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The digitisation of culture

Summary

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A treasure chest of unique resources

‘The best we have to offer, is not on the Net’. Around the turn of the millennium, this lament would have been justified for anyone referring to all the material that was stored in museums, archives and libraries. The European Commission spoke of a ‘treasure chest of unique resources’ (EC 2002) and implied that cultural institutions held the key to that chest. Digitisation is vital to improving access to this vast quantity of material. Virtually all cultural institutions in the Netherlands – not just traditional guardians of cultural heritage and libraries, but also broadcasting associations and art institutions – now have their own websites and are working hard on digitisation and creating digital access to museum collections, old films and television programmes and a host of other material. Thanks to the placing of this digitised material on websites, CD-ROMs and other carriers of digital information, the scope for disseminating our shared cultural capital has increased greatly, enabling the contents of the cultural treasure chest to be made accessible to a wider public. There are any number of publications which say something about the status of the digitisation of culture, but to date there has been no systematic overview of what kind of digital material the various cultural sectors (cultural heritage, the arts, libraries and public broadcasting) offer.

This publication summarises a study of the digitisation of cultural sources and the use of that digitised material. The exploratory study ensues from the Culture and ICT (*Cultuur en ICT*) programme within the Culture and Media Directorate of the Dutch Ministry of Education, Culture and Science (OCenW) and was carried out by Erasmus University Rotterdam (EUR) in collaboration with the Social and Cultural Planning Office of the Netherlands (SCP).

The study focussed on the digitisation of information in four cultural sectors: cultural heritage, the arts, libraries and public broadcasting. It brings together quantitative and qualitative data to provide an

overview of available information on both the supply of and demand for digital material. In addition to this description and broad analysis of supply and demand, the study looks at the relationship between the various disciplines, the relationship with the field of education and the participation of Dutch institutions in international projects. This study also looks at what gaps in knowledge exist in the field of Culture and ICT and can serve as a reference point to clarify what research is still needed for further policy development.

In summary, the object of study can be formulated as follows:

The object of the study is to provide an impression of the available information on both the supply of and demand for digital cultural information in the cultural heritage sector, the arts sector, the libraries sector and the broadcasting sector in the Netherlands.

In order to realise this object, six research questions were formulated in consultation with the Ministry, and these served as a guiding theme for the study.

What does digitisation mean in the different sectors?

What do key figures and bodies believe to be the main activities and developments in their sector and what problem areas and (knowledge) gaps do they perceive in the development of digital products and services?

What collaborative alliances have been forged within and between the different sectors?

How do the different sectors contribute to the development of digital cultural information for education?

What is happening at European level as regards the digitisation of culture, and how does the Netherlands participate in this?

The digital cultural products offered and what are the main gaps in the knowledge about the 'digital public'?

In order to elicit the necessary information a literature search was carried out, websites were visited and interviews were held with representatives of umbrella organisations and key institutions, as well as with specialists from several directorates at the Ministry. The

interviews formed the main part of the study; a total of 69 experts were interviewed and additional information was obtained from 11 persons. Below we first summarise the findings on the supply and use of digital cultural information based on these research questions. Conclusions are then drawn concerning the digitisation of culture in the Netherlands.

Summary

Digitisation by sector

The term 'digitisation' is commonly used and its content is rarely disputed, but in practice it is found to refer to a range of different processes. In its literal sense it means the creation of digital images of physical objects. Defined thus, digitisation is sometimes denoted by the Netherlands Museums Association (*Museumvereniging*) using the term 'computerisation', and refers to collection management as one of the tasks of museums. In addition to this 'narrow' definition, there is also a 'broad' definition, which refers to making material accessible to a wider public. This relates to the online presentation of material, the addition of metadata and the facility to search through material using standardised indexes and user-friendly search engines. Addition of information about backgrounds, history and stories relating to objects can further increase accessibility. According to this definition, therefore, digitisation involves much more than simply scanning in images. This variation in the definition of digitisation also occurs in other heritage-related sectors. While the relevance of the different aspects is not disputed, it is denoted by different people using different terms.

The performing arts use an even broader definition of digitisation. Here it relates to the production, promotion and recording of the performing arts, including the process that precedes a performance (including information exchange between theatres and theatre companies). The digitisation of theatre itself encompasses the recording of performances and making those recordings accessible online. These two activities are comparable with the narrow and broad definitions used in the museum sector. The same applies for the digitisation of films and other audiovisual material; here it involves the conversion of tapes, for example, to digital format and then offering them online.

