Mondriaan). The museum is entitled to charge a high admission price without having to pay the rights holders any compensation. But if this same museum wants to place low-resolution images of these works on its own website, it has to obtain permission. The rights holders can, of course, refuse permission for publication or ask for an arbitrary amount as compensation, even though the online publication of these works generates no revenue.

Clearly there is no direct relationship between generating income and compensating rights holders. It is the type of use that de-

termines whether or not permission is required and, as a result, whether a fee has to be paid. Permission is only required from the rights holder if the work is published or reproduced.

**Figure 12:** Distribution rings for cultural heritage.

1. Analogue, in-house
2. Digital, in-house
3. Online
4. Online, in the network



The introduction to this publication identified four forms of access to digitised cultural heritage. Heritage institutions only need to consider the outermost three rings in relation to the copyright status of works. The process of obtaining permission is also called 'clearing' the rights. Generally speaking, more rights have to be cleared for use in the outer rings than in the innermost rings.

1. Analogue in-house: access to analogue work is not usually governed by copyright law, but rather pertaining to institutional regulations, exhibition policy, opening hours, and so on. One exception is lending out copyright-protected books, for which a payment has to be made to the authors (lending rights).
2. Digital in-house: permission is required from those holding the rights in order to digitise copyright-protected works (with the exception of preservation copies). There are copyright exceptions that allow heritage institutions to make digitised works

available on their own premises without having to obtain permission from the rights holders.

3. Online: permission is required from all rights holders for the online display of digitised works on the institution's own website. In many cases, this permission involves a payment of a fee, and it is given for a limited purpose. In the Netherlands, there are no generally accepted or legal procedures for displaying orphan works online.
4. Online, in the network: permission is required from all rights holders to offer works in the network or to use open content licences. This presents the same problems as in situation 3 above. Agreements on compensation for use by third parties can also be difficult to arrange.

In practice, copyright laws do not seem to present as many obstacles to the digitisation of works as it does for their distribution. As long as digitisation takes place on a relatively small scale, and within the four walls of the heritage institution, there is little likelihood of rights holders claiming an infringement of their rights. This means that heritage institutions are actually in a position to interpret the law quite widely. The copyright status of a work does not become a real issue until it is offered online (rings 3 and 4). The crux of this problem is that heritage institutions generally do not have enough rights to display their collections and make them available online, while digital services are becoming the core business of these institutions.

**Copyright obstacles:**

Three generic copyright obstacles have been identified within the heritage sector in the context of the study. They do not affect every heritage institution in the same way, but they do have an impact on the sector as a whole:

1. Institutions need to take stock of the copyright status of their collections. This often requires a tremendous amount of staff time and/or financial input. It is also unclear how to deal with 'orphan works', since the rights holders cannot be identified.
2. In many cases, heritage institutions do not have the capacity and experience needed to clear the copyright on the works in their collections. There are not enough specialised personnel and the ones who are qualified are expensive. This lack of experience and knowledge can cause difficulties in negotiating with rights holders.
3. The copyright for the online exploitation of protected works does not take account of the unique position of heritage institutions. The heritage sector provides a public service – often an educational one – so that it is important to reach as wide an audience as possible. Offering online access to digitised collections is an extremely effective tool for this.

**Possible solutions**

The key question is what opportunities there are for heritage institutions to offer their collections online without infringing third-party copyright. Four different models were identified for this during the course of the study. Before we explore them, however, it is important to draw a clear distinction between the commercial and non-commercial activities of heritage institutions in the digital environment.

**Non-commercial vs. commercial**

In many cases, offering collections online is part of the public service provided by the institutions. In essence this is a non-commercial activity, closely linked to the institutions' activities in the analogue world. The collections are offered online first and foremost because the institutions want to keep up-to-date in carrying out their activities. In this case, the institutions do not generate any direct revenue by offering works online. Such uses are characterized by the absence of an online revenue model.



In other cases, heritage institutions want to develop commercial activities based on their collections. These can be either direct, by licensing works to third parties (sale of files and derivative works), or indirect by means of, for instance, sponsorship. Here there is an online revenue model, with income being generated on the basis of works in the collection.

From the perspective of heritage institutions, it seems appropriate that different copyright rules should be applied for each of the two different methods of use:

- For non-commercial use, it is important for agreements to be made that limit the financial risks taken by heritage institutions. These agreements allow all associated costs to be taken into account when budgeting digitisation projects or preparing structural budgets.
- If there is an online revenue model, it is desirable to make a direct or indirect link between the amount of the compensation paid for use and the amount of revenue that is generated.

However, not all of the online activities carried out by heritage institutions can be easily designated as either commercial or non-commercial. There is currently a good deal of uncertainty in this area, and a need for generally accepted guidelines. A clear-cut distinction between commercial and non-commercial activities is an important prerequisite for resolving copyright issues (Creative Commons, 2009).

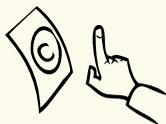


**It is important that the heritage sector and the rights holders should together formulate a clear-cut definition of non-commercial activities.**



### Models for offering digitised collections online

Four models for offering collections online were identified during this study of the copyright options for heritage institutions. These models can be used alongside one another or in combination.



#### Model 1: Opt-out

In the opt-out model, works are placed online without prior permission from rights holders. The heritage institutions offer the facility of removing these works if asked to do so by the rights holders (opt-out) or, alternatively, of agreeing a payment. This leads to greater long-term clarity as regards the copyright status of the collection.

This model is already used by many heritage institutions in practice. However, it is often not a deliberate or strategic choice, but rather the result of an inadequate grasp of the copyright requirements. The (financial) risks of such an infringement are difficult to determine in advance, so that it only really makes sense to use this model if few rights holders are expected to disagree with their works being presented online.

#### Advantages:

- Few staff and financial input needed to list and clear the rights.
- Collections can be placed online quickly and completely.

#### Disadvantages:

- This model is essentially an intentional infringement of third-party copyrights and therefore creates a risk of financial or other sanctions. Institutions must in a position to respond immediately to objections from rights holders.
- The copyright status of some of the works remains unclear.
- There is no basis for developing business models that use content for commercial purposes.

### Model 2: Clearing by the body itself

In this model, the heritage institution clears the rights itself. This can be a very time-consuming and costly process, depending on the size and content of the collections that are made available. Heritage institutions only place works online if they have received explicit permission to do so.



In these cases, it makes sense to offer the authors a limited number of options in return for their permission, e.g. for use on the institution's website alone, or on the conditions of the Creative Commons licences, or without any limitations at all. Nevertheless, the degree of permission within collections can be expected to vary widely.

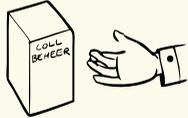
In addition to works for which permission is either explicitly obtained or not, there are also works for which the rights holders cannot be identified (orphan works). In these cases, there is a need for guidelines on the reasonable effort to be made to identify the rights holder. An opt-out structure can always be used for these works if this is not possible (see Model 1).

#### Advantages:

- Clarifies the permitted forms of online use prior to the work being used.
- This model is fully in line with current copyright legislation and cuts down the risk of liability.
- It is possible to obtain permission for use in ring 4 (such as presentation under an open content licence).
- It is possible to reach agreements on developing business models that use content for commercial purposes.

#### Disadvantages:

- This model is very time-consuming and therefore cost-intensive, particularly with large and diverse collections.
- It leads to a mixed-up legal situation within the collections that are made available, since the permitted forms of use may be different for every object.
- It is ineffective for orphan works.



**Model 3: Clearing rights through an outside organisation**

In this model, the clearing of rights is subcontracted to an outside organisation. The likeliest of these are the collective rights management organisations (CRMOs), which can give permission for the online use of collections on behalf of their members as well as other rights holders they represent. Under this model, the CRMOs grant permission for the digitisation and online publication of the works of the rights holders they represent. They also issue indemnities for the works of other authors and orphan works and charge a fee for granting permission, from which they pay compensation to the rights holders.

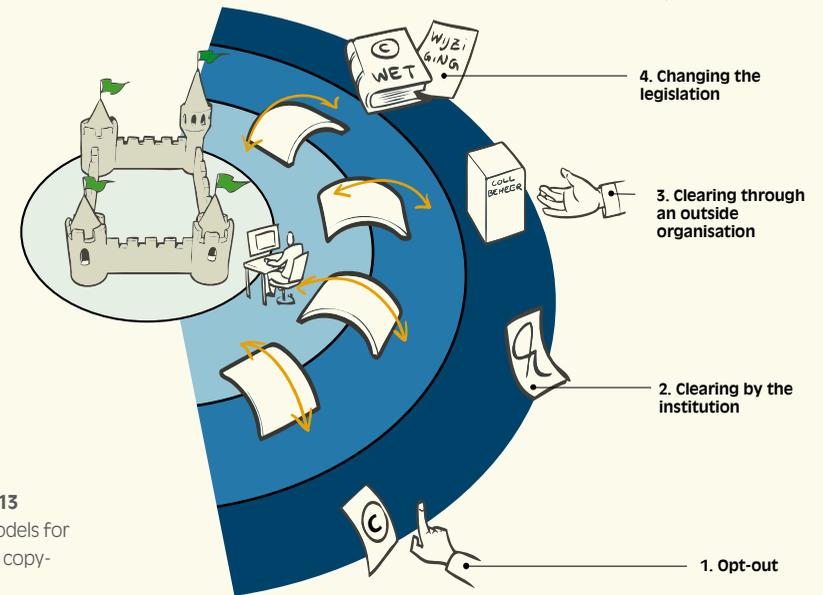
Subcontracting the clearing process allows heritage institutions to focus on their core functions, namely opening up and contextualising collections.

**Advantages:**

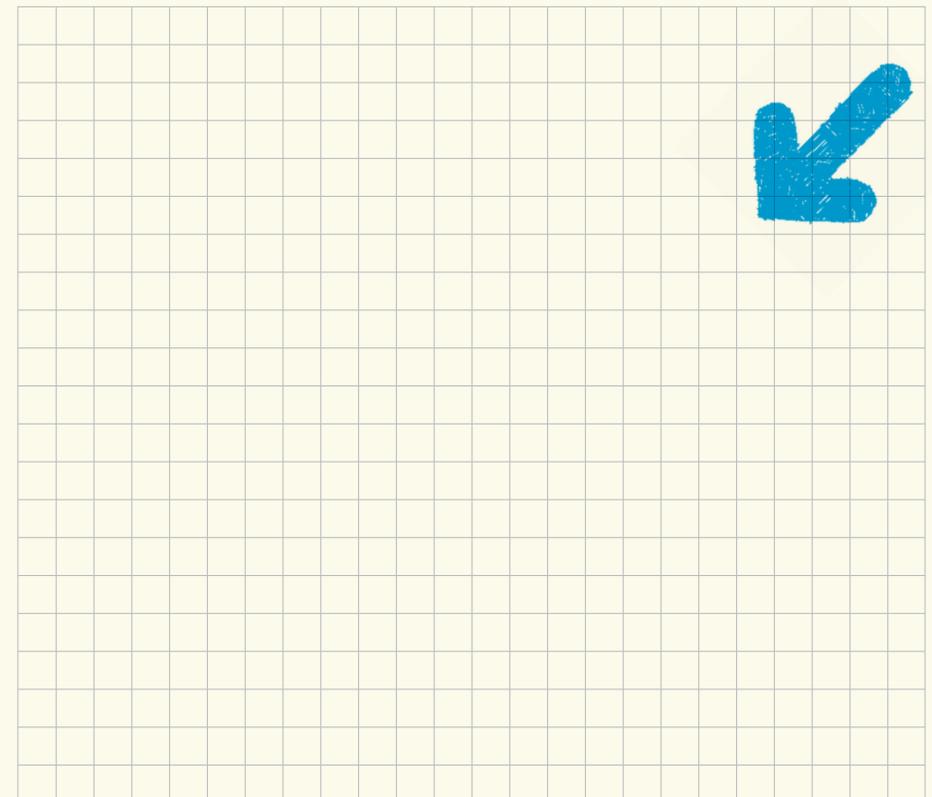
- Copyrights can be regulated uniformly for each collection.
- The heritage institutions do not need copyright specialists (although the heritage institutions would be wise to understand the agreements clearly).

