The Netherlands

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A. Users and content

What are the main materials/categories of objects being digitised?

Concerning heritage several categories are enumerated.

Audio visual archives
In 2007 a programme has started for the preservation and mass digitisation of audiovisual resources ("Beelden voor de Toekomst" – Images for the Future). In total 285.000 hours video, film, audio and 2.9 million photographs in de collections the Nationaal Archief (National Archives), Film museum and Netherlands Institute for Sound and Vision will be digitized. This amounts to approximately 20% of the total audio visual collections in the Netherlands.

Archives, libraries and museums
Some of the larger cultural institutions have separate projects for (mass) digitisation for example the Koninklijke Bibliotheek (National Library of the Netherlands): text digitisation of the national newspaper collections and parliamentary papers. A large programme - supported by the Ministry of Health, Welfare and Sport concerning the digitisation of material from the Second World War has started in 2006. In addition a consortium of 10 cultural institutions supported by the Ministry for Education, Culture and Science is developing a plan for the mass digitisation of other heritage collections. Most cultural heritage institutions have digitisation projects. The Nationaal Archief for example aims its digitisation activities at photographs, maps and inventories of their holdings. At a local and regional level more Dutch oral-history content is becoming available.

Monuments and sites
The project KICH <http://www.KICH.nl> makes available geographical information in combination with cultural historical information (archaeology, under water-archaeology, historical landscapes, protected villages and townscapes, country houses). This information is linked with zoning schemes and spatial planning. The connections are provided via the information model IMKiCH2006 in which GIS is combined with the Dublin Core.
In this way structured (geographical) and unstructured data (documents) can be linked, downloaded and re-used.
Information on built heritage is digitised and will be made accessible. For example photographs of buildings (400,000) as well as architectural drawings and archaeological finds. Digitisation of 20,000 glass negatives concerning archaeology will be accomplished in 2007.

How is the digitised CH content being distributed?

The distribution is mainly organised through domain specific or institutional websites. There are a few cross-domain portal-websites such as: <http://www.geheugenvannederland.nl> (National Library of the Netherlands – "Koninklijke Bibliotheek") and <http://www.collectiewijzer.nl> maintained by the Netherlands Institute for Cultural Heritage ("Instituut Collectie Nederland –ICN"). All provinces and a number of cities have specialised sub-sites with cultural heritage on provincial or local level, often including national data as well. Examples of domain specific sites which distribute digital cultural content are: <http://www.na.nl> (archives), <http://www.kb.nl> (libraries), <http://portal.beeldengeluid.nl/> (audio visual) and <http://www.rijksmuseum.nl>. Content concerning monuments and sites is distributed via KiCH and the portal of National Service

for Archaeology, Cultural Landscape and Built Heritage (RACM), `<http://www.racm.nl>`. To some extent content in this domain is also distributed via mobile phones and PDA's.
Information about digitised museum collections in the Netherlands is available through the MusIP (Museum Inventory Project – "Museum Inventarisatie Project") site: `<http://www.musip.nl>`.
For libraries and archives no such inventory is currently available.

Are there any eLearning or creative industry uses for the digitised CH material?

Many cultural institutions produce eLearning applications using digitised content. See for a cross-domain example `<http://www.geheugenvannederland.nl/onderwijs>`. Furthermore producers within the creative industry sector (e.g. media, broadcasting, publishing, advertising) use digitised cultural heritage material.

Are there any special issues that deal with the general accessibility of the digitised cultural content?

Dealing with Intellectual Property Rights can have a major impact on digitisation projects. The work at a European level of the High Level Expert Group, and in particular its Copyright Subgroup, on European Digital Libraries is monitored closely. At a national level a set of legal guidelines for digitisation projects in the cultural heritage sector was published in 2007 by the Taskforce Archives and the Museum branch organisation with support from the Ministry of Education, Culture and Science. The Ministry also supports the development and implementation of the Creative Commons license scheme in the Netherlands. In 2007 the Council for Culture will advise the government on the accessibility of cultural information in the public domain. Further policy development on this topic is expected in 2008 and onwards.

B. Technologies for digitisation

What common standards are most commonly used in digitisation?

Examples of standards used by the Dutch institutions are:

Audio visual: WAV , MP3 Video/film: Digital betacam D 10 30 and D 10 50 , MPEG2

Photo's: JPEG, Tiff

Museums, libraries, and archives: Dublin Core, EAD, XMl, Open Archives Initiative.

Monuments and sites: KiCH and IMKiCH, NEN 3610 (geographical basic standard), this standard, which is also an ISO 9000 standard, is used in the information model is for the knowledge infrastructure for cultural heritage (KiCH) as well as the information model for spatial planning, water and nature. AAT (Arts and Architecture Thesaurus) as basis for the thesauruses for the domains of archaeology, building/architectural history and historical landscapes.

What technologies and tools are most commonly used in digitisation?

A few major cultural institutions have in-house facilities for mass digitisation. Digitisation is also outsourced to specialised companies and laboratories. Depending on the type of material to be digitised specific scanning equipment and expertise has to be employed. Guidelines for digitisation have been developed through the digitisation programme "Het Geheugen van Nederland" (Memory of the Netherlands) `<http://www.geheugenvannederland.nl>`. These and other guidelines are available through Digital Heritage Netherlands (DEN "Digitaal Erfgoed Nederland") a national clearinghouse for ICT and cultural heritage.

How is interoperability ensured?

