Wegwijzer

Setting up an image bank

Yvette Hoitink

Author
Yvette Hoitink

Design
Arno Geels, BNO, The Hague

Disclaimer
'Setting up an image bank' is the result of a study conducted with the utmost care using the information available at the time. The author and the contractor (Archives Taskforce) accept no liability, however, for any loss or damage arising out deficiencies in the content, such as errors or incompleteness.

ISBN: 978-90-78763-02-4

TABLE OF CONTENTS

Preface

The cultural heritage of the Netherlands is made up of a vast array of objects and documents – from archives, books and magazines, visual artworks and all kinds of other cultural historical objects to audiovisual sources, some of which exist only in digital form. However, these are stored in widely dispersed locations, as the collections are held by many different heritage management organisations. Digitisation and online availability allow us not only to cross these physical barriers but to dissolve the boundaries of time and place for an interested public.

The archive sector wishes to fully exploit the public and social capital that lies hidden in all these collections. As well as carefully managing the collections, the sector is determined to reach as broad an audience as possible and to maximise the use made of the collections. ICT offers promising possibilities in this regard, but in order to exploit these fully we need to ensure quality assurance in the fields of digitisation and digital accessibility. This is why the archive sector has set up the Digital Accessibility of Archives Taskforce.

The 2003 study Naar een publieksgericht archiefbestel [Towards an audience-oriented archival system] by the Dutch Institute for Research on Public Spending (IOO) revealed that the Netherlands has a large new target group (about 28% of those aged 18 and over) who are only interested in finding out what archival organisations have to offer by means of digital technology. That's a sizeable new audience. Images – photos, maps, drawings, postcards, etc. – make up a key area of interest for this group.

Archival institutions are already responding by setting up image banks, either alone or in conjunction with one another. These projects have all yielded valuable learning experiences – experiences that are of interest not only to archival institutions wishing to set up an image bank, but also to those contemplating further development of their existing image bank. This is what prompted the Taskforce to produce a handbook on setting up an image bank. This guide brings together and systematises our practical experience, and offers useful suggestions for further development. The practical approach is of course paramount, which is why the guide is written from the perspective of an archival institution faced with a wide range of choices.

It is quite likely that new information, including further tips from archival practice, will come to hand after this guide has appeared. This information can be found on the Archives Taskforce website: www.taskforce-archieven.nl.

A steering committee of people from the archive sector was set up to ensure an effective tie-in with practical needs and experiences. Expert input has also come from other institutions, such as Digital Heritage Netherlands and the National Library of the Netherlands.

Valuable pointers for this guide came from consultations with the steering committee and other experts. The Archives Taskforce wishes to express its appreciation to all those involved.

More information

Archives Taskforce
PO Box 90520
2509 LM
The Hague
The Netherlands

E-mail: taskforce@taskforce-archieven.nl
www.taskforce-archieven.nl

Partners in the Archives Taskforce are:
Nationaal Archief (principal partner), the Netherlands Institute for Heritage,
Digital Heritage Netherlands (DEN), the Inter-Provincial Council (IPO) and the
Association of Netherlands Municipalities (VNG)

Introduction and guide for the reader

In addition to written documents, archival institutions administer large quantities of image material. Most collections contain a wide range of material, from hand-drawn seventeenth-century maps or nineteenth-century prints of castles to twentieth-century photos or postcards.

This image material is ideal for a broad audience. After all, pictures also appeal to many who are not engaged in in-depth historical research. With the advent of the Internet, it is now possible to bring this material to the attention of an audience that seldom, if ever, sets foot in a reading room.

An increasing number of institutions have opted to make their image material available online through image banks. An image bank comprises the digitised images plus a description of the images. This allows visitors to find the image they are looking for and to see what it represents.

This guide brings together the expertise and experience built up in recent years with regard to the setting up of image banks. It presents best practices as current in the archive sector in early 2007. The guide is intended as a manual for institutions wishing to either set up a new image bank or expand an existing one.

Guide for the reader

The guide is divided into two main parts: the step-by-step plan (Chapter 1) and an outline of the choices to be made (Chapter 2). Each part complements the other. Steps in the step-by-step plan will often entail one or more choices, and conversely, a choice may recur or be fleshed out in several different steps.

T!P You will find practical tips throughout the text. These can be identified y this symbol in the margin.

Project managers intending to set up a new image bank are advised to start by reading Chapter 1, the step-by-step plan. This discusses the entire course of an image bank project. More information can then be found in chapter 2, which explains at greater length the choices to be made.

Project managers wishing to know how best to expand an existing image bank can seek inspiration for new opportunities in Chapter 2, the choices to be made. The practical tips in Chapter 1 can also offer pointers for improving the image bank.

Chapter 2 will be of particular interest to project managers, as it discusses the range of options open to you.

For readers wanting additional information, we refer you to the references and the knowledge bank on the Archives Taskforce website: www.taskforce-archieven.nl.

Gonzales Coques and many other artists

'Interior with figures before a picture collection' 1667-1672, canvas 176 x 210.5 cm.
Royal Picture Gallery Mauritshuis, The Hague

1 Step-by-step plan for image bank project

Establishing an image bank can be viewed as a project because it is a one-off activity involving several people (often from different departments) working together for a set period with a certain quantity of resources in order to achieve a result. For this reason, the step-by-step plan adopts a project-based approach.
The aim of the project is to create an image bank and its associated work processes. The project usually begins with the drafting of a project plan and ends the moment the image bank comes online and is transferred to the line organisation.

In general terms, setting up an image bank involves each of the following stages:

Preparation	Design	Realisation	Production
• Drawing up a project plan • Setting up the project organisation • Exploring joint projects • Taking stock of the current situation • Describing the target situation • Making a copyright inventory • Testing against policy • Deciding on outsourcing • Arranging funding • Drawing up a communications plan	• Defining requirements • Selecting suppliers • Selecting image material	• Developing the software • Digitising the image material • Indexing the image material • Writing additional texts • Making material available	• Implementing the communications plan • Launching the image bank • Transfer to permanent • organisation

1.1 Preparatory stage

1.1.1 Drawing up a project plan

An image bank project usually begins with drafting a project plan, which contains at least the following:
- Objective of the project
- Target group for the image bank
- Project organisation (who does what, what expertise is required?)
- Anticipated impact on the organisation
- Planning
- Budget

See Appendix A.1 for a comprehensive project plan checklist.

T!P An image bank often has several objectives. For some it might be a tool for reaching a wider audience, and for others a conservation instrument for protecting the collection or for adding supplementary information from the public to the collection. We recommend that you consider these different approaches in the project plan because they will determine just how the image bank will be used in practice.

T!P If you are uncertain whether there is enough support for the project, it might be a good idea to first of all draft a project proposal. This sets out the reasons for implementing the project and describes the project in general terms. If the project proposal is approved, a project plan can still be drawn up outlining the project in more detail. By first assessing a project proposal, you avoid a situation in which a great deal of work has gone into a project that is not viable.