**Disadvantages:**

- The costs are unclear at the moment. The structural budgets of many heritage institutions are not expected to be able to cope with these costs.
- There are some doubts about the legality of the indemnities offered by CRMOs.
- The scope of the indemnities and user licences can be limited, e.g. to one's own country.



**Figure 13**  
Four models for clearing copyright





#### Model 4: Changing the legislation

Finally, there is the possibility of adjusting copyright law to create more scope for publishing collections online. There are already a number of exceptions under copyright laws for educational users and heritage institutions. These exceptions could be adjusted to allow for non-commercial online use of digitised collections (for a reasonable fee).

A number of Dutch heritage institutions have submitted a joint response to the European Commission's Green Paper on copyright in the knowledge economy, in which they propose to extend these copyright exceptions. The online publication of works without a commercial purpose should be permitted under certain conditions (such as payment of a fee) and without the permission of the rights holder.

Whether the legal framework will be amended or not will largely depend on developments at the European level.

**It is neither desirable nor realistic to expect heritage institutions to resolve all copyright issues themselves. The complexity of copyright problems demands a joint, sector-wide approach.**

Since changing the legislation is the only 'real' solution for many heritage institutions, it is important that the current discussion should result in concrete changes. A prime example would be the creation of a copyright exemption, that allows heritage institutions to digitise their own collections and to make them available online in a non-commercial fashion on the condition of paying a reasonable fee.

#### Advantages:

- Rights would not require clearing within the limits of the exemptions and, as a result, no additional staff capacity would be required.
- Clear-cut, standard costs for heritage institutions by means of a legally fixed fee. This would also guarantee reasonable compensation for copyright owners.
- It would lead to a homogenous legal situation for entire collections, and give all heritage institutions the same rights for non-commercial exploitation.

#### Disadvantages:

- A very radical step for rights holders.
- No basis for developing business models in which cultural heritage is used for commercial purposes.

#### Setting aside a budget for orphan works

All of these four models need a mechanism to pay the costs of any claims made by authors of works that are wrongly categorised as orphan works. The obvious method is to set aside some financial resources for reimbursing such authors. For Model 1, this would have to be done by the individual institutions, whereas, for Model 2, a joint fund could also be set aside. In Model 3, the fund would be managed by the CRMOs on the basis of the fees paid by the institutions and, in Model 4, either the government or an agency designated by the government could be in charge of managing the fund.

## Conclusions

Depending on the resources and structures of individual heritage institutions, these four models could be incorporated into the copyright policy of individual institutions. The most important obstacles to the use of these models are the legal consequences (Model 1), organisational, financial and staff inadequacies (Model 2), legal objections and a lack of funding (Model 3) and insufficient organisation within the sector for bringing about policy changes (Model 4).

Model 2 appears to be the most appropriate option for heritage institutions that have well-organised and well-documented collections, along with sufficient resources to clear the rights themselves. For the sector as a whole, a combination of Model 4 (for non-commercial activities) and Model 3 (for commercial activities) would seem most appropriate.

	Model 1	Model 2	Model 3	Model 4
<b>Non-commercial use</b>	For non-commercial use, the risk of having to pay compensation is relatively small	Possible to make special agreements with rights holders (relatively little or no compensation paid for non-commercial forms of use)	Low base rate for non-commercial publication of entire collection	Non-commercial use by heritage institutions permitted on certain conditions (such as the payment of a reasonable fee) without prior consent
<b>Commercial use</b>	Not suitable for the commercial exploitation of the works by the institution	A percentage of revenue earned from commercial exploitation	Higher rates (percentage of revenue) for commercial use of works by rights holders represented by the CRMOS	Permission for commercial use does not cover the copyright exceptions and must therefore be obtained some other way
<b>Suitable for</b>	Collections with large numbers of orphan works and low commercial potential	Relatively small and homogenous collections	Collections with a large volume of works by rights holders represented by CRMOS	All the collections of heritage institutions

### More collaboration needed

The complexity and urgency of this issue demand a joint, sector-wide approach. It is neither desirable nor realistic to expect heritage institutions to resolve all of the copyright issues themselves.

Greater coordination and collaboration among heritage institutions seem to be needed in a number of areas. Joint action can offer important advantages in all four of the models we have described:

- If heritage institutions choose the opt-out approach, it would be good practice to register all of the responses from rights holders in a joint, public database. This database could also be used to offer rights holders the opportunity to authorise the use of their work (opt-in).
- If the bodies opt to clear the rights themselves, the sharing of information can result in greater efficiency in the long term. Arrangements might also be made to avoid the need for several bodies having to be clear the same works.
- If rights are cleared through CRMOS, coordination among heritage institutions should lead to an improvement in the negotiating position and consequently lower rates in the long term. It is also conceivable that specialised personnel could be brought in on a joint basis to coordinate mass digitisation agreements with the CRMOS.
- Finally, joint action by the sector is an essential condition in the discussion surrounding any adjustment to the legislation for putting digital heritage online. Bearing in mind the debate at the European level (Reading, 2009), it is important for heritage institutions to decide on a joint position as quickly as possible, and then get involved in this discussion on the basis of that position. It is up to central government to support the joint position of the heritage institutions and, in this way, to encourage people's access to digitised heritage.

Until a structural solution for clearing third party rights is available, heritage institutions will have to concentrate on collections whose copyright has expired, or for which they already own the necessary rights. In both cases, the heritage institutions can develop both non-commercial and commercial activities. In addition, these collections are currently the only ones for which activities can be developed in the network (ring 4).

### Copyright policy for new acquisitions

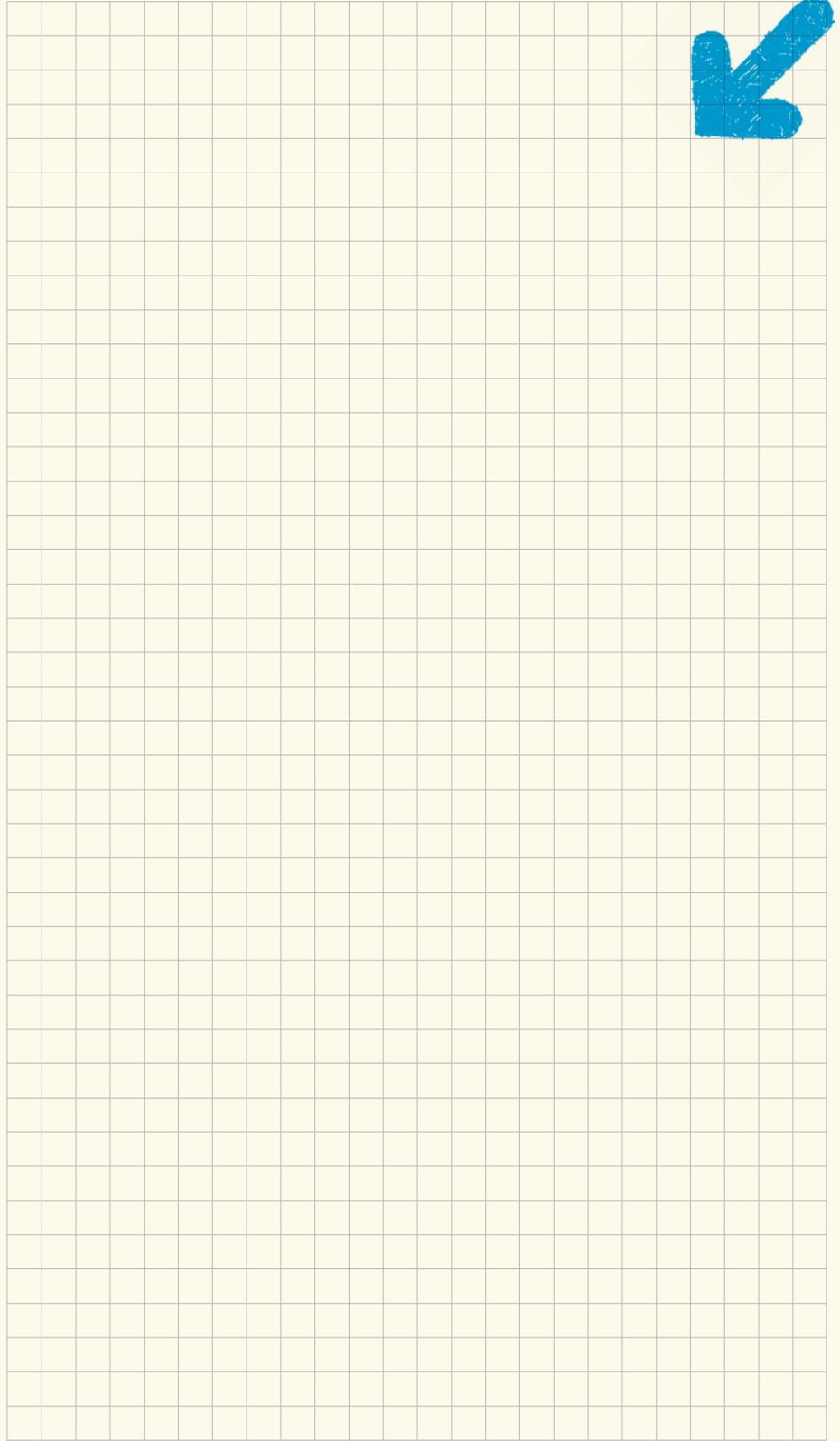
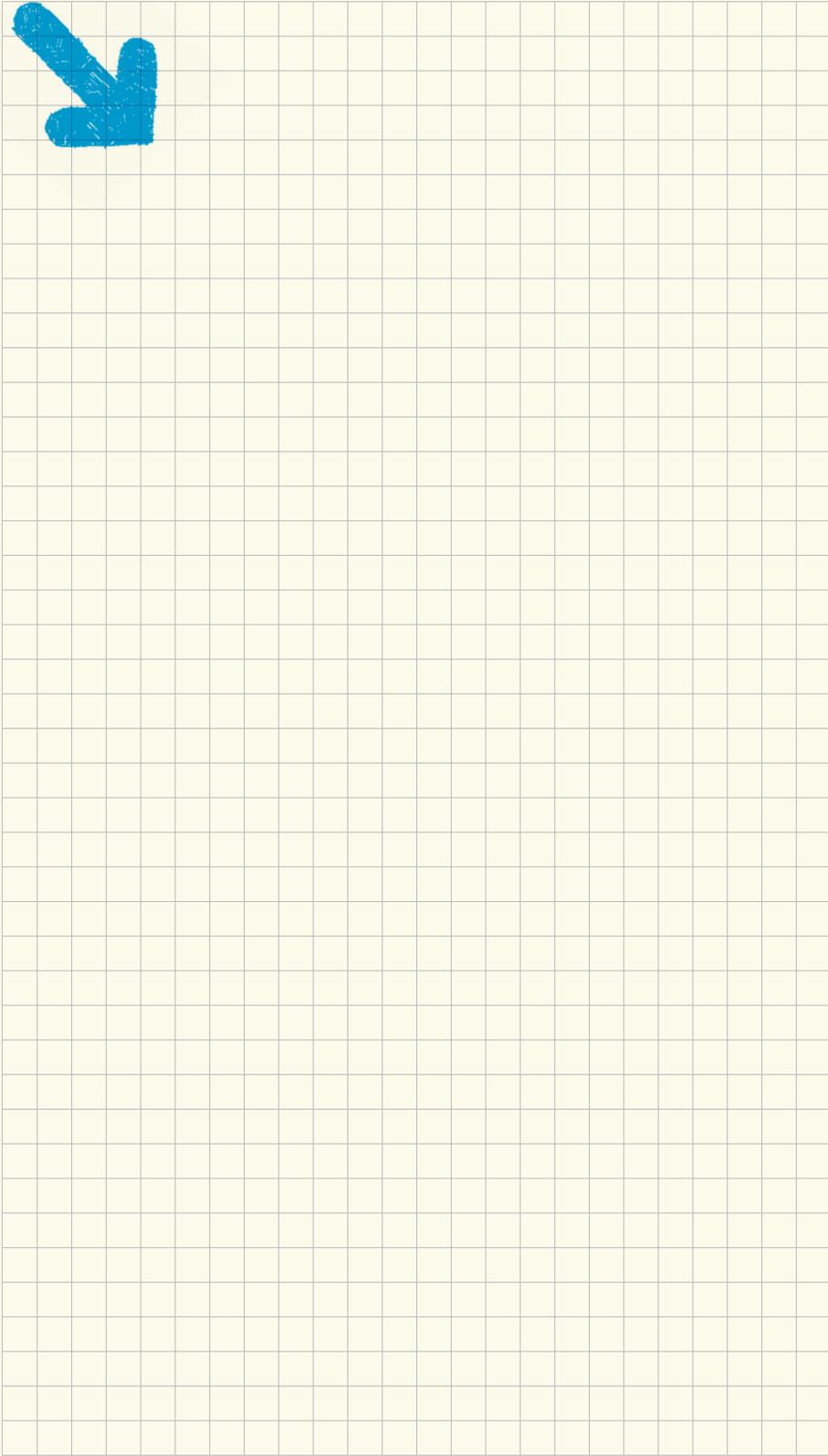
In the short term, the most profitable course is through collaboration between the heritage sector and CRMOs. In the medium term, however, changes to the copyright legislation appear to be both possible and desirable.