The libraries sector in turn places greater emphasis on gatekeeper and signposting functions in the large mass of available information. A good example is the development of the digital information service Al@din, where people can ask questions about the most diverse topics.

Main activities and developments

There are wide differences in the way in which the arts, cultural heritage institutions, libraries and public broadcasting sectors create access to digitised material. In the performing arts sector, digitisation is mainly designed to enhance the efficiency of operations and increase the audience reach. Digitisation contributes to the information exchange between theatres and theatre companies, to improving stage techniques, to planning working hours and to the promotion of performances and makers. Digital name and address data are used in *pr* activities for customer relationship management. Few audiovisual recordings are available online of Dutch stage performances, though one exception is Fabchannel, a company that film's performances by both well-known and unknown bands in the Melkweg and Paradiso venues in Amsterdam and presents its concert recordings online.

Much more experience has been gained with the digitisation of film and audiovisual material. The grant given to the *Beelden voor de Toekomst* ('Images for the Future') project in September 2006 will undoubtedly provide a strong boost to the digitisation of this type of material. This digitisation project is being carried out on an unprecedented scale for the Netherlands and is aimed at restoring, conserving, digitising and creating access via all manner of services to the enormous reservoir of twentieth-century audiovisual material.

Many galleries now have websites containing information on exhibitions, artists and their works. Some galleries also use the Internet as a forum for bringing together supply and demand.

In the cultural heritage sector, digitisation in museums, as with the performing arts, is still strongly focused on increasing the public reach; digitisation of museum collections is not a high priority.

However, there are museum websites which form an exception to this rule; for example, the various websites operated by the Naturalis natural history museum are intended primarily as a means of conveying knowledge, with no attempt to persuade the digital visitors to visit the museum in person.

Many of the larger archives have begun digitising material, but smaller archives often lack the expertise and resources for this. Archives do however possess material that can appeal to many people. The national genealogy database illustrates how digital archive material can reach a wider public. The national monuments and archaeology sector are collaborating on the development of a Knowledge Infrastructure of Cultural History (KICH), which will provide access to the digital databases on cultural history held at the various knowledge centres in the Netherlands. National databases of archaeological and architectural monuments were made accessible in 2006 as part of the KICH project.

Libraries have also made significant progress in the area of digitisation. The National Library of the Netherlands (Koninklijke Bibliotheek, KB), in particular, participates in a large number of projects, not just nationally but also internationally. One such project is the Geheugen van Nederland ('Memories of the Netherlands') project, with its large digital collection of Dutch-produced illustrations, photos, texts, films and audio fragments. The Netherlands Public Library Association (VOB) has also worked hard on creating digital alternatives to traditional services.

One development that has taken place in several sectors is the emergence of portal sites, such as the site www.omroep.nl developed by the public broadcasting associations. Among other things, this site provides access to all public broadcasters and web-based radio stations and also includes an online programme guide. The web portal www.uitburo.nl offers information on art and culture in a broad sense, and also presents national listings of cultural events. The *Hollandmuseums* project provides access to the websites of 409 museums via the portal

site www.museumserver.nl. Provincial heritage portals are also being developed.

Collaboration within and between sectors

There are wide differences within the arts sector in the degree to which institutions collaborate on digitisation. Many institutions concentrate on activities within their own organisation, whilst others are actively seeking cooperation. Existing partnerships are driven mainly by similarities in content or technical challenges. The ‘creative pioneers’, such as V2_, Submarine, Montevideo and Fabchannel, play a key role in the development of innovative applications, and for these creative pioneers collaboration with institutions from the arts sector and the heritage sector is the rule rather than the exception. Most other arts institutions collaborate little with organisations outside their own sector, though an important exception is the collaboration in the Geheugen van Nederland (‘Memories of the Netherlands’) and Beelden voor de Toekomst (‘Images for the Future’) projects.

There is greater collaboration between institutions in the cultural heritage sector, with any number of joint projects by museums and archives at local and national level. Important bodies concerned with historic monuments and archaeology were brought together organisationally in 2006 in the National Service for Archaeology, Cultural Landscape and Built Heritage (RACM), though before that time they had already been collaborating in projects such as the Updating of the Historic Buildings Register (Actualisering Monumentenregister) and the Knowledge Infrastructure for Cultural History (KICH). A number of organisations from outside the cultural heritage sector (such as Alterra and the Knowledge Directorate of the Ministry of Agriculture, Nature and Food Quality (LNV)) are also involved with KICH. Several archives are participating together with the National Library of the Netherlands in the Geheugen van Nederland (‘Memories of the Netherlands’) project.