1.1.2 Setting up the project organisation

In this stage, decisions are made as to who does what. For example:

- Project management
- Selecting the image material
- Digitising the image material (implementation, supervision)
- Indexing the image material
- Communication about the launch
- Technical support for suppliers

T!P To be successful, an image bank must be embedded effectively within the organisation. It is therefore worth ensuring that people from different departments in the permanent organisation (e.g. collection managers, reading room staff, maintenance staff and ICT staff) are involved in the project. You should also be thinking about how the image bank will be managed once the project is completed. These staff can then think about this aspect during the project and will be fully informed about the choices made. It is also important that staff are regularly updated about progress (e.g. at staff meetings).

1.1.3 Exploring joint projects

Thanks to the Internet, it is possible to jointly present collections from several institutions. One option is to set up a joint image bank containing the collections of several institutions. Another is for each institution to present its collection in its own image bank, but to also have a website – called a portal – where the public can search several collections at the same time.

Whether or not institutions collaborate with others can have major implications for the project. It is therefore important in the preparatory stage to explore the issue of co-operation. If you decide to incorporate the image material in an already existing image bank, project implementation is usually confined to digitising the material. In this case, the work is carried out in accordance with guidelines agreed for that image bank. If a decision is taken to jointly set up a new image bank, greater co-ordination may be needed. While this may involve a longer timeframe, it could also reduce costs because there are several parties to share the one-off and ongoing costs. You may also decide to allow your own image bank to be searched via a portal. In this case, the material must be made available in a format that the portal can process.

T!P An example of a joint image bank is the Memory of the Netherlands, www.geheugenvannederland.nl. Visitors can browse here through the collections of dozens of institutions. Material included in the Memory must comply with guidelines drawn up for that purpose.
The North Holland Image Bank (www.beeldbank-nh.nl) is one that functions as a portal. The search results are shown in the portal website, but visitors can click to access an image from a contributing institution.

1.1.4 Taking stock of the current situation

When setting up an image bank, it is often possible to use existing resources. These are outlined in the preparatory stage. For example:

- Available digital images
- Available metadata, digitised or non-digitised
- Available expertise within the organisation
  (on Internet applications, metadata, digitisation)
- Existing image bank

T!P In practice, existing descriptors are often far from optimal. They may be too general, or not be designed for online use (e.g. series descriptors). You must then decide whether to place the material online with inadequate descriptors or wait until the descriptors have been improved. Such considerations of quantity versus quality generate much discussion at many archives. It is therefore important to think about this issue at an early stage.

1.1.5 Describing the target situation

In the preparatory stage, a global inventory also made of the desired situation (e.g. the type and quantity of image material to be included in the image bank). Such an inventory is needed in order to estimate the costs involved.

T!P Many archives already have a database containing descriptors of the image material. These databases can be used to estimate the number of objects in the collection or sub-collection and the number of objects that have to be digitised. Bear in mind that although composite objects like photo albums or series may appear in the database as a single object, several objects may have to be digitised.

1.1.6 Making a copyright inventory

We advise you in the preparatory stage to make a global inventory of the copyright on the images. This will avoid a situation in which you put considerable time and energy into setting up the image bank only to discover later that the images may not be published online (see image on page 14).

See section 1.2.3 for more information on copyright.
You can, however, include descriptors for image material for which the institution does not hold the copyright. Site visitors are then notified that the image is not available online.

Example: Postcard image bank Groningen Archive
www.groningerarchieven.nl

1.1.7 Testing against institution policy

It is a good idea in the preparatory stage to check how the image bank complies with institution policy. Policy plans or information plans often set out the parameters within which projects (e.g. creating an image bank) should be carried out.

T!P Policy plans or information plans often contain information that can help you to organise an image bank project. Which objectives can the image bank help to meet? Does the target group of the image bank match the target groups that the institution is trying to reach? What is the policy on software development? The project will have a greater chance of success if these aspects of the image bank are linked to institution policy.

1.1.8 Deciding on level of outsourcing

Setting up an image bank involves a range of tasks. For almost every task, you need to decide whether the archive itself should do it or whether it needs to be outsourced. As this decision has many implications for planning and for funding, a provisional decision must be taken early in the project. If you discover in the course of the project that the decision does not work in practice, you can of course still change your decision.

You need to decide for the following tasks whether the archive itself will perform them or whether they will be outsourced:
- Digitising the image material
- Indexing the image material
- Developing the administration software for the image bank
- Developing the software for the visitor website
- Hosting the website
- Maintaining the administration software for the image bank
- Maintaining the software for the visitor website
- Exploitation of the image material (sale of reproductions)

T!P Most archives opt to at least outsource software development, software maintenance and web hosting, and to index the image material themselves. With digitisation, we see a greater variety of options: some archives elect to digitise everything themselves, while others hire in specialist scanning companies. Of course, combinations are also possible. You may decide to scan material smaller than A4-size yourselves and to outsource the scanning of larger material.

1.1.9 Arranging funding

The image bank costs can be broken down into in one-off and ongoing costs. The costs depend very much on whether you decide to do the work yourselves or to outsource it. One-off costs are:

- Digitisation costs
- Cost of administration software for the image bank
- Website software costs
- Graphic design costs for website
- Cost of digitisation equipment (if you do the digitising yourselves)
- Cost of purchasing a web server (self-hosting)
- Cost of buying other hardware: storage hardware (e.g. SAN or NAS for network storage), PCs for administrators
- Deploying your own staff
- Perhaps hiring in external expertise

T!P   You may try to cover all or part of the one-off costs through funding. See the 'Overzicht fondsen en subsidieregelingen voor Digitaal Erfgoed' [Summary of funding and grant schemes for digital heritage] available from the Digital Accessibility of Archives Taskforce (www.taskforce-archieven.nl).

Ongoing costs:

- Cost of web hosting (server on which the image bank operates), including bandwidth costs
- Deploying own staff (updating the image bank)
- Cost of digitising supplementary material
- Hardware maintenance and depreciation costs
- Software maintenance and depreciation costs
- Licence costs

T!P   A rule of thumb for estimating the ongoing costs of maintenance and software licences is that this usually amounts to between 15 to 20% of the one-off costs per annum.

Ongoing costs are usually borne by your own organisation. Your organisation therefore needs to make a decision in advance to invest in the image bank for several years.

In addition to costs, an image bank can also generate income through the sale of reproductions (on paper or as downloads). You can include this anticipated revenue in your financial projections.

T!P   In the preparatory stage, it is important to consider offering reproductions and the price to be charged. What is your starting point: only to cover the cost of reproductions or to recover the costs of the web shop? Will you levy a fee for user rights or can anyone use the images for any purpose? Depending on the kind of use, a distinction is often made when passing on the cost of user rights between no costs

for private use and different rates for commercial publications according to the type of publication (online, journal, book) and its circulation.