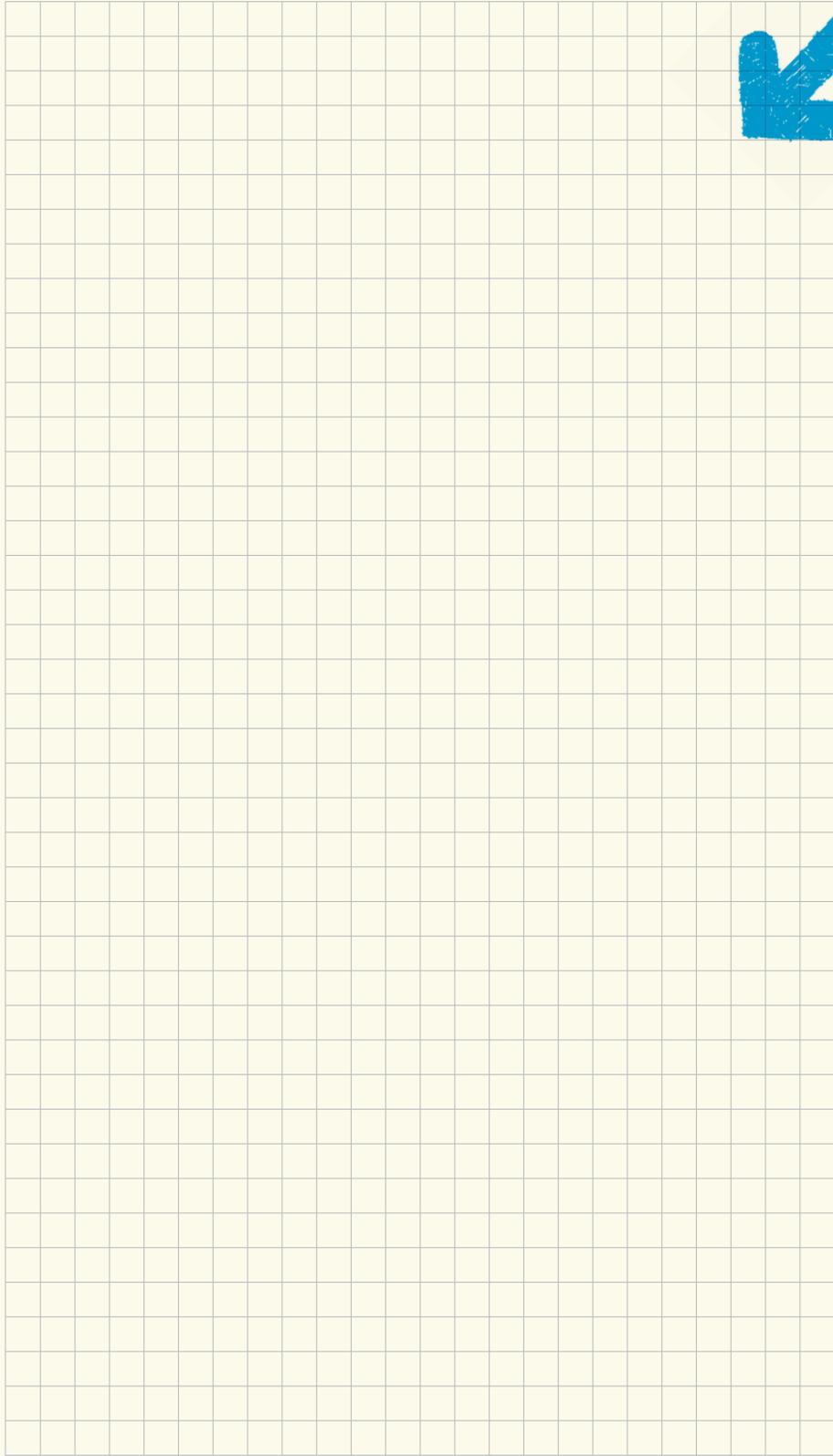
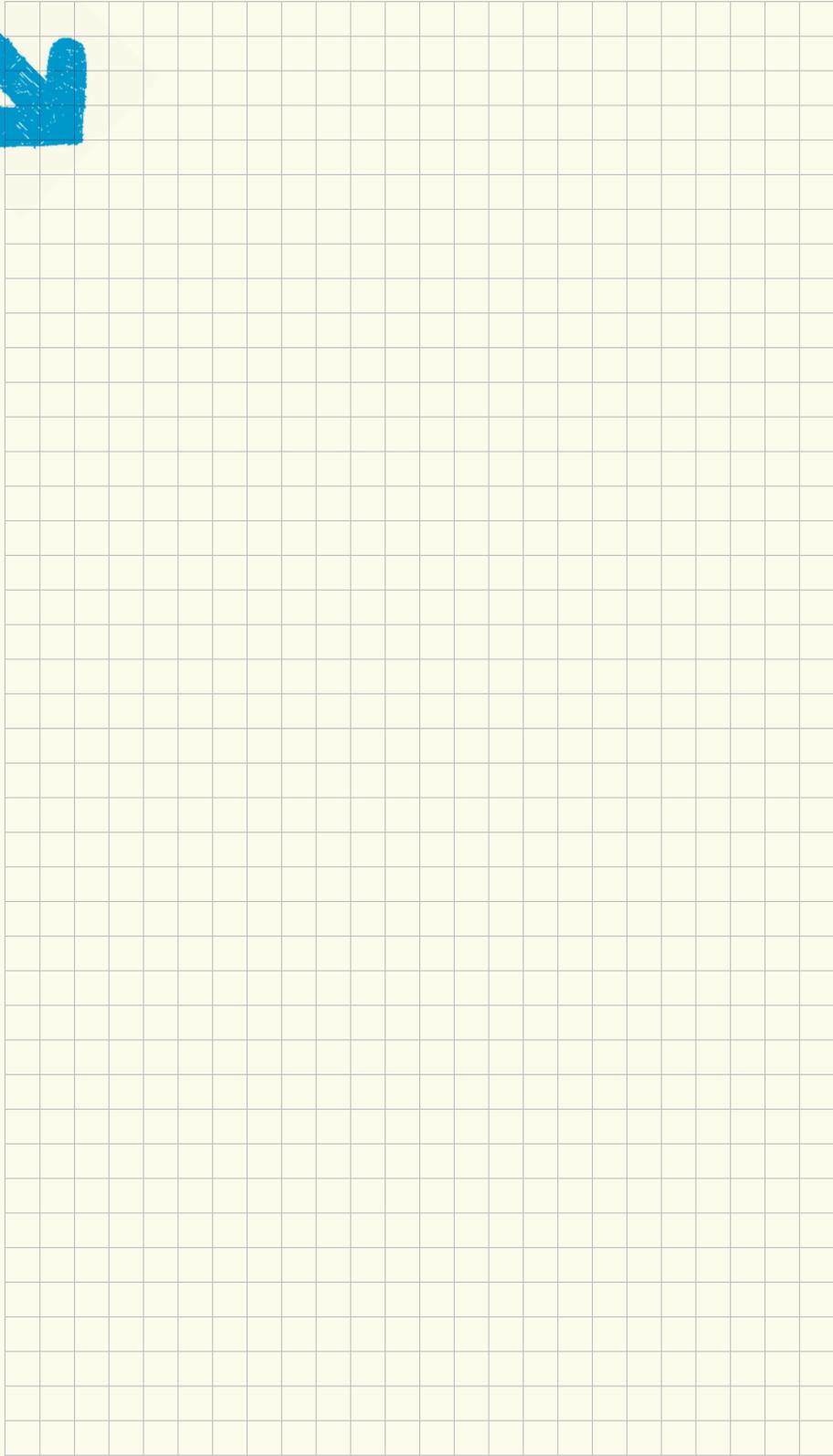
The problems we have described mostly concern works for which the copyright was not sorted out in the past. The main reason for this is that the future digital possibilities were not considered when the collections were being built up.

That said, it is quite possible nowadays to take copyright status into account when building up collections and acquiring new objects. It is advantageous to heritage institutions if they make sure, straight away, that they secure adequate rights to make these works available online. Bearing all this in mind, it seems desirable, at the very least, for heritage institutions to have a right to offer the works they manage online in a non-commercial fashion. We therefore recommend that standard tools should be developed for this purpose.