Libraries frequently work with other cultural institutions in order to shape their new gatekeeper and signposting role in the world of digital

information. In local projects, public libraries are developing new digital services in conjunction with archives and museums. A joint project is under way with the Nederlands Uitburo cultural information service to create access to local information on all manner of municipal institutions via the Internet in the De G!DS guide. Public libraries are also working with the Central Record Library in Rotterdam (CDR) to allow members to apply to borrow CDs, LPs and music DVDs via the MuziekWeb.nl music website. There are also alliances with the Digital Heritage Foundation (Digitaal Erfgoed Nederland, DEN), the Documentary Information and Archive Service (Vereniging voor de documentaire informatievoorziening, DIVA) and the Dutch Museums Association (NMV).

Academic libraries have a great deal of contact with universities and other scientific organisations on the use of standards and new techniques. The National Library of the Netherlands (KB) initiates or participates in many projects in the field of digitisation of cultural Heritage (e.g. the CATCH programme).

The Dutch Institute for Sound and Image (Nederlands Instituut voor Beeld en Geluid) has initiated a large number of projects and as such is driving forward the digitisation of culture and related collaborative projects. Examples include the Fonos project, which brings together organisations from the broadcasting and music sectors, and the *Beelden voor de Toekomst* ('Images for the Future') project, in which the *Beeld en Geluid* is working together with the National Film Museum (Filmmuseum), the Rotterdam Central Record Library, the National Archive, the Netherlands Public Library Association and the KnowledgeLand Foundation (Nederland Kennisland).

Digital cultural information for education

Now that the technical infrastructure in education is largely in order, attention can focus more on substantive digital applications and on supporting teachers in their use. Culture is a field which lends itself particularly well to the development of educational services. More and more material is becoming available which can be used to create

interesting educational applications. Important organisations in the use of ICT in education are *Kennisnet/ict op school*, *SURFnet*, *Cultuur en School*, *Erfgoed Actueel* and *Waag Society*. *Kennisnet/ICT op school* and *SURFnet* are responsible for the infrastructure and also jointly develop Internet applications aimed at innovation in Dutch education. *Cultuur en School* and *Erfgoed Actueel* are specifically concerned with cultural education with a view to encouraging interest in art and cultural heritage and raising historical awareness. *Waag Society* also plays a pioneering role as an expertise centre for cultural subjects and ICT, in gathering and disseminating knowledge on the use of ICT for cultural education purposes, and in developing innovative applications for education.

The portal site www.cultuurplein.nl contains a great deal of background information on art and culture. The site aims to be the central hub for everything that has to do with culture and education in the Netherlands, and seeks to support teachers and cultural institutions in integrating cultural activities into teaching practice. By providing advice to teachers (including the sharing of knowledge) and promoting expertise at cultural institutions, the site aims to encourage the use of the digital possibilities.

Several projects are under way aimed at increasing the digital accessibility of cultural heritage in education. The portal site www.kennisnet.nl offers a wide range of educational information and teaching packs for both teachers and pupils. Information on architecture and design has been made accessible for education and applications are being developed that are designed to bring pupils into contact with documentary and other film genres in an active way. Cultural heritage is also presented to pupils in an exciting and playful way; archaeological information, for example, shows pupils how people used to live, from prehistoric times up to and including the Middle Ages.

Education is becoming an increasingly important focus for archives, which are seeking to align more closely with the world of education

through the development of supplementary digital teaching material and digital teaching packs. Although the museum sector develops a great many educational activities, for the time being it offers relatively few digital teaching packs. Several projects by the Naturalis natural history museum show a possible way forward. The *Geheugen van Nederland* ('Memories of the Netherlands') project also makes cultural heritage from archives, museums and libraries accessible for education, including via online lessons. Libraries, for their part, compile packs on individual subjects which are dovetailed to the core objectives and attainment targets. These packs provide information on all manner of topics in the form of links to websites, articles and film clips. Moving images are of great value for education, and exploring the didactic, technical and organisational aspects of the use of streaming media (playing audiovisual material via the Internet) should make wider application possible in the future. The Teleblik project makes thousands of hours of streaming content from the public broadcasters accessible to education.