1.1.10 Drawing up a communications plan

To ensure that the image bank is given sufficient publicity, it is important to draw up an effective communications plan in good time. The plan should include:
- The type of press releases to be drafted
- The kinds of media that will announce the launch (regional newspapers, local history journals, genealogical magazines, your own newsletter, mailing lists, news groups)
- Which websites will be asked to provide a hyperlink to the image bank (e.g. portal sites)
- How your staff will be kept informed about the image bank and its progress
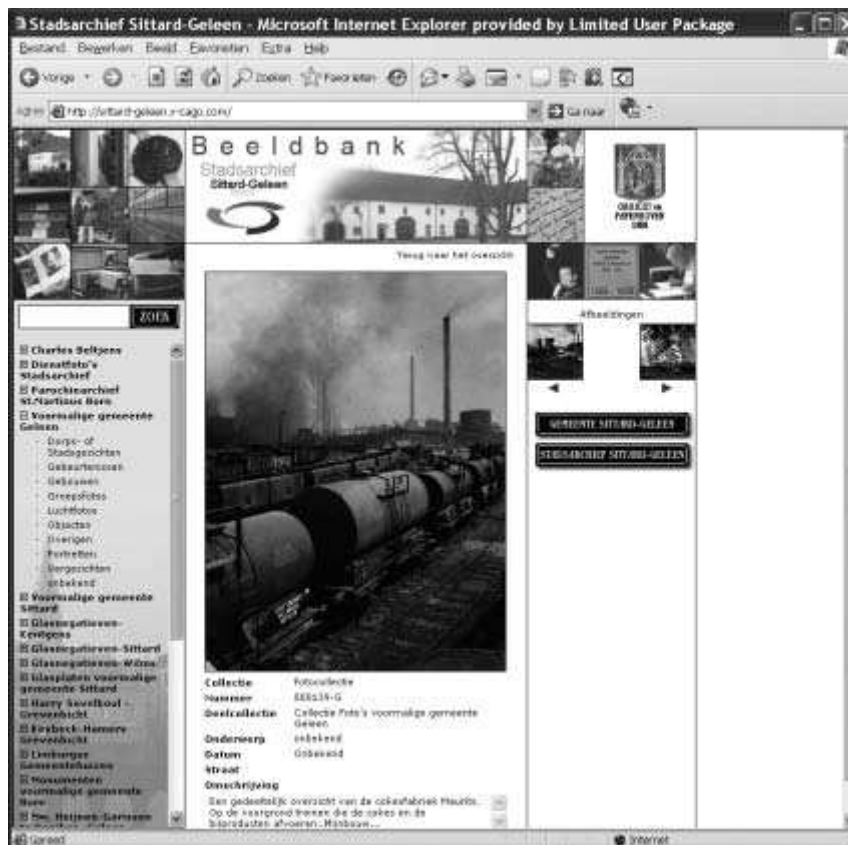
A tree diagram gives visitors a good overview of the subjects in the collection. Visitors can browse the collection without having to formulate their own specific search question.

Example: Sittard-Geleen Municipal Archive image bank
www.stadsarchief-sittard-geleen.nl

T!P Search engines are an important tool for making your image bank known to an audience that may be unfamiliar with your institution. The positioning of your website in search engine results depends on:

- How frequently the searched-for word occurs on the page, with additional weight being given if the word features in the page title
- The number of links to the image bank from other websites (and the quality of those websites)
- The extent to which the content is accessible to search engines

Search engines do not fill in forms. If the images can only be accessed via a search form, search engines will never find them. You therefore need to ensure that there are additional entries to the image bank, such as thematic lists containing images or a hierarchical structure with all the images. This allows both visitors and search engines to browse the content of the image bank (see image on page 17). It is also helpful if results can be accessed directly (deep linking). This will encourage others to make links to your image bank (e.g. from weblogs) and will enable search engines to offer links to specific images in your image bank.

1.2 Design stage

1.2.1 Drawing up wishes and requirements

The definition of requirements for the image bank sets out what the organisation wants the image bank to do and what conditions need to be met. A definition of requirements contains the following:

- Summary of desired functionality (for both visitors and administrators)
- Standards to be used
- Indication of the nature and extent of the image material
- Desired support (training, manuals, helpdesk)
- Legal framework (e.g. regarding the rights to customised software and the use of images)
- Technical requirements, such as the type of server running the image bank and the guidelines that the site must comply with. This is particularly important if you intend to do the web hosting yourselves (see image on page 19).

Refer to Appendix A.2 for a comprehensive checklist for defining image bank requirements.

T!P The Dutch government has drawn up web guidelines (see http://webrichtlijnen.overheid.nl). By following these guidelines, you can ensure that the site is accessible to disabled people, can easily be found by search engines and is easier to maintain. We advise you to take these web guidelines as your starting point when formulating technical requirements. As of 1 September2006, all new Dutch government websites have had to comply with these guidelines.
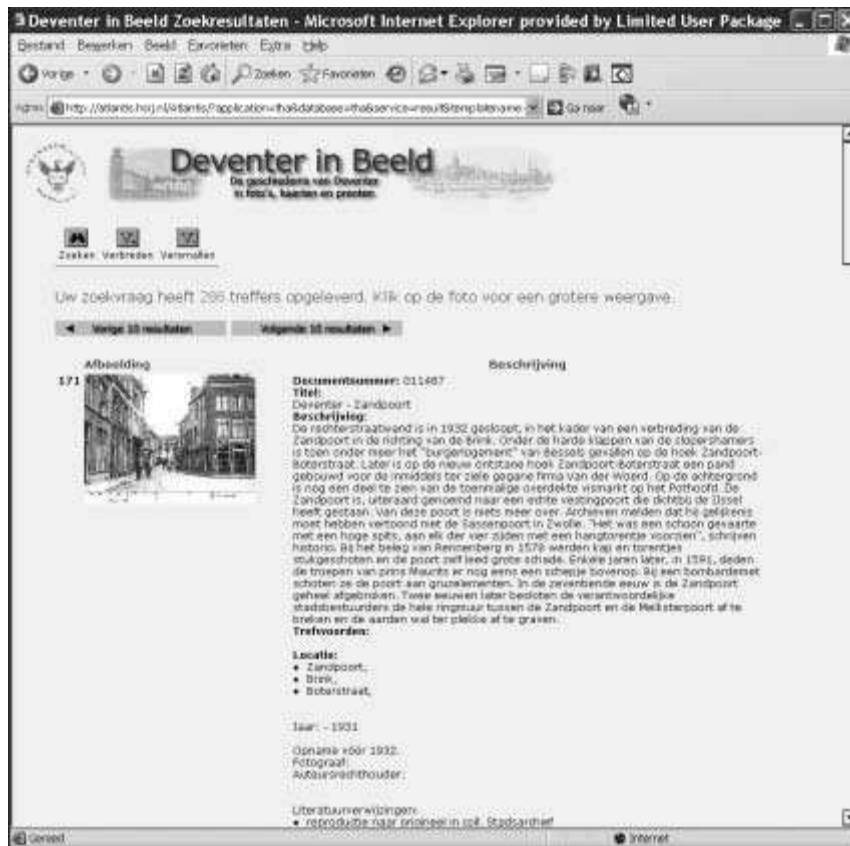
A lengthy description containing key words provides not only a great deal of information, but also many opportunities to find the image.