A building block for a standard agreement is available in the form of Creative Commons licences, (Hoorn, 2006). These licences regulate the user rights of end-users in a clear-cut, internationally standardised and tried and tested manner. Creative Commons licences are compatible with efforts to get people actively involved in the online activities of heritage institutions. They are used both by heritage institutions (such as the Institute for Sound and Image and the Brabant Historic Information Centre) and by major content platforms (Wikipedia, Flickr.com). In order to encourage heritage institutions to use Creative Commons licences and rights holders to accept them, however, it seems that we will also need to find a definition of 'non-commercial use' that is accepted throughout the entire sector.







---

## 6 REVENUE MODELS

---

### Overview

Digitisation creates new possibilities, not just for opening up collections, but also for income generation. New revenue models represent a largely unexplored territory for heritage institutions. It involves pioneering and experimentation. This chapter describes a number of approaches for considering revenue models based on digital cultural heritage.

But before that, let's ask a different question: are heritage institutions even interested in generating income? This issue was touched on in Chapter 5, dealing with copyright. The most significant justification for answering 'no' to this question is the social function and purpose of heritage institutions, whose main job is to manage and preserve collections and open them up to the public at large.

But there are at least four reasons why the answer to this question might just as easily be 'yes'. Firstly, it has for some time been quite usual in the heritage sector to ask for a public donation for certain products or services. These include museum admission or the re-use of archive materials. Such contributions are also generally felt to be fair, and the public has become accustomed to them. The second argument in favour of generating income relates more to costs. Digitisation is an extremely costly and labour-intensive operation. It involves not only digitising collection materials, but also setting them in context, through the introduction of metadata. There is little or no government funding for digitisation, so that heritage institutions often need to fund this in other ways. The third consideration is the fact that many heritage institutions are tied into performance models that force them to generate income from the market. In the Netherlands, bodies producing culture with a government grant will have to earn at least 17.5% of



Digital collections open the door to new sources of income

their own income, from 2013 onwards (Cultuurprofijs, 2009). If they fail, grant-in-aid may be reduced. The final argument is the fact that digital services and products require the bodies to make an investment, so that it is hardly surprising when they then charge for these services or products.

The heritage sector is also in motley company in its quest for new revenue models. Publishers, recording companies, film producers and creative artists: digitisation poses fresh challenges to organisations and businesses throughout the creative industries. So – even within the limited confines of this chapter – we will occasionally take a peak over the fence at other creative sectors.

### Possible solutions

A heritage institution looking for a revenue model is best advised to start with its potential customers, rather than its collection. This may be a slightly alien approach for many of them, since the collection has always been their prime focus. But once the value that customers are looking for becomes clear, services can be adapted to it. This is why we cannot avoid involving the 'customer' building stone in the business model canvas when discussing revenue models (Osterwalder, 2009).

It is worth noting that there are two types of customers, paying and non-paying. Both can be equally important (Anderson, 2009). For example, the public at large can be granted free access to the digital collection online, while advertisers pay a fee for advertising space on the website.

OLIVIER BRAET (UNIVERSITY OF BRUSSELS):

‘The trick is to create a bundle of products in which you combine something that is available free of charge with something that has to be paid for. Then your earnings are not directly from digitisation, but from a linked product.’

This example illustrates the various value propositions involved. The value for the public lies in gaining access to the collection, while for advertisers it translates into attention for their own products. In other words, the collection is not the only value proposition offered by the heritage institution. It is important, for achieving a functioning revenue model, to understand where the value lies for your customers.

#### Who is your customer?

Who are the potential customers for the heritage sector? Generally speaking, there are five different customer groups. Of course it would be possible to keep on subdividing, but the following five groups provide a practical starting point:



*The consumer.* ‘Consumer’ is a broad designation for customer groups in the consumer market. They are non-commercial buyers. Consumers are the most obvious customer group for many heritage institutions.

*The creative industries.* ‘Creative industries’ represent customer groups consisting of the makers of creative works in general. They buy cultural heritage as a semi-finished product and then use it for the products made by the creative industries (such as films, music and games). It is important to remember that heritage itself also consists of creative products. With modern collections, the creators in question are right there, in the background, and this allows heritage institutions to create value for the creative industries in a different way as well, for instance by offering the management, conservation and digitisation of creative works as a service to the creative industries.



*Business professionals.* The third group represents all other customer groups in the commercial market. These are business professionals who want to profile their company using heritage (art collections, sponsorship) or by means of their products (merchandise). There is also a (more marginal) market for services offered to business people who hire a cultural body’s expertise for advice.



*Education and research.* The teacher symbolises customers interested in digital heritage from an educational or academic point of view.



*The government.* For a large number of heritage institutions, the government is an important, perhaps slightly distant but obvious customer group. The government provides heritage institutions with the necessary income, primarily through grants.

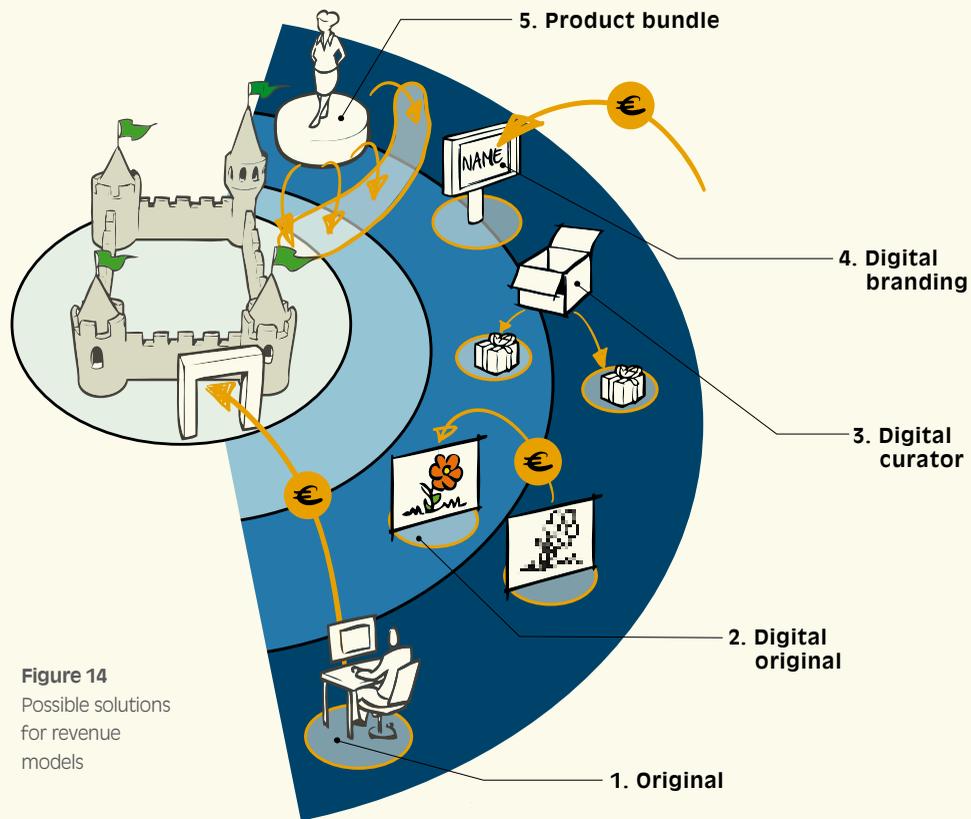


The key question is what new values heritage institutions can offer these five customer groups through digitisation. We provide five possible approaches for revenue models. As far as we are concerned, these are not necessarily the only possible approaches. Rather, we view them as ‘umbrella models’, encompassing a number of other, more specific revenue models.

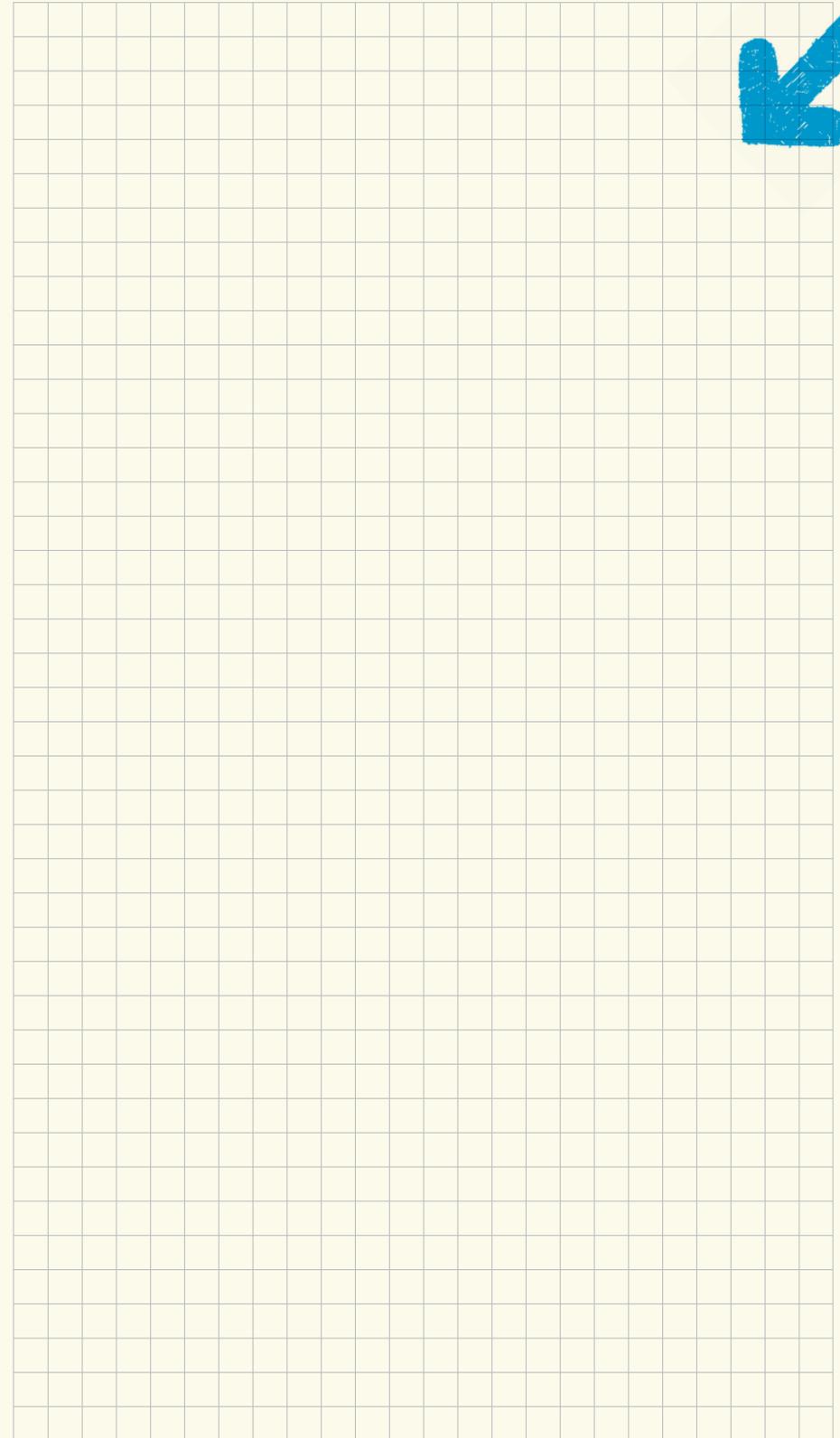
**Five approaches for revenue models**

Figure 14 once again shows the four 'distribution rings' for (digital) services based on collection material. Five approaches are shown in the different rings. We provide the following information for each of these approaches, in no particular order:

- the type of income sources involved;
- the customer groups that are probably needed to tap into these sources;
- the corresponding value propositions;
- the part played by digital heritage.