The growing amount of cultural content on the Internet is giving rise to new questions in relation to digital applications. Does the available material match the existing curricula? Do teachers have enough time, energy and knowledge to incorporate this material into their lessons? Do pupils manage to find their way to this material?

The Netherlands in Europe

The digitisation of culture in the Netherlands is also promoted by the European Council and the European Commission (EC). Several European action plans call for the promotion of Internet use and digital access to European cultural heritage. Through the use of ICT the hope is that social and economic development can be stimulated and that the sustainable conservation of European cultural heritage can be promoted. Several financial sources are contributing to the digitisation of culture in Europe, the most important being Culture 2000, eContent (plus), e-TEN, 5th & 6th Framework, IST Program, DigiCULT, Cordis and the MediaPlus programme.

Participation in these projects by Dutch institutions leads to the inclusion of information on culture in the Netherlands on European portal sites, thus facilitating comparison with what is available in other countries. An inventory of European heritage is being compiled, as is an international agenda for digital research activities and a platform for the sharing of knowledge and experience in the field of digitisation. Attention is also being devoted at European level to integrating and coordinating ongoing studies relating to digitisation.

European projects are generally not focused on the digitisation of material itself, but are aimed at creating the conditions to harmonise digitisation in EU member states. With this in mind, efforts have been and are being devoted to the development of:

- conservation and planning systems that are accessible to all;
- universal software infrastructure for continuous digital archiving;
- development of a European standard for storage of large databases;
- developing tools that make the digitisation, storage and restoration of old (audio and video) material cheaper and more effective and lead to higher productivity;
- common digital archives for image, audio and video material.

These initiatives will make it easier to bring together and improve access to the available material. Promoting expertise is also on the European agenda.

The Netherlands plays an active role in many European projects and is one of the leaders in the digitisation of culture. Nonetheless, Dutch organisations and institutions regularly look to other countries to see how they tackle digitisation. Developments in Scandinavian countries, and also in the United Kingdom in particular, are an important source of inspiration. Outside the EU, Canada serves as an example. Projects which go beyond individual sectors are of particular interest. The Netherlands also looks to these countries when it comes to creating, managing and improving access to digital content, collection management, regulating intellectual property issues and creating standards.

Public reach of digital cultural products

Internet statistics provide some information on the size of the visitor group of many organisations. However, whether that group is large or small compared with other cultural institutions is difficult to determine due to the absence of an inventory of the available material. The interviews in this study revealed a broad lack of insight into the profile, background and wishes of the digital public. Little concrete effort is generally made to turn the desire for research among the public into reality. This does not mean that no such research has been carried out at all; however, existing surveys of the public are focused mainly on the use of the Internet as a source of information in preparation for visiting a cultural institution. To the extent that institutions carry out public surveys themselves, this is often done in order to improve the navigation on the website. Generally, there is no information available on how visitors assess things such as the layout, navigation or amount of information. Filling this gap in knowledge is important in matching the aims of the providers and the wishes of visitors.

Many cultural institutions are asking themselves how far they can reach the large group of non-visitors with information and services via cultural sites on the Internet. Very little is known about the size of the potential target group. Further segmentation of the group, as was carried out for example by Wubs and Huysmans (2006) for cultural heritage, could form the basis for a further specification of expectations regarding culture on the Net.

Conclusions

A great many projects have been carried out in the various cultural sectors; all kinds of problem areas have been identified and expectations for future developments have been specified. All these data are difficult to summarise to form a coherent whole. Nonetheless, an attempt is made here to instil some cohesion into the material presented.

Ambition

The ambition of digitising cultural material is clear, and was also recently expressed at European level in a recommendation by the European Commission. Cultural institutions are increasingly seeking collaboration with institutions from other fields in order to present information jointly on the Net. These joint efforts generate a picture of the future that has been described as the 'Digital Collection of the Netherlands' (Digitale Collectie Nederland). The aim is that this would bring together text, images and sound and all manner of individual collections to create a single coherent collection which can be easily accessed by various user groups. It is not even a picture of a distant future; projects such as *Geheugen van Nederland* ('Memories of the Netherlands') and *Beelden voor de Toekomst* ('Images for the Future') effectively mean that part of the Digital Collection is already here. A great deal has thus already been achieved in the twenty-first century, but this does not alter the fact that a great deal still remains to be done. There are differences between the various cultural sectors, and also between the institutions within those sectors, in the way in which and the pace at which they are fulfilling their digital ambitions. Often, the collaboration does not go beyond the confines of their own sector, and where this does happen it is usually because a limited number of organisations – such as the 'creative pioneers' referred to earlier – are involved. Encouraging cooperation, especially in the development and application of standards, appears desirable, and should include both horizontal and vertical cooperation (i.e. both within and between sectors).