Example: Deventer in Beeld (Municipal Archive and Athenaeum Library Deventer) www.deventerinbeeld.nl

Wishes and requirements can also be drawn up for digitisation. This includes:
- The resolution at which digitisation occurs
- The file format in which the digital images are supplied
- The storage medium on which the digital images are supplied (DVD, hard disk, FTP)
- The nomenclature of the digital files
- The means of linking the digital image with the original so that you know which image you are dealing with. For example, using a logical file name, placing a bar code on the original (or its cover) that corresponds to the file name, providing an additional file indicating for every file name which object it refers to, etc.

See Appendix C for more information about the quality at which you can digitise and Appendix A.3 for a comprehensive checklist for defining your digitisation requirements.

T!P   It can be useful to establish the specifications per type of object. An archive can decide to set lower quality requirements for a handwritten archive item (criterion of legibility) than for photos, where every detail

must be visible. You may also choose to have larger photos scanned at a lower resolution than small ones because large photos often do not require the same level of detail.

Digitisation quality requirements also depend on the reason for scanning. Digitisation for the purposes of conservation or for professional publications will involve higher requirements than if the sole purpose is to allow the public to view the images. 35-mm negatives will have to be scanned at a much higher resolution than photos in order to preserve all significant details. Also, scanned negatives first have to be made positive in order to obtain the true image.

Finally, we advise that you establish what the metadata needs to comply with:
- Which standards?
- Use of existing thesauruses
- What level of granularity (how far do you go with your description?)
- Level of interpretation of the image ("elderly woman shakes young man's hand" is much less helpful to visitors wishing to find the image than "Princess Juliana greets Prince Willem-Alexander").

Allocating metadata to the images serves two purposes: it describes the image and ensures that people can find the image. For archives, the emphasis is often on the former, whereas the latter is vital if the image bank is to be a success.

T!P You should bear in mind when describing the image that metadata is used not only to show what an image represents, but also to find the image (see image on page 19). In other words, it is better to choose commonly used terms that visitors will search for and to avoid more unusual expressions. In other words, use "Princess Juliana greets Prince Willem-Alexander" rather than "Her Royal Highness greets her eldest grandson".

1.2.2 Selecting suppliers

There are different tasks to be carried out:
- Graphic design
- Construction of image bank
- Digitisation of image material
- Hosting the image bank

You can decide for each task whether to select a supplier or to carry out the task yourselves. Some suppliers combine several tasks. The process described below applies to all tasks.

T!P Be wary of new suppliers who are doing something for the first time. Although this may give you an opportunity to be involved in development or to obtain a discount, it may also take a good deal

longer and may not give you what you expect.

The usual practice is to approach several suppliers to submit a quotation. Since suppliers have different areas of expertise and charge different rates, it can be very instructive to compare quotations. You may even save on costs.

T!P Do you know of an image bank that matches your wishes in terms of functionality? If so, the supplier of that image bank may be the right one for you.

The request for quotation covers at least the following points:
- Definition of wishes and requirements
- Questions about the supplier: experience in the heritage sector, experience with comparable projects (references), company size, how long the company has been operating, etc.
- Request to include information on proposed approach, timeframe, demands on your own staff and the required one-off and ongoing investments
- Information on administrator training possibilities
- Information on the desired quotation format to make comparisons easier. For example, you can request that all wishes be worked out as optional extras or that the quotation be submitted both on paper and in digital form.
- Information on the timeframe in which the quotation should be submitted
- Information on the desired general terms and conditions (e.g. including own purchase conditions)

Once all quotations have been received, you need to compare them. We recommend that you draw up in advance a 'score list' of aspects on which the quotations will be assessed. All quotations are then evaluated in terms of each aspect. The suppliers who have submitted the best quotation are invited for an interview, in which the following points are addressed:
- Getting to know one another
- The supplier explains the quotation in more detail
- Answering questions about the quotation (clarifying uncertainties, discussing points that are not acceptable)

T!P It is important during the interview to pay attention to how the supplier communicates with you. Does the supplier immediately understand what you mean? Do they use very technical language or adapt their terminology to that of the archive?

Clear communication with the supplier, with no need for intermediaries, can prevent the project from overrunning its time or can avoid a result that you did not expect. You should therefore ask who the contact person will be for the duration of the project and arrange to meet them.

When selecting a supplier for digitisation, we advise you to have a number of test scans made of representative items. This will give you a good indication of the quality you can expect and may serve as reference material in the event of disputes.

It is often clear after the first interview who your preferred supplier is. You may request a revised quotation. This is usually followed by a further interview in which the following points are discussed:
- General terms and conditions under which the work is carried out
- Agreement on which parts of the quotation will be carried out
- Agreements on supplying images
- Agreements on supplying or entering metadata
- Planning

T!P   When negotiating the general terms and conditions, be sure to address the following:
- Do you remain the owner of the digitised image material and the metadata?
- What happens if the supplier closes down or goes bankrupt? How do you then gain control over your own material?
- If the supplier is also arranging for reproductions, do you grant that supplier the exclusive right to reproduce your material or may other parties do so as well?

The contract is then assigned. You need to notify the rest of your organisation about the planning so that the people involved will be available when needed.

1.2.3   Selecting image material

Because selecting and digitising the image material can be very time-consuming, it is important to make a start on this early in the project.

T!P   Sometimes there may be several versions of an object available, for example both a negative and a print or a rough copy and a good copy of a manuscript. We advise you to consider in advance how to deal with several versions and to make agreements about this.
Some archives opt to digitise all of the versions, while others prefer to have as little overlap as possible between the objects and therefore opt for a single version. Archive policy will determine which version is selected. One archive may prefer negatives to prints because negatives are often sharper or the file with negatives may be more comprehensive, while another archive may regard the print as the true work of the artist and the negative as a semi-finished product.

Criteria for image material to be included in the image bank could be:
- Material with a high level of public interest (photos, maps)
- Material that is already digitally available (e.g. for use in publications)
- Material whose condition does not permit frequent consultation in the reading room

- Collection highlights (items of great historical or cultural importance)
- Material on a topical theme or on a specialist area of the institution
- Material that is already well indexed
- Material that is free of copyright or for which your own institution holds the copyright

T!P Drawings may first have to be flattened or restored before they can be digitised. Digitisation may therefore have implications for restoration and conservation.