**Figure 14**  
Possible solutions  
for revenue  
models





### 1. Original: the heritage institution creating the experience

For many – but certainly not all – heritage institutions, physical access to their collection has always been an important source of income. In addition to ticket sales, income earned from the museum cafe or the sale of guides and catalogues can also be regarded as income relating directly to the first ring.

If the heritage institution makes its collection available digitally, it can raise its profile among potential visitors, thus increasing visitor numbers. There are other ways to create value as well, but they require a shift in the value proposition.

Digitisation has led to a new appreciation of the 'physical original'. This applies not only to the visual arts, but also to photography and music. For example, less than 20 years ago, pop artists made their fortunes from the sale of records and CDs. But, over a very short period of time, there was an upheaval, leaving live performances as the primary source of income. The most important value lies not in the music itself, but in experiencing an 'authentic' performance.

A physical gathering of people, at a concert for instance, is a widespread phenomenon. Digital games are another good example. Games events attract thousands of players, and physical participation in this shared experience appears to provide the greatest added value.

This was also the case with the WikiLovesArt project, where visitors were allowed to photograph collection objects at a large number of museums. The aim was to fill in any gaps on Wikipedia. It was obvious to anyone who saw the photographers at work that they were not making a 'classic' museum visit. They were actively involved with the art, not just observing it, but also trying to take the perfect picture. And the activity continued after they went home; the visitors uploaded their photographs to the Flickr photo platform and then took part online discussions. ([www.wikilovesart.nl](http://www.wikilovesart.nl))

The physical collection is relevant to all the customer groups, and therefore a long way from being a write-off as a source of income.

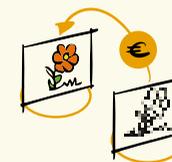
However, there has been a shift in the corresponding value proposition. In the analogue era, the proposition was strongly oriented towards offering access to an otherwise closed collection. In the digital age, authenticity and experience are the emerging value propositions.

### 2. Digital original: the heritage institution as a digital heritage broker

A second approach is to view the digital collection as the 'raw material' for new creative work and services that can be developed by third parties. An example of this is when archived film fragments are used for new documentaries. In this approach, the digital material is the most important source of income. What is on offer, for instance, includes licences for the use or re-use of digital collection objects, or copyright transfers.

The greatest difference between Original-digital and Original is the way the collection is used. With physical collections, the control over a collection piece is primarily a matter of property rights and house rules ('photography prohibited') whereas, in the digital domain, exclusive control can only be engineered via copyright. Even then, the ability to copy digital material presents obstacles for this approach.

A challenge facing heritage institutions is that many older items in their collections are no longer protected by copyright, while the institutions often have no rights to the copyright in the newer items in their collections (see Chapter 5). In the latter case, the



[www.wikilovesart.nl](http://www.wikilovesart.nl)



[www.getty.edu](http://www.getty.edu)



heritage institution can act as a 'broker' or intermediary for the rights holder, as is currently done by institutions like Sound and Vision (*Beeld en Geluid*). The institution receives a percentage of the revenue generated from licensing or trade in rights, as compensation for the services it provides. The value proposition here is the mediation for the creative artist or rights holder.

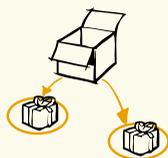
A demonstrable new value can sometimes be created with Original-digital, in addition to preserving the work. This is the case, for instance, with publishing extremely high resolution photographs of collection pieces from the Rijksmuseum ([www.rijksmuseum.nl](http://www.rijksmuseum.nl)) or the American Getty Museum ([www.getty.edu](http://www.getty.edu)). These digital works show more detail than can be seen with the naked eye, which – in this case – provides interesting new value for research and educational purposes. In other words, the digital work provides more information on the painting techniques than the physical work itself does.

Original-digital is a popular solution for archives, with examples including the search and order service offered by the Netherlands *Audio-Visual Institute* or the online portal *Filmotech* (currently being developed) where *the Netherlands Museum of Film* and other organisations will offer archive material downloads for a fee.

### 3. Digital curator: the heritage institution providing the context

Whereas digital heritage is the primary source of income in the second approach, the focus of the third path is the context surrounding the digital collection. The 'digital curator' or 'digital archivist' might be whimsical terms to use, but they actually describe the situation surprisingly well. This approach focuses on the development of services around the digital content.

'Digital curator' proceeds on the assumption that the expertise of heritage institutions is a value proposition that can be used to generate income. The most obvious customer groups for Digital curator are consumers, academics and researchers, and business professionals.



A social objective and commercial activities need not be at odds

There are at least two fields of opportunity:

Firstly, heritage institutions often possess highly professional and specialist knowledge (Falk & Sheppard, 2006). We can imagine that heritage institutions could not only open up their collections digitally, but also offer digital services centred on the collection materials as a sort of digital curator or archivist. This could be 'refined' metadata, like specialist background information on a collection, or a digital teaching package. The Tate in Britain, for example, offers online courses for about €25 on Artists' techniques and methods, which explain various painting techniques using paintings from the museum's collection ([www.tate.org.uk/learnonline](http://www.tate.org.uk/learnonline)). Archives are also doing something similar. Many archives offer courses to archive researchers, including novices.

Secondly, digital services can be developed to enhance the experience of the physical collection. Many museums already offer a personalised guided tour that can be downloaded from the website for use during the museum visit. This is also an option for archives, as the Utrecht Archive has shown by providing archive materials within a museum setting. Consumers form the main customer group for these services. Value propositions include experience and enjoyment, as well as convenience

KLAAS KUITENBROUWER (VIRTUEEL PLATFORM):

'Content is no longer available in just a single format. In the future scenario for heritage, the museum is part of a whole world of values.'

#### Do it yourself or contract out?

With each of the approaches, there is the question of what a heritage institution can do itself and what it can contract out. The creative industries, for example, has experts in the use, re-use and creation of new value involving digital content. Whether something should be contracted out or not depends on the heritage institution's priorities as well as the resources that are available. Starting with the reasoning for the revenue models, there are three possible paths, each with its own pros and cons.

1. Do it all in-house. The main advantage is that you retain full control, with no need to consult anyone else about how to allocate the income. The disadvantage is that developing services can amount to a significant strain on the organisation, with extensive adaptations required at the 'back' end of the business model.
2. Contract everything out. This is the other extreme, where the most that the heritage institution contributes is some knowledge or expertise, as well as digital heritage. Contracting out can take the form of a contractor-client structure or a 'Digital original' approach (licensing of digital heritage). A third option is brand licensing (see 'Digital branding'), where a third party develops a service and the heritage institution can associate its name with that service.
3. Collaboration. The perpetual golden mean is to develop

services jointly. Its advantage is that the cultural heritage institutions can use their resources (cultural heritage and expertise) most constructively. But the disadvantage is that this type of model always needs some additional effort agree on the distribution of income. Collaboration means carrying out and maintaining the service together, which also means sharing the income and the risks.

#### 4. Digital branding: the heritage institution creating the reputation and building the brand

In the fourth approach, the digital collection material is used entirely to service brands and reputation. Income sources relate entirely to the name and reputation of the heritage institution, opening up a wide range of opportunities.

A brand can be 'cool', which means the value proposition for customers is mainly about status or (social) identification. A brand can also act as a stamp of quality, meaning that the value lies more in reliability or exclusivity. Digital branding is the approach where value propositions like reliability, status and association (the 'I want to be part of this' attitude) are most important.

Digital branding is also the perfect umbrella for revenue models where several customer groups occur beside each other, but not all of them contribute directly towards income. Let us give you four examples of this. Firstly, the sponsorship and advertising model is covered by Digital branding. With sponsorship and advertising, the value proposition, as far as the sponsor is concerned, is usually 'attention' and/or 'association'. The opposite of sponsorship and advertising (although not always) is a customer group that is offered something requiring little or no payment.

A second example of a revenue model based on brand or reputation is the 'Friends-of' structure. While 'friends' often receive some discount or benefit, 'association' and the desire to support an institution by way of 'charity' are generally the basis for this type of structure.



JAN WILLEM SIEBURGH (RIJKSMUSEUM):

'The greatest added value of digitisation is 'better than real'. You can digitise objects at a higher resolution, revealing details that are invisible to the naked eye.'

The third model to focus on reputation or brand is 'crowd funding' (Dell, 2008). With crowd funding, the consumer usually provides the income that makes a project possible. This is a type of pre-financing, in which consumers express their confidence that the heritage institution will be able to succeed in developing and carrying out the project in question. Other creative sectors are also experimenting with this model. A perfect example of this is Sellaband, where music fans can buy 'shares' in music productions by (unknown) artists. An album is not actually produced until the artist has earned 50,000 dollars. The financiers then share in the profits.

The example of Sellaband in fact indicates a possible fourth model, where the creative artist actually becomes the customer group. With Sellaband, the brand has now made its own reputation. For would-be artists, being associated with the brand is important enough. This type of brand association can provide a reputation boost for the creative artist. ING Art Management is also familiar with this effect, and allows artists to 'capitalise' on ING's reputation as a collector through, for example, readings and exhibitions. While this is mostly an expense for ING, it is conceivable that a revenue model could be created around building up the reputation and name of creative artists.

With all brand and reputation models, it is important to the heritage institution that the digital collection materials should always be clearly associated with the institution. If this can be organised properly, there is no reason to assume that these models could only work in the third ring (online, but not in a network structure).

### 5. Product bundle: the heritage institution as the provider of product bundles

The fifth and final approach combines several of the other paths. This approach focuses on the (trans-media) combination of various sources of income (Bakos & Brynjolfsson, 1998). Whereas the previous paths involved 'one or the other', this is about 'one and the other'.

A simple example of a product bundle is cable television, which offers a combination of channels as a package. Product bundles are coming into their own, in a somewhat more complex form, in the creative sectors. The example of declining CD sales in the music industry, for example, which we mentioned earlier, is being countered by offering a discount to a live concert when someone buys a CD. Another example is the band Coldplay, which developed a 'teaser model' for their concerts earlier this year by offering free downloads from their latest album.

The heritage sector can also provide combined products and services within all four rings. Also, these bundles need not be the entire responsibility of a single institution. This is the approach that opens up chances of collaborating with other parties, to combine collections for instance. In principle, product bundles can be an interesting option for every customer group.



[www.tate.org.uk/learnonline](http://www.tate.org.uk/learnonline)



Exploiting the collection is just one of the ways to make money in the market.