Vision

Ambition alone is not enough, but also requires vision if it is to be achieved. Four years ago Velthausz and Bruinsma (2002) were particularly critical of the lack of vision in the digitisation of the cultural heritage sector. They argued that only a small minority gave any thought – and only on a small scale – to the role of digitised cultural heritage in a knowledge society, but that in general a strong ‘push’ approach dominated. According to Velthausz and Bruinsma, cultural institutions were mainly concerned with offering as much material as possible online, without concerning themselves with the interests of the public or the activities and plans of other cultural institutions. In the four years since then, some things have changed; increasingly, the digitisation of material for internal management is combined with a commitment to opening up external access. At least two questions arise here: what is digitised, and for whom?

The idea that all material should be made available online as quickly as possible has largely been abandoned. On the other hand, recent initiatives such as the ‘Images for the Future’ project referred to earlier and several projects in the humanities are focused on large-scale digitisation. There is a growing realisation that selection is needed; however, the selection methods differ widely. Sometimes a thematic approach is chosen, in which everything to do with a given topic is digitised. In other cases content is the guiding criterion, linked to a classification of the collection into different categories of importance. Naturally, priority is then given to digitising the most important category. Sometimes a demand-driven approach is adopted; the ‘customer’ or ‘user’ then indicates what they would like to see digitised.

The question of who digitisation is done for is easy to answer in the case of demand-driven digitisation. But the target group for the other methods is more difficult to establish. Often a distinction is made between at least three target groups: education, science and a generally interested public. Scientific institutions digitise primarily for scientists; yet these organisations also state that they appeal to a much wider public by making their material available in digital form.

Other institutions focus more on a wide public, and often especially on education.

Institutions have only a vague picture of what the various target groups actually want or expect from the digitised material offered. Virtually no research has been carried out aimed at mapping out this information about users and potential users. Yet many cultural institutions ask themselves how they can reach and serve the large group of non-visitors with digital information. An understanding of the information needs of specific target groups and their appreciation of what is currently available online could give direction to the further shaping and profile of the material presented. The counter-argument that potential users have virtually no way of identifying their needs must also be taken seriously. Accordingly, a great many 'creative pioneers' are involved in opening up access to digitised material which themselves are designing forms of access that they presume to be attractive to the public. Experiences with a large number of projects undoubtedly provide support for these designers.

One sign of the increasing focus on the public is the improved access to the available material; it must be possible for people to find the digital material available. The addition of metadata, the use of thesauri and search engines are important here. The need to improve these aspects of access to digital information is broadly endorsed.

After answering the questions of what is digitised and for whom, a further question remains: how to digitise? This discussion is focused mainly on image quality. Proponents of high-quality digitisation find themselves confronted with advocates of the idea that it is better to digitise large quantities of lower quality and at lower cost. Some steering of this debate would appear desirable.

ICT policy plans

ICT policy plans must not only provide a financially substantiated indication of which sources are to be digitised, but also which metadata are to be added and how the database and website are to be managed.

The digitisation itself must be separated from the presentation of the digitised material on websites, CD-ROMs or DVDs.

There are comparable problems in ensuring sustainable access to ‘born digital’ material. The experimental projects are of enormous value for the digital arts of the future and consequently of a ‘digitally born’ heritage. Too little attention is devoted to this issue in the present digitisation programmes.

Collaboration

A further question relates to the partner with which digitisation takes place. Collaboration on digitisation is becoming increasingly interdisciplinary; the picture of lots of different ‘islands’ each using their own methods is long gone, and overarching infrastructures encompassing several sectors are increasingly being used. This does not however mean that all ‘island kingdoms’ are yet connected; there are large groups which still have difficulty communicating with each other. There is broad consensus on the importance of shared standards, corresponding metadata and the same thesauri. The variation in the standards used is seen as a particular problem. Yet metadata are increasingly based on broadly shared metadata schemes such as the Dublin Core. The danger is that the more different sectors invest in different systems, the more difficult it becomes to build bridges between them. One possible solution to this would be to develop information models that can integrate different systems.