T!P You can find more on the subject of copyright in the Juridische Wegwijzer [Legal Guide].
The material is free of copyright if the maker has been dead for more than 70 years.
When selecting material, it is a good idea to ask the following questions:
- Is there a copyright on the work? If not, there is no problem. If so:
- Does your institution hold the copyright? If so, there is no problem. If not:
- Do you have the copyright holder's permission to place the material online?
- If not, the material may not be placed online, unless you obtain permission. If so, you should also check whether permission has been granted to sell reproductions for private and/or commercial use.

Even if the preliminary check appears to suggest that the archive holds the copyright, you would be well-advised to inform assumed copyright holders in the website's disclaimer about the steps they can take. After all, it is always possible that material transferred to the archive may include items whose copyright was not held by the previous owner.

1.3   Realisation stage

1.3.1 Developing the image bank software

Generally, it is an external supplier that develops or adapts the software for the image bank. During the development process, the supplier maintains regular contact with the contractor.

T!P Arrange for the supplier to make a prototype and discuss the prototype with different people within the organisation. This will ensure that any problems are quickly identified and that the organisation as a whole will continue to feel involved with the image bank.

T!P It is a good idea to commit to paper any agreements with suppliers, such as delivery dates or any anomalies. This provides an additional tool for checking whether both parties have the same understanding of the agreements reached. In addition, recourse can be made to the

agreements in the event of problems.

Once the supplier is ready, tests can be carried out. It is important for different departments to be involved because they may look at image banks from a different perspective. It may also be useful to obtain feedback from a user panel.

With regard to testing, bear in mind the following:
- Does the functionality comply with the definition of requirements?

- Have the requested standards and other technical requirements been complied with?
- Is the application user-friendly for visitors and can it be used without training?
- Is the application user-friendly for administrators and can it be used by those who have to work with it?
- Have things been omitted from the definition of requirements that are nevertheless required?

This is also the time to run training courses for administrators.

1.3.2 Digitising the image material

The digitisation of the image material can be carried out in parallel with the software development for the image bank.

If digitisation is outsourced, we advise you to first have a small series of test scans made. The archive must then arrange the following:
- Record the absence of the items in the archive administration system
- Make agreements with the supplier about handling the items (e.g. procedures and climate control)
- Make agreements with the supplier about transport and insurance or about having the items digitised in your own archive
- Packaging and delivering the items (depending on the agreements with the supplier)
- On delivery, check compliance with the defined requirements for digitisation, check whether everything has been scanned (no omissions or doubling-up), and check for mirror images (especially with glass negatives)

T!P Digitisation expertise is required for checking the quality of the scans. In particular, checking the resolution requires specialist knowledge. You will find a brief explanation in Appendix D. Digitised glass negatives require special attention during the checking process. Check whether the digitised image is correctly oriented and is not a mirror image (see image on page 25).

If digitisation is carried out by your archive, ensure that the following conditions are present:

- Digitisation expertise
- Technical digitisation facilities, such as scanners or digital cameras
- Sufficient storage media

Next, your own staff will work in accordance with the defined requirements.

Glass negatives require special attention when digitising. For street scenes, you can examine street signs or the direction of traffic to see whether you have a mirror image.

Example: Image bank of the Regional Historical Centre Limburg

www.rhcl.nl

1.3.3 Indexing the image material

Indexation occurs in accordance with the set requirements. It is often possible to use the newly-developed image bank software, in which case, the metadata cannot be entered until the end of the realisation stage.

1.3.4 Writing additional texts

In addition to the image material, further texts often need to be written, such as the introduction, colophon, copyright information, justification, help text,

standard mail, etc. The archive service must submit these texts to the supplier in good time.

1.3.5 Making material available in the image bank

Ultimately, all available information must be placed in the image bank. This often involves the following tasks:
- Adding digitised images to the image bank
- Converting existing metadata, allocating it to the associated images and monitoring this process

1.4 Production stage

1.4.1 Implementing the communications plan

Depending on the chosen media, the communications plan is implemented several weeks before the site launch. The press releases are sent to the media designated in the communications plan.

1.4.2 Launching the image bank

The image bank is launched in consultation with the supplier. From that moment on, it is accessible to the public.

T!P Ensure the following in connection with the launch:
- Make agreements with the hosting provider on peaks in visitor numbers
  Generally, image banks have to process a large number of visitors in the first two weeks after the launch
- Ensure that there are enough people available to reply to e-mails and that those closely involved in the project are available if problems arise

1.4.3 Transfer to permanent organisation

After the launch, the image bank is transferred from the project organisation to the permanent organisation. From that moment on, the permanent organisation becomes responsible for managing the image bank. This involves the following tasks:

- Processing visitor responses
- Implementing corrections
- Selecting, digitising, indexing and adding new material
- Administering the software (updates, notification and/or fixing bugs)
- Administering the web server (updates, notification and/or fixing bugs)

- Periodic evaluation as to whether the image bank continues to meet the organisation's functional requirements

T!P Image banks will attract few return visitors if new material is seldom added.
For this reason, more and more archives are making digitisation a structural part of their annual plans so that their image banks can be regularly supplemented with new material to attract new visitors

2   Choices to be made

Setting up an image bank entails a succession of choices. What material do you use? How do you present it to the public? Some choices are technical, while others relate to content. In this chapter we map out the choices to be made, and provide practical tips on how to flesh out those choices.

T!P   Archives Taskforce has a knowledge bank of information on a range of subjects such as public, digitisation and accessibility (www.taskforce-archieven.nl/kennisbank). You will also find many recommendations for technical standards in the ICT register of Digital Heritage Netherlands (www.den.nl/register).

2.1   Content

2.1.1 Type of material

What type of material do you include in the image bank:
- Images, sound fragments and/or films?

T!P   You need to consider a few additional matters if you choose to include multimedia material:
- The files are larger and therefore require greater storage capacity and bandwidth

      You can opt for full downloads or to offer multimedia material as a stream. A stream means that the file can be played immediately, with the next bit being constantly retrieved as it plays. This option is commonly available among providers specialising in multimedia. Multimedia material can be indexed at different levels. You can opt to allocate metadata to the object as a whole or to each scene.

What type of documents (see image on page 29) are included in the image bank:
- Photos, maps, postcards, floor plans, deeds, newspapers, etc?

T!P   The choice of document type is often determined by the public policy of the archival institution. Photos hold greater appeal for a target group consisting primarily of interested laypeople, while an academic researcher may be more interested in digitised deeds.

2.1.2 Metadata
- What metadata is allocated?
- Do you use an existing standard or do youcreate your own fields? Or do you use your own field, which can then be converted to a standard?

Postcards appeal to a wide audience because they often portray familiar scenes

Example: Postcard image bank Gelderland Archive www.geldersarchief.nl

T!P We advise you to match your metadata to the Dublin Core standard. See Appendix B for the recommended minimum set.
Many people today are researching their local or family history. We advise at the very least that you index the images by the person's name, the street name and place name. Postcodes or x- and y-co-ordinates (geocoding) can be used to identify the location.