## Conclusions

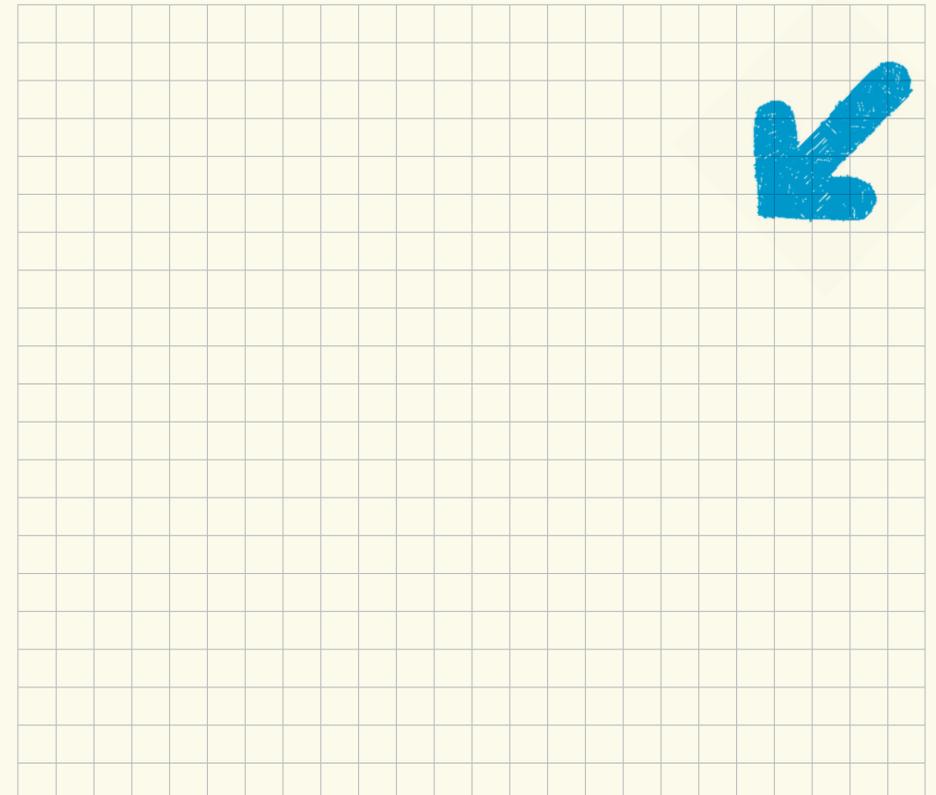
This chapter provided a bird's-eye view of a number of approaches. Each of them can be developed into a wide range of revenue models. The approach that is finally chosen will depend on what the heritage institution in question actually wants. We close this chapter by setting three tasks for heritage institutions:

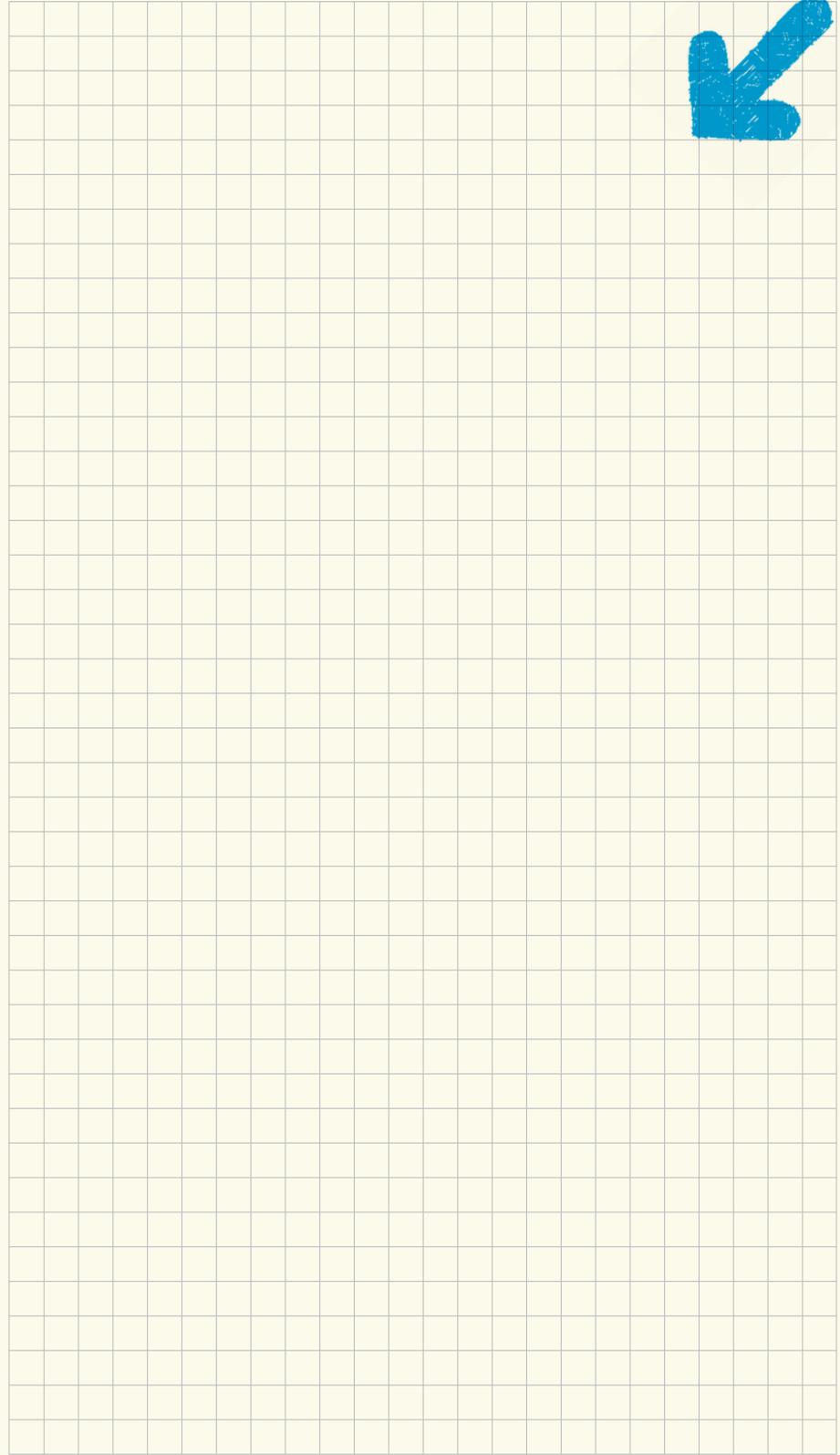
To start with, heritage institutions need to broaden their outlook. Many institutions have an (understandable) tendency to define their core activities and resulting value propositions in terms of managing, conserving and opening up their collections. Our intention with the five umbrella models is to show that the value propositions offered by cultural heritage institutions can be much more diverse, thereby providing a wider range of potential sources of income.

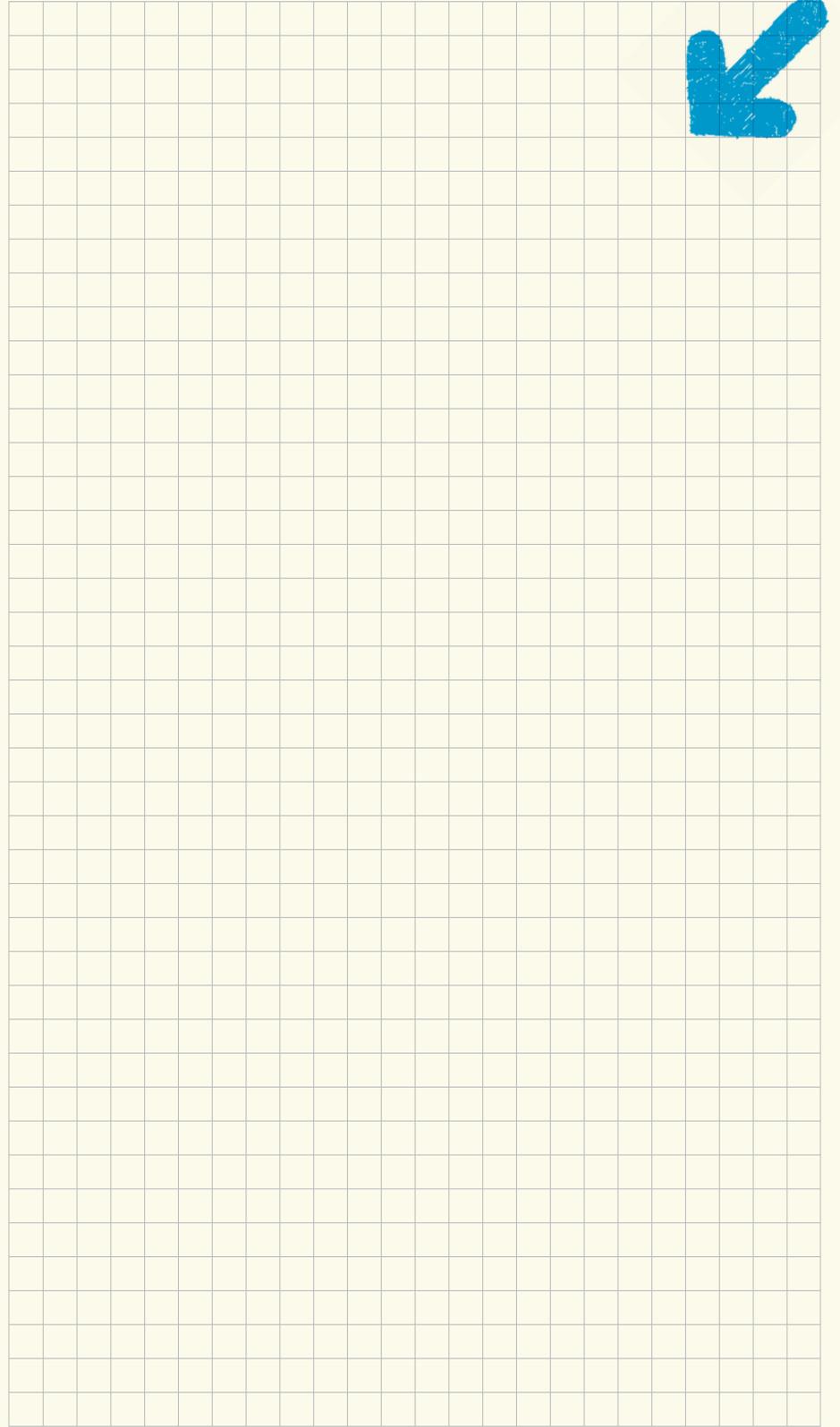
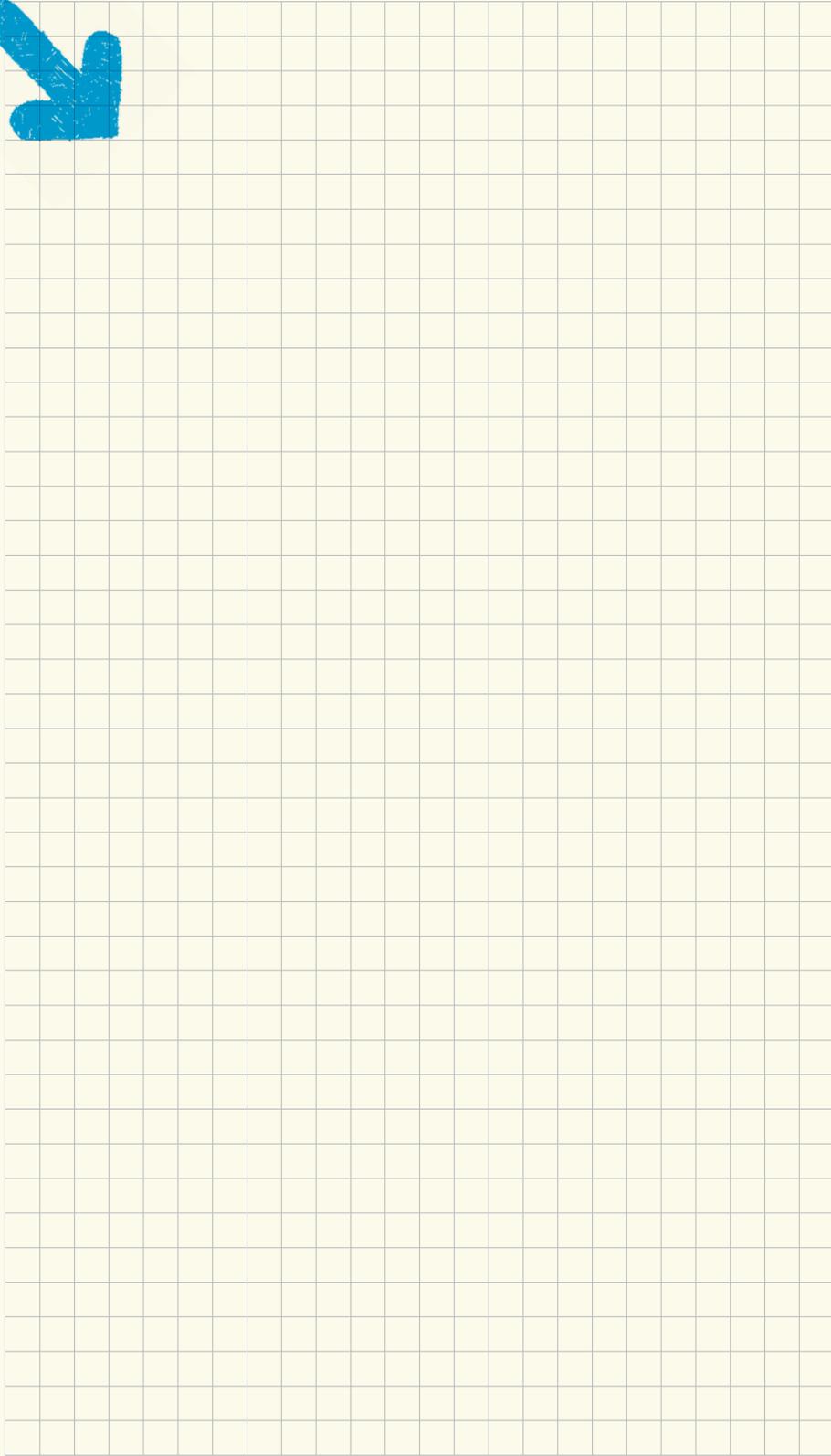
Following on from this, the second task for heritage institutions is to generate value – and income – in a network environment using decentralised, 'centre-less' forms of distribution (fourth ring). The fourth ring affords ideal opportunities for making heritage widely accessible. This is in keeping with the social objective of heritage institutions, although not (yet) with the methods of exploitation to which such these institutions are generally accustomed. We are therefore challenging heritage institutions to experiment.