Focus areas

Other problems which still have to be resolved are sustainability and copyright. The rapid advance of technological developments makes it very difficult to store and use digital material permanently: once something has been digitised, it demands continuous management. ICT has also thrown the issue of traditional copyright into discussion. For some institutions copyright presents an insurmountable financial barrier to providing access to digital material. Sometimes the solution lies in buying up the copyright, but other initiatives such as the ‘Creative Commons’ can also play a role. The legal frameworks

surrounding copyright laws do however currently pose a problem in the digitisation of culture.

For many small and medium-sized institutions the problems associated with digitisation are much more basic; they simply lack the expertise, manpower and financial resources for adequate digitisation.

The virtual presentation of material is still seen too much as an extension of the physical presentation to allow optimum utilisation of the available material. There is a need to separate the physical and virtual collections. Fears are also sometimes expressed that virtual visits will replace physical visits; yet any number of examples refute the likelihood of such a substitution effect, rather suggesting a stimulus to make a physical visit. More important, however, is that some organisations largely decouple the presentation on Internet from the physical visit. This gives the information on the Internet an independent function in the transfer of knowledge. For example, a distinction is made between websites of museums and virtual museums. The latter are virtual information centres which are aimed at knowledge transfer, not at promoting a particular institution. In this way, images of objects which are situated physically at different locations can be presented as a coherent whole.

Despite the progress that has been made in the last four years, ICT policy plans spanning several years which provide a framework for individual projects are still scarce. Today, in 2006, the large institutions are actively engaged in digitising objects and services, but even in these organisations an ICT policy plan is the exception rather than the rule. There is a greater concentration on putting a vision on digitisation into practice than putting it on paper.

Reference has been made several times in this report to the success of short-term, small-scale projects. However, in order to achieve the envisaged future of integrated digital access to cultural sources, two conditions will have to be met: the scale will have to be increased and continuity will have to be guaranteed. Larger institutions are currently

confronted with problems relating to upscaling. Pilot projects have often shown the way forward, but are often no more than ‘try-outs’ on a limited scale. Large-scale digitisation projects do however demand considerable financial resources. Many initiatives arise on a project basis, and financial support is almost never structural, but is also provided on a project basis. The interviews for this study show that this form of funding means that money is often available only for setting up and carrying out a project. However, the problems arise only after the financial support has dried up; often no thought has been given to what should be done with the end product, often a website, after completion of the project. There is then no budget for maintaining the site, which means it is no longer kept up to date. Drawing up a long-range financial plan for ‘e-culture’ output would appear to be a primary prerequisite for guaranteeing continuity.

Synthesis

Continuity in the digitisation of culture will benefit from increases of scale and a shared, integral vision of the ultimate objectives to be achieved. This means building collaboration, both between institutions within individual cultural sectors and between sectors. Realising a vision will then require overall control and some planned activities at the level of institutions. Where cultural institutions have formulated an ICT policy plan, there is a good chance that a digitisation plan will also be formulated. Plans spanning several years can be particularly useful for creating a framework within which individual projects can be placed. Such plans must not only indicate which sources are to be digitised, but also the format to be used, which metadata will be added and how the format and metadata fit into the larger picture. The plans should also make clear how the database and website will be managed in the longer term.

Management of databases is necessary in order to deal with another continuity problem: ‘sustainability’. Digitised cultural artefacts do not remain accessible automatically. The limited life cycle of software and hardware makes regular migrations and upgrades necessary. The same applies for ‘born digital’ material, which suffers from similar problems

as regards sustainable access. The present digitisation programmes take too little account of this issue.

Literature

- European Commission, Directorate-General for the Information Society (EC) (2002). *The Digicult Report. Technological landscapes for tomorrow's cultural economy. Unlocking the value of cultural heritage*. Luxembourg: Office for Official Publications of the European Communities.
- Velthausz, D. en E. Bruinsma (2002). *Inventarisatie Infrastructuur Digitaal Erfgoed. Een onderzoek naar visies, belemmeringen en oplossingen*. Enschede: Telematica Instituut.
- Wubs, H. en F. Huysmans (2006). *Klik naar het verleden; een onderzoek naar gebruikers van digitaal erfgoed: hun profielen en zoekstrategieën*. Den Haag: Sociaal en Cultureel Planbureau.