Establishing a metadata format involves two steps:
- Indicating the fields (deciding on the form to be filled in)
- Deciding on the information that should go in each field. For example, editorial agreements on descriptors, agreements on how to handle the dating of reproductions, which key word list is used, etc.

T!P Many archives already contain databases in which the descriptors follow their own metadata format. You may also opt to work with a standard. It is frequently possible to convert your metadata format (mapping) to a standard. This does not always work, however, and may have to be done manually.

Converting the metadata to a standard format can be done once (conversion), after which you can work in accordance with the

standard. The advantages are that it is easier to work with other institutions, new staff can learn the ropes quickly and you can use the available standard software.

Instead of a one-off conversion, you may also opt to continue to work internally in accordance with your old method, but to make the data available to outsiders in accordance with the standard. We would advise against this, for the added reason that it may often involve manual conversions of the data.

2.1.3 Digital files

How are the images made available?
- How many dpi (e.g. 72 dpi or 300 dpi)? See also Appendix C for more information on the quality of scanning and Appendix D for checking the resolution of the delivered material
- Which file format (e.g. JPG, GIF or TIFF for single images or TIFF or PDF for combined images)?

T!P Some archives opt for a single, standard format (e.g. A4 at 300 dpi). This means that originals smaller than A4 are scanned at a higher resolution than larger originals.

2.2   Visitor functionality

See also Appendix A.2 for a checklist for defining image bank requirements.

2.2.1 Search functionality

There are the following options for searching:
- Simple or advanced search (field-specific)
- Is the search only possible using text or can visitors, for example, click on a map?
- Are wild cards supported? (A wild card is a special character that can replace any character in a search query)
- Is Boolean searching (AND, OR, NOT) supported?
- Making thematic preselections available
  This helps to give people an idea of the image bank content and is ideal for zeroing in on topical matters. They could use a predefined search in which questions are answered. An example is to offer a selection for each place name.
- Permitting refining or expansion of search queries
- Indexing with key words
  This requires much more effort during the indexing process as it involves allocating key words and updating the key word list.

T!P Certain search functionalities, such as Boolean searches and permitting search refinements or expansions, are particularly designed

for more sophisticated researchers. We suggest that you offer these options discreetly so as not to confuse ordinary visitors.

T!P It is a good idea to offer simple searches – in which the results contain all the words (AND) – as the standard search method. This is similar to how Google works. It is best to offer advanced search formulas on a separate page, accessible from the simple search by means of a click.

T!P If you are going to support wild cards, we advise that you use ? to replace a single character and * to replace zero or more characters. For example, man?en will find both manden and mannen, while man*en will find manen, mannen and manden, as well as manchetten.

There are several options for searching the image bank:
- Is the image bank searched by the general search engine of the institution website?
- Does the search involve only your own image bank or those of other institutions as well?

There are several options for presenting search results:
- Gallery presentation with just pictures, pictures plus text or just text. The user can often choose.
- Offering sorting options
- Providing tips (e.g. for search strategies if a search produces no results)

T!P To give visitors a quick impression of the results, it is a good idea to display pictures (with or without text) in the search results by default. These pictures (also called thumbnails) should be large enough to give the visitor a good idea of the image.

Presentation of the image:
- What metadata are displayed?
- Are the metadata clickable or not?
- An example of clickable metadata is a place name that you can click on, which yields search results about that place name
- Is there a zoom function?
- Can the full image be downloaded? If so, what is the quality like?
- Are images that belong together displayed together? (e.g. a digitised archive object consisting of several pages)

2.2.2 Response options

For visitor responses, there are several possibilities that can be used alongside one another:
- Providing an e-mail address to which people can mail
- Providing a mail form where visitors can respond (we recommend that this be provided as a matter of course)
- Providing a response form for posting responses on the site. In this way, visitors can help to enrich the material.

- Enabling live contact with the institution staff, for example via instant messaging or a chatbox (see image on page 33)

T!P Providing live contact opportunities requires considerable commitment on the part of the organisation. It entails always having a member of staff available to respond immediately. If the service is popular, one person may not be enough. If it does not go well, however, that person could be waiting for nothing. A way to limit staff deployment is to keep online 'office hours', which involves having someone only directly available online at agreed times.

2.2.3 Ordering options

What can be ordered:
- Can the images be ordered?
- If so, does this apply to the entire image bank or only to subcollections?
- If so, on paper (which formats?) or digitally (download)
- Can all images be ordered?

Implementing ordering:
- Mailing
- Online order form
- Shopping cart to which images can be added

If images carry the names of the people portrayed, visitors can easily find themselves or their families. This can produce some interesting, personal responses.

Example: Nationaal Archief Image Bank
http://beeldbank.nationaalarchief.nl

How payment works:
- Via the website
  Possibilities include credit cards, The Way You Pay, iDeal and Paypal.
- Not via the website
  In advance: the order is not processed until the customer transfers the Money. Later: the customer receives an invoice/giro slip with the dispatched order.

T!P Allowing the option of paying by credit card can be very expensive because you need to enter into an agreement with a financial institution. There are also transaction costs associated with online methods of payment.

How is the order processed:
- By your own organisation?
  For this, you need suitable printers, which your staff must to be able to operate.
- By an external party?

T!P If you outsource the provision of reproductions to an external party, you may have to charge 19% VAT, whereas your own institution is not required to charge VAT. Investigate this properly in advance and bear it in mind when setting prices.

Setting prices:
- Is there a fee for copyright or for use of the image?

T!P You can find more information about setting prices for the exploitation of image material in section 1.6 of the Juridische Wegwijzer.

User-friendliness:
- Can visitors track the processing of their order via the website?
- Can visitors open an account for future orders?

T!P The Dutch Distance Selling Act generally applies to orders made via the Internet. The Act entitles customers to cancel their order and return the product, at their own cost, within seven days of receipt. The invoiced amount must then be credited to their account. Items produced in accordance with the buyer's specifications are an exception here.
  The provisions relating to distance selling can be found in articles 46a–j of Book 7 of the Dutch Civil Code (see http://wetten.overheid.nl).

2.2.4 Storing results

It is possible for visitors to store the found images for a later time. The following options apply:
- Allowing them to prepare their own profile in which images can be stored
- Allowing them to prepare their own profile in which search queries can be stored

2.3   Administrator functionality

2.3.1 Administration environment

On which platform is the image bank administered? Options are:
- Via a (Windows) program installed on the administrator's computer
- Via an administration component of the website

2.3.2 Image administration

How can images be added to the image bank? Options are:
- Supply on DVDs, which always requires the co-operation of the supplier

- Adding them to the image bank yourself. The files are then sent to the image bank via the network or via the Internet without the intervention of the supplier.