Current policy is aimed mainly at self-regulation for the cultural heritage sector. The national clearinghouse for guidelines, best practices and quality

assurance concerning digitisation - Digital Heritage Netherlands – has been established for this purpose. In this way the use of common international standards for digitisation (including metadata) in various domains is being stimulated. Furthermore direct funding for digitisation under a national grant scheme ("Digitaliseren met beleid") is conditional; applicants have to follow a set of criteria for digitisation projects maintained by the national clearinghouse.

Have any research needs emerged?

Research needs have emerged concerning the following topics: automatic indexing, digital sustainability, semantic interoperability, (mobile) distribution platforms, mass data/content storage and IPR and copyrights. Two major research programmes are currently in progress addressing these issues: CATCH (Continuous Access to Cultural Heritage) and Multimedian, in which computer scientist work closely together with heritage institutions.

C. Sustainability of content

What funding models and funding sources are most commonly used in digitisation?

Digitisation is mainly financed indirectly through structural subsidies by the national government for cultural institutions. Part of these annual budgets can be used for digitisation projects. Direct (and structural) funding is available through a grant scheme ("Digitaliseren met beleid" - Ministry of Education Culture and Science) and the national programme Memory of the Netherlands. Local and regional authorities also fund to some extent digitisation projects. Some larger national programmes for digitisation are funded separately via innovation or research grant schemes. Private funding and public-private partnerships only occur on a small scale for specific projects. An innovative financing model has been developed for the project Images for the Future. Funding is granted on the basis of a "cost benefit analysis". The total of project-costs is funded by the government: the estimated surplus benefits will have to be repaid to the government after the project is finished over a 10 year period. To improve

the use of various funding sources workshops are being organised to bring funding bodies and cultural institutions together.

Have you any examples of cost-reduction?

The availability through the clearing house of guidelines and best practices will increase the general level of expertise within the cultural sector and the overall quality of projects. In general mass-digitisation will lead a more efficient approach to digitisation, where cost reduction is possible in various steps of the digitisation process. Within the project Images for the future for example various cultural institutions work together. Through collaboration the total of project costs is lower, than would have been possible if each of the partners had chosen an individual approach.

Have you any examples of national competence centre in digitisation of cultural content?

• National Institute for Sound and Vision (NIBG), competence centre for mass storage, digitisation, accessibility to and distribution of digital audiovisual material.
• Film museum: competence centre for restoring and digitising various formats of film.
• "Koninklijke Bibliotheek" (National Library of the Netherlands) : competence centre for mass digitisation and distribution of (textual) electronic online resources
• Netherlands Institute for Cultural Heritage (ICN): competence centre concerning digitisation of museum collections on collection level.
• University Library Amsterdam
• "Nationaal Archief" (National Archives). Digitalization of archival material, e-depot. The National Archive is creating public access and awareness of the archives through websites and opening up the archives for the general public.
• Digital Heritage Netherlands (DEN) is the national clearing house for ICT and cultural heritage in general, and digitisation in particular.

D. Digital preservation

Are there national policies for digital preservation?

With support from the Ministry of Education, Culture en Science a National Coalition for Digital Preservation has been established in 2007. Its aim is to ensure that within five years a national organisational and technical infrastructure is in place, which secures the long term accessibility of scientific, commercial, governmental and cultural data.

Other national policies:

1. The national clearinghouse Digital Heritage Netherlands (DEN) maintains guidelines for quality assurance of digitisation. Digital preservation is an integral part of this.
2. Government funded project "Beelden voor de Toekomst" (Images for the future) is an expression of government policy on digital preservation through digitisation as a substitute for quickly degrading original material.
4. The National Library of the Netherlands and the Nationaal Archief (National Archives) collaborate on digital preservation projects, both on a national and international scale.

Can you give examples of tools or technologies used for digital preservation of CH content?

• Development of an E-deposit system at the National Library of the Netherlands, which is based on OAIS.
• Emulation research being performed by the National Library of the Netherlands and the National Archives
• Institutional repositories at University libraries, as part of the DARE project.

E. Monitoring progress

MEUR Comment
Funding allocated by Ministry of Education, Culture & Science directly for digitisation purposes amounts to 4.5 m EUR annually.

Output Number of collections / items Comment
With regards to museum-collections information about digitisation on collections level is readily available and is updated on a regular basis via the MusIP project. For the library and archive, monuments and sites sectors no structural mechanisms are in place so far, to provide the same type and quality of information. The current estimate is that 5% of museum-collections is digitised. For libraries and archives the estimates are lower: less than 1 %. In the Images for the Future project approximately 20% of the Dutch audiovisual collections will be digitized.

Use indicators

Use Amount Comment
Currently the Social and Cultural Planning Office (SCP) and the Erasmus University Rotterdam, supported by the Ministry of Education, Culture and Science are conducting a research on the use of on the use of digital cultural resources.

Assess any user-need surveys made on digital heritage content services

• Report Social and Cultural Planning Office (SCP) and Digital Heritage Netherlands (DEN): "Klik naar het verleden" (2006)
• Report Social and Cultural Planning Office (SCP) and Erasmus University Rotterdam: "Bezoek onze site" (also available in English: "Visit our Site": <http://www.scp.nl/english/publications/summaries/9789037702965.html> (2006)
• Taskforce Archieven: "Snuffelen en graven" (2006)
• DIVA: sectie kwaliteitszorg "Archiefbeheer in de praktijk. De klant centraal"
• Netherlands Institute for Cultural Heritage ("Instituut Collectie Nederland –ICN"): "Behoefte onderzoek gebruikers Collectiewijzer"