The third task for the heritage sector is to make more active use of performance-based models vis-à-vis the government. We have not devoted much space in this chapter to subsidies, because we have focussed mainly on generating revenue from the market. But the government is still the most important financier for the bulk of the

heritage sector. The basis on which the government pays cultural heritage institutions (by granting subsidies) is critically important here. In principle, the heritage sector can tell the government what performance should be assessed. But this is not (yet) happening, partly because the sector itself has no clear-cut view on how its social goal relates to its commercial activities. Conditioned self-regulation (see Chapter 3 on organisation) is one solution that could lead to a more pro-active attitude towards performance-based models.









---

## ACKNOWLEDGEMENTS

---

The publication *Business Model Innovation Cultural Heritage* is the result of numerous formal and informal discussions held within the context of a project carried out by two Dutch institutions, The DEN Foundation and Knowledgeland. The project was commissioned by the Ministry of Education, Culture and Science. The topic of business models rose quickly to the top of the cultural heritage agenda. This publication is intended to support cultural heritage institutions in their search for new business models.

Early on in the project it became clear that there are four obstacles facing the heritage sector: Organisation, ICT Infrastructure, Copyright and Revenue Models. Expert meetings were organised in the summer of 2009 on these four themes and were attended by around 100 representatives from the heritage sector, government, scientific community, education, creative industries and business community. The results of these meetings form the core of this publication. These findings were refined during a seminar that took place in the autumn at the Hermitage aan de Amstel. These meetings were prepared in consultation with the monitoring committee, consisting of Lucie Guibault (UvA, Instituut voor Informatierecht), Dirk Houtgraaf (Rijksdienst voor het Cultureel Erfgoed), Frans Hoving (Erfgoed Nederland), Eerde Hovinga (Beeld en Geluid), Hans Jansen (Koninklijke Bibliotheek), Paul Rutten (Universiteit Leiden) and Jan-Willem Sieburgh (Rijksmuseum Amsterdam).

The DEN Foundation, Knowledgeland and the Ministry of Education, Culture and Science wish to thank all attendees of these meetings and all those who actively contributed to this project.

---

## BIBLIOGRAPHY

---

ABC-DE (2008). *Woordenboek voor het Digitaal Erfgoed. The Hague, DEN Foundation*

Anderson, Chris (2006). *The Long Tail: Why the Future of Business is Selling Less of More*. Hyperion.

Anderson, Chris (2009). *Free: the future of radical price*. Hyperion.

Bakos, Yannis & Brynjolfsson, Erik (1998). *Bundling information goods: pricing, profits and efficiency, working paper*.  
[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=11488](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=11488)

Berenschot (2007). *Advies infrastructuur Digitale Collectie Nederland*. Utrecht 2007. [www.den.nl/docs/20070719095645](http://www.den.nl/docs/20070719095645)

Beunen, Annemarie en Tjeerd Schiphof (2006): *Juridische wegwijzer archieven en musea online*. A PDF version can be found at:  
[www.taskforcearchieven.nl/projects/juridischewegwijzer](http://www.taskforcearchieven.nl/projects/juridischewegwijzer)

Bishoff, Liz & Allen, Nancy (2004). *Business Planning for Cultural Heritage Institutions; A framework and resource guide to assist cultural heritage institutions with business planning for sustainability of digital asset management programs*. Council on Library and Information Resources, Washington D.C (USA).  
[www.clir.org/pubs/reports/pub124/pub124.pdf](http://www.clir.org/pubs/reports/pub124/pub124.pdf)

Bloem, Jaap & Van Doorn, Menno (2006). *Open voor business; open-source- inspiratie voor innovatie*. Verkenninginstituut Nieuwe Technologie ViNT, Groningen.  
<http://vint.sogeti.nl/books/open4business.pdf>

Brain en KVAN (2009). *Archiveren is vooruitzien. Visie op de koers en de inrichting van het archiefwezen*.

CATCHplus, *Continuous Access to Cultural Heritage plus (2009)*.  
[www.catchplus.nl](http://www.catchplus.nl)

Consortium of Regional Historic Centres and the National Archives (23 June 2009). *e-Archief in ontwikkeling, Visiedocument 2009-2014*.

Creative Commons (2009): Defining "Noncommercial" A Study of How the Online Population Understands "Noncommercial Use". A PDF version can be found at:  
[http://wiki.creativecommons.org/Defining\\_Noncommercial](http://wiki.creativecommons.org/Defining_Noncommercial)

Cultuurprofijs (2009). *Eigen inkomstennormen voor de cultuurproducerende instellingen in de basisinfrastructuur*. Recommendations to the Minister of Education, Culture and Science. The Hague, [www.minocw.nl/documenten/133933b.pdf](http://www.minocw.nl/documenten/133933b.pdf)

Dell, Kristina (2008). *Crowdfunding*, in Time Magazine,  
[www.time.com/time/magazine/article/0,9171,1838768,00.html](http://www.time.com/time/magazine/article/0,9171,1838768,00.html)

DEN Foundation (2009). *De Digitale Feiten; Onderzoek naar de omvang en kosten van gedigitaliseerd cultureel erfgoed*. DEN, The Hague. [www.den.nl/docs/20090326122902](http://www.den.nl/docs/20090326122902)

DEN Foundation (2009). *Informatieplannen* [thema dossier].  
[www.den.nl/kennis/thema/informatieplan](http://www.den.nl/kennis/thema/informatieplan)

European Commission (2008): Interpretatieve mededeling van de Commissie over de toepassing van het Gemeenschapsrecht inzake overheidsopdrachten en concessieovereenkomsten op geïnstitutionaliseerde publiek-private samenwerking (geïnstitutionaliseerde PPS). [http://ec.europa.eu/internal\\_market/publicprocurement/docs/ppp/comm\\_2007\\_6661\\_nl.pdf](http://ec.europa.eu/internal_market/publicprocurement/docs/ppp/comm_2007_6661_nl.pdf)

Faber, Edward & de Vos, Henny (2008). *Creating succesful ICT-services*, Telematica Instituut.

Falk, John H. & Sheppard, Beverly K. (2006). *Thriving in the knowledge age. New business models for museums and other cultural institutions*. AltaMira Press, U.S.

Griffiths, José-Marie (et al.) (2008). *InterConnections, The ILMS National study on the use of Libraries, Museums and the Internet*. Chapel Hill, Univ. of North Carolina.

De Haan, J. & Mast, R. & Varekamp, M. (e.a.) (2006). *Bezoek onze site: over digitalisering van het culturele aanbod*. The Hague, SCP.

Hoorn, Esther (2006). *Creative Commons Licences for cultural heritage institutions - A Dutch perspective*. A PDF version can be found at <http://creativecommons.nl/onderzoek/>

Kelly, Kevin (2008). *Better than free!* Available online at [http://www.kk.org/thetechnium/archives/2008/01/better\\_than\\_fre.php](http://www.kk.org/thetechnium/archives/2008/01/better_than_fre.php)

Korn, Naomi (2009). *In from the Cold: An assessment of the scope of 'Orphan Works' and its impact on the delivery of services to the public*. een PDF versie is verkrijgbaar via <http://www.jisc.ac.uk/publications/documents/infromthecold.aspx>

Leadbeater, Charles (2008). *We think. Mass innovation, not mass production*. London: Profile Books. Online draft available at [www.wethinkthebook.net/home.aspx](http://www.wethinkthebook.net/home.aspx)

Limonard, S. & Staal, M. (2009). *Erfgoed 2.0: doelgroepen, organisatie, geld. Een positioning paper*. TNO, Delft.

Ministry of Education, Culture and Science (2002). *Beleidsbrief Digitalisering Cultureel Erfgoed* (2002 edition). [www.minocw.nl/documenten/brief2k-2002-doc-18765.pdf](http://www.minocw.nl/documenten/brief2k-2002-doc-18765.pdf)

Ministry of Education, Culture and Science (2005). *Digitalisering brengt erfgoed dichterbij*. Brochure. [www.minocw.nl/documenten/folder\\_digitalisering\\_erfgoed.pdf](http://www.minocw.nl/documenten/folder_digitalisering_erfgoed.pdf)

Ministry of Education, Culture and Science (2009). *De cultuur- en mediastelsels*. [www.minocw.nl/cultuur/1105/De-cultuur-en-mediastelsels.html](http://www.minocw.nl/cultuur/1105/De-cultuur-en-mediastelsels.html)

Moortgat, J. (2009). *Taking pictures to the public*. Evaluatieverslag Nationaal Archief en Spaarnestad Photo op Flickr The Commons. National Archives, The Hague. [www.nationaalarchief.nl/images/3\\_16370.pdf](http://www.nationaalarchief.nl/images/3_16370.pdf)

NCDD, Nationale Coalitie voor Digitale Duurzaamheid (2009). *Toekomst voor ons digitaal geheugen, Duurzame toegang tot informatie in Nederland*. The Hague.