Which modifications to the image must be possible using the administration software? For example:
- Mirror image (especially useful for glass negatives)
- Cropping
- Adjusting
- Reducing
- Modifying the contrast, saturation or colour balance
- Retouching

T!P   Every archival institution will have to decide whether and to what extent the digitised images can be modified. Some modifications (e.g. cropping, adjusting) are carried out to render the digital version as close as possible to the digitised original. Most institutions make such modifications. Other changes (e.g. altering the contrast, retouching) are carried out to make the image look as good as possible. Many institutions do not want to do this because it would affect the authenticity of the image.

If your institution decides to modify images, we advise you to also keep the unmodified version so that other choices remain open to you in the

future.

2.3.3 Metadata

How can metadata be allocated? Options include:
- Can series descriptors be allocated or must every image be described separately?
- Is it possible to maintain a list of key words or a thesaurus?
- Are there compulsory fields?

T!P Some administration software offers a single text box for key words, in which all key words are typed in succession. In such cases, you need to agree on a character – e.g. a semicolon (;) – to separate the key words. This will enable you later to convert the text into a list of individual key words. Otherwise, you will not be able to distinguish, for instance, between "Bergen" and "Bergen op Zoom".

2.3.4 Rights

What rights are recognised?
We advise in any event that you make use of the following rights:
- Administrator – the right to add, remove and modify images and metadata and the right to accept or remove new users and to grant them rights. The image bank administrators can be granted these rights.
- Viewers – the right to view images and metadata
  The institution staff may be granted these rights so that they can also consult the image bank administration.

If you use volunteers to enter metadata, we recommend that you create a separate 'Volunteer' role for them, granting them only the right to add metadata and to view metadata and images.

2.3.5 Statistics

What statistics should be collected? For example:
- Number of visits
- Number of visitors (based on IP addresses)
- Data traffic used
- Content of the database (number + scope of images)
- Referring websites (where do the visitors come from?)
- Most frequently used search terms
- Most frequently consulted images
- Click paths
- Orders

2.3.6 Orders

If you decide to permit ordering from the image bank, this will entail choices about processing. The two most common types are:
- Processing by e-mail: the website e-mails the order to the archive staff member for processing
- Processing by means of an administration application (see image on page 37)

If you opt to process orders within the administration application, you need to choose the functionality of that application:
- Displaying outstanding orders
- Order tracking (monitoring the status of an order, perhaps also accessible to visitors)
- Account administration (e.g. allowing certain customers to pay on credit)
- Processing invoices
- Drawing up credit invoices

One option is to allow visitors to order a scan or a reproduction of an image. Many image banks let customers add images to their shopping cart.

Example: Image bank of Brabant Historical Information Centre
www.bhic.nl

2.4 Design

2.4.1 Image bank design

There are the following options for image bank design:
- Using the design of the image bank supplier
  Although this tends to be cheap, it makes your organisation less identifiable.
- Fitting in with your own house style
- Creating a completely new design for the image bank

T!P Not all suppliers of image bank software are equally flexible in letting you make changes to the design. For example, some suppliers allow you to modify the colours but the structure of the site is fixed. Others give you complete design freedom. The extent to which you can alter the design itself also varies. We therefore recommend that you include your design requirements in your definition of requirements.

2.5 Process

2.5.1 Content administration

- Who will be responsible for adding new material?
- Who will be responsible for describing new material?
- Who will be responsible for processing responses?

2.5.2 Technical administration

- Who will be responsible for the technical administration?
- What level of support is required in the event of emergencies?
  Should this be 24/7 or is it sufficient for a problem to be solved within 48 hours?

T!P In general, 24/7 support is much more expensive. If you are considering offering this level of support, you also need to consider the demands this will make on your own organisation. Are faults only remedied if they are reported by an employee? You can only adopt this approach if you have staff available to report faults. Many archives opt for a next-business-day solution, in which problems are solved the following working day at the latest.

2.6 Implementing the image bank

2.6.1 Support standards

- Does the image bank use the OAI protocol for data availability?
- Does the website comply with government web guidelines?

T!P By supporting OAI (Open Archives Initiative), the image bank can act as a data provider. Other image banks or special search engines can then search the information.

T!P Web guidelines have been developed by the government to ensure that websites can be maintained, are robust and accessible. These guidelines are obligatory for central government websites but also serve as a useful guide for other websites. See http://webrichtlijnen.overheid.nl.

2.6.2 Legal framework

- What type of licence applies to the image bank software?
- How many administrators may use the software?
- Can you allow third parties to adapt the software?

T!P In their general terms and conditions, many suppliers state that they retain the intellectual ownership rights to the image bank software. This means that you are entitled to use the software but may not have it modified by a third party. Provided you have a good relationship with the supplier, this should not be a problem. In the event of conflicts or bankruptcy, however, it could mean that you may no longer continue to develop the image bank. It is therefore critically important when selecting a supplier that you investigate both the experience of others with this supplier and supplier continuity and that you make agreements about how to access your data in the event of the supplier closing down.

3   Literature and further information

P. Alkhoven
Inleiding in het digitaliseren van erfgoedcollecties, National Library of the Netherlands, 2004. <http://www.kb.nl/hrd/digi/Inleiding-digitaliseren.pdf>

R. Bourgonjen, M. Holtman, E. Fleurbaay
Digitalisering ontrafeld, Gemeentearchief Amsterdam, 2006. <http://stadsarchief.amsterdam.nl/algemeen/organisatie/projecten/digitalisering_ontrafeld_web.pdf>

Advies overheid.nl
Richtlijnen voor de toegankelijkheid en duurzaamheid van overheidswebsites, 2006. <http://webrichtlijnen.overheid.nl>

A. Beunen, T. Schiphof
Juridische Wegwijzer Archieven en musea online, Digital Accessibility of Archives Taskforce /Museumvereniging 2006. <http://www.taskforce-archieven.nl/projects/juridischewegwijzer>

V. Cohen
Beelden en geluiden in Terabytes. Nieuwe toekomst voor het audiovisuele geheugen van Nederland, in: Archievenblad December 2006.

cDAVID
Rapport Digitaal Beeldarchief. Aanbevelingen voor het realiseren van beeldbanken aan de hand van lessons learnt en best practises, 2005. <http://www.cdavid.be>

Digital Heritage Netherlands
Kwaliteitsinstrumenten voor ICT-projecten en digitalisering. <http://www.den.nl/register/digitalisering>

Digital Heritage Netherlands and Mondriaan Foundation
Cultureel erfgoed digitaal; leidraad bij projecten.

Dublin Core Metadata Initiative
Using Dublin Core, 2005. <http://www.dublincore.org/documents/usageguide>

The Memory of the Netherlands
Richtlijnen en procedures voor uitvoering van projecten. <http://www.kb.nl/coop/geheugen/richtlijnen /richtlijnen%20en%20procedures%20geheugen%20openbaar%204.1.pdf>

E. Hokke
En we noemen 'm: Internationale Norm voor Archivistische Geautoriseerde Beschrijvingen voor Organisaties, Personen en Families, in: Archievenblad June 2006.