Niet, Marco de (2007). *Bouwstenen van de digitale bibliotheek in De Digitale Bibliotheek*. Ed. by Van der Meij, Bart & Westerkamp, Kees. Rotterdam, Essentials/NVB.

Nispen, Annelies van (2009). *Inputnotitie sector cultuur/erfgoed*. Nationale Verkenning Digitale Duurzaamheid.

Osterwalder, A., Pigneur, Y. (2009). *Business Model Generation*. [www.businessmodelgeneration.com/order.html](http://www.businessmodelgeneration.com/order.html)

Poort, J. e.a. (2006). *Baten in Beeld. SEO economisch onderzoek*, Amsterdam. 110

Raad voor Cultuur (2003). *eCultuur: van i naar e, advies over de digitalisering van cultuur en de implicaties van cultuurbeleid*. The Hague.

Raad voor Cultuur (2007). *Innoveren, participeren, Advies agenda cultuurbeleid & culturele basisinfrastructuur*. The Hague.

Rappa, Michael (2009). *Business Models On The Web*. [www.digitalenterprise.org/models/models.html](http://www.digitalenterprise.org/models/models.html)

Reading, Vivian (2009): *Europe's Fast Track to Economic Recovery*  
The Ludwig Erhard Lecture 2009 Lisbon Council, Brussels,  
9 July 2009 <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/09/336>

Samenwerkende Nederlandse Erfgoedinstellingen (2008): *Reactie van Nederlandse erfgoedinstellingen op het Groenboek Auteursrecht in de kenniseconomie*. A PDF version can be found at [www.den.nl/docs/20081202032636](http://www.den.nl/docs/20081202032636)

SenterNovem (2009). *[Subsidy scheme] Digitaliseren met Beleid, Projecten*.  
[www.senternovem.nl/Digitaliserenmetbeleid/projecten/index.asp](http://www.senternovem.nl/Digitaliserenmetbeleid/projecten/index.asp)

Shirky, Clay (2008). *Here comes everybody. The power of organizing without organizations*. The Penguin Press, New York.

Telematica Instituut (23 oktober 2002). *Inventarisatie Infrastructuur Digitaal Erfgoed*.

Vliet, Harry van (2009). *De Digitale Kunstkamer, Lectoraat Crossmedia Content*, Hogeschool Utrecht.

Wetenschappelijk Technische Raad SURF (1998). *Alles uit de kast, op weg naar een nationaal investeringsprogramma digitale infrastructuur cultureel erfgoed*. Utrecht.

## COLOPHON

**Chapter 2 - Business Model Innovation:** Harry Verwayen (Knowledgeland), Erfgoed 2.0: Sander Limonard (TNO)

**Chapter 3 - Organisation:** Marco de Niet, Marco Streefkerk (The DEN Foundation)

**Chapter 4 – ICT Infrastructure:** Marco de Niet, Marco Streefkerk (The DEN Foundation)

**Chapter 5 - Copyright:** Paul Keller (Knowledgeland)

**Chapter 6 – Revenue Models:** Martijn Arnoldus (Knowledgeland)

**Content editing:** Marco de Niet, Lieke Heijmans, Harry Verwayen

**Text editing:** Hannah de Groot (Blanco&co)

**Translation:** The Language Lab, Amsterdam

**Illustrations:** JAM Visueel Denken

**Design:** Sin – Bureau voor Visuele Communicatie

**Printing:** Bestenzet

Supported by the Ministry of Education, Culture and Science, the Netherlands.

Please send all feedback to:

Knowledgeland / Stichting Nederland Kennisland, P.O.Box 2960,

1000 CZ Amsterdam. The Netherlands, [info@kennisland.nl](mailto:info@kennisland.nl)

or The DEN Foundation, P.O. Box 90407, 2509 LK The Hague, The Netherlands, [den@den.nl](mailto:den@den.nl)

A PDF version of this publication is available on the websites of DEN ([www.den.nl](http://www.den.nl)) and Knowledgeland ([www.kennisland.nl](http://www.kennisland.nl)).



Digitaal Erfgoed Nederland



Ministerie van Onderwijs, Cultuur en Wetenschap



**Users may:**

Copy, distribute and forward the work.

Remix: produce derivative works

**The following conditions apply:**

- **Attribution:** the user must state the name of the work assigned by its maker or licensor (but without giving the impression that these individuals endorse your work or your use of the work).
- **Share Alike:** if the user adapts the work, the resulting work may only be distributed pursuant to the same licence as this licence, or a similar or compatible licence.
- **Re-use or distribution:** the user must inform the third parties of the licensing terms of this work. The best way to do this is by using a link to this web page.
- The user may waive one of more of these conditions with the prior approval of the rights holder.
- Nothing in this license amounts to harming or limiting the moral rights of the author.

The complete text of the licence right can be found at

<http://creativecommons.org/licenses/by-sa/3.0/nl/>



► page 6



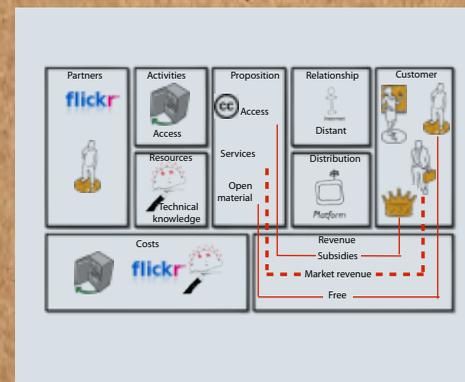
► page 7



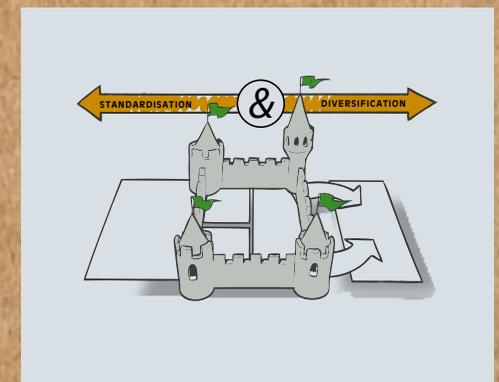
► page 12



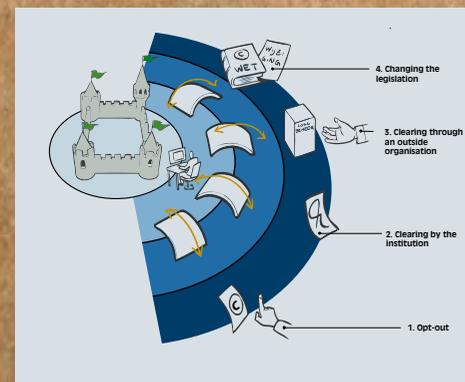
► page 15



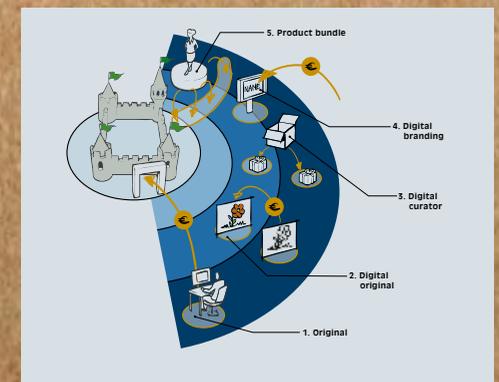
► page 20



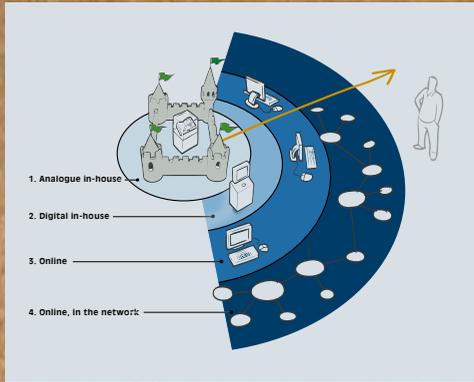
► page 49



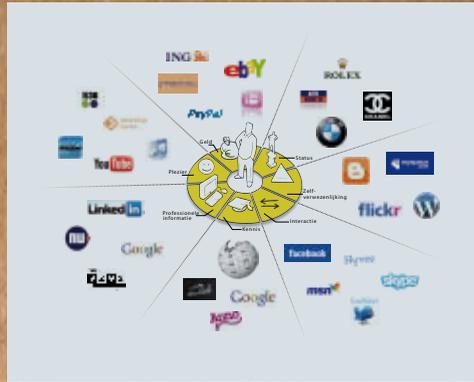
► page 73



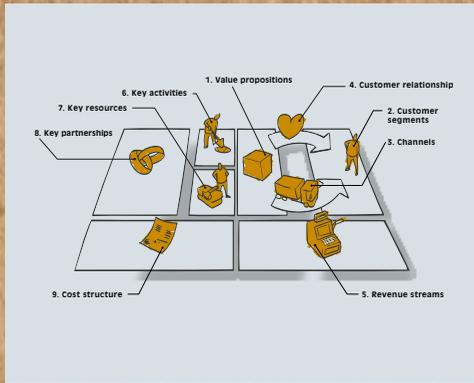
► page 88



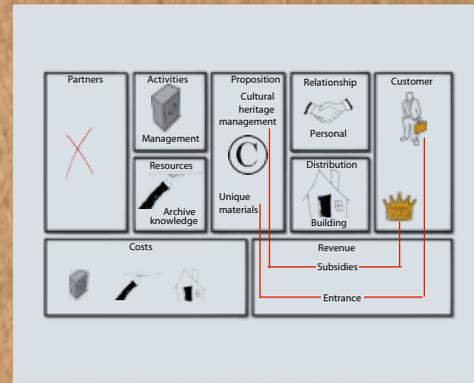
► page 8



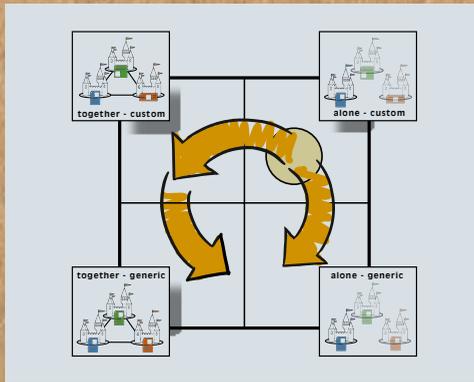
► page 10



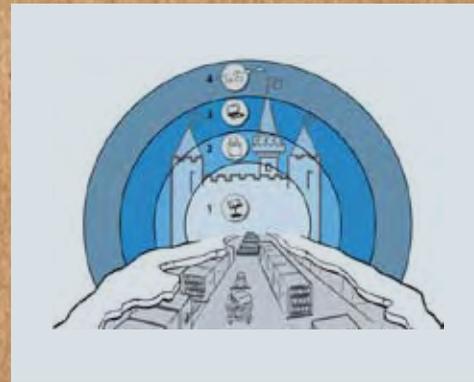
► page 16



► page 19



► page 51



► page 64