J. de Haan, R. Mast, M. Varekamp, S. Janssen
Bezoek onze site. Over de digitalisering van het culturele aanbod, Social and Cultural Planning Office, 2006.
<http://www.scp.nl/publicaties/boeken/9037702902/Bezoek_onze_site.pdf>

E. Klijn, Y. de Lusenet
SEPIADES. Cataloguing photographic collections, KNAW, 2004.
<http://www.knaw.nl/ecpa/publ/pdf/2719.pdf>

B. Lai, E. Magnée-Smirnova, H. van Dam, M. Geelhoed, N. Hoevenaars
Het juiste digitale gereedschap bepalen met de checklist toegankelijkheidsinstrumenten, in: Archievenblad June 2006.

D. Maidment-Otlet
The JISC Digitisation Programme, Joint Information Systems Committee.
<http://www.jisc.ac.uk/digitization>

P. de Rynck (ed.)
Beelden in woorden: wenken voor de beginnende beeldbankmakers, Culturele Biografie Vlaanderen, 2006.
<http://www.culturelebiografie.be/library/cbv2006/documents/publicaties /beelden_woorden.pdf>

Senter Novem
Subsidieregeling Digitaliseren met beleid, 2007.
<http://www.senternovem.nl/Digitaliserenmetbeleid/>

J. Tieleman
KIT zet kaartencollectie op internet, in: Archievenblad February 2006.

H. Wubs
Snackers, gravers, grasduiners: Doelgroepen in het middelpunt, in: Archievenblad June 2006.
<http://www.taskforce-archieven.nl/pers/doelgroepen>

H. Wubs, F. Huysmans
Klik naar het verleden. Een onderzoek naar gebruikers van digitaal erfgoed: hun profielen en zoekstrategieën, Social and Cultural Planning Office, 2006.
<http://www.scp.nl/publicaties/boeken/9037702791/Klik_naar_het_verleden.p df>

H. Wubs, F. Huysmans
Snuffelen en graven. Over doelgroepen van digitaal toegankelijke archieven, Social and Cultural Planning Office, 2006.
<http://www.scp.nl/publicaties/boeken/9037702767/Snuffelen_en_graven.pdf>

Appendix A

Checklist documents

This appendix contains three comprehensive checklists: an overview of the common components in a project plan, a definition of image bank requirements and a definition of digitisation requirements.

A.1   Project plan checklist

Introduction

Objectives
- Project objectives
- Intended results
- Scope of the project
- Target groups

Quality
- Quality criteria
- Risks and opportunities
- Quality control

Project environment
- Current situation
- Related projects

Project organisation
- Project leadership
- Project group
- Steering committee
- Suppliers

Planning
- Stages
- Activities
- Division of tasks
- Products to be delivered

Budget
- One-off costs
- Ongoing costs

Communication
- Internal communication
- External communication

A.2   Checklist for defining image bank requirements

Image bank content
- Size of the image bank
- Type of objects in the image bank

Visitor functionality
- Consulting
- Searching
- Responding
- Ordering
- Storing

Administrator functionality
- Administering images
- Manipulating images
- Indexing images
- Processing orders
- Administering responses
- Administering selections
- Administering visitor accounts
- Administering administrator accounts
- Statistics

Presentation
- Design
- Site structure
- Language
- Access for the disabled

Links to other systems
- Metadata formats to be supported
- Links to archival institution website
- Links to other image banks
- Import and export possibilities
- Searchability by search engines

Required supplier characteristics
- Experience with similar projects
- Desired support
- Means of communication

Technical requirements
- Platform on which the image bank should operate
- Browsers to be supported
- Standards to be supported
- Guidelines to be used

- Scalability of the image bank

A.3   Checklist for defining digitisation requirements

Material to be scanned
- Number of objects
- Type of objects

Logistics
- How the originals are supplied and returned
- How the digital files are delivered

Procedure
- Dealing with originals
- Digitisation method to be used
- Quality control

Files to be delivered
- File format to be used
- File names to be used
- Desired resolution
- Desired colour depth
- Metadata to be delivered

Required supplier characteristics
- Experience with similar projects
- Desired support
- Means of communication

Appendix B   Dublin Core

If you use the Dublin Core to determine your metadata, we advise you to at least support the following fields:

Dublin Core Element	Meaning
Title	The title of the object
Creator	The maker of the object, for example the name of the photographer, cartographer or artist
Subject/key word	Key words that describe the content
Description	A description of the object in free text
Publisher	Name of the archive placing the images in the image bank
Date	Date of the object (exact date or period/first year-final year) We recommend that you take the dating of the content as your starting point. For a reproduction, this is the date on which the original was made. Although the date on which the reproduction was made may be relevant for administration and conservation purposes, it is confusing for the public.
Identifier	Designation linking the associated file with the image
Language	Language used for the title, description, subject/key word and coverage
Coverage	The geographical key words that can be assigned to the object (e.g. street, town or city, province).

These fields have been chosen because they match the most frequently asked questions from visitors (who, what, where, when, how) and because they indicate what a found object represents. They are the most frequently used fields in the Netherlands and internationally, and are sometimes given as the minimum requirement by grant providers.

For more information on other elements and on applying the Dublin Core, see 'Using Dublin Core', www.dublincore.org/documents/usageguide.

Appendix C   Scanning quality

Scanning is not only carried out for image banks. We therefore offer more general suggestions about scanning quality. Two extreme-case scenarios are juxtaposed to help you make a proper appraisal:

TIFF	JPG
Suitable for conservation purposes	Suitable for viewing purposes
All information from the original also available in digital form	Compression leads to loss of information
Suitable for 1:1 print on paper and viewing on screen	Suitable for viewing on screen
Large files requiring considerable storage capacity and bandwidth	Small files requiring little storage capacity and bandwidth
Not directly applicable in a browser	Directly applicable in a browser

The scanning quality does not have to match the quality displayed in the image bank. The digital file can be stored once again at a lower quality for the image bank. Many archives choose to scan at 300 dpi TIFF to produce a mother file from which they make a 72 dpi JPG file for the image bank.

Which strategy best suits your project? Answer yes or no to the following questions:
- Is the original a highlight of your collection?
- Is the original in poor condition?
- Is the original not always available
  (e.g. because it is on loan or because it is normally frozen)?
- Will the scan also be used for printing purposes in the next three years?

If you answer 'yes' to one or more of the above questions, it is probably a good idea to scan at 300 dpi TIFF. In that case, you should bear in mind that you will have to store the TIFF files permanently. We advise you to store the files on several hard disks. You can also make a JPG-derived file as the copy to be used for consultation via a browser.

If you answered 'no' to all the questions, you could consider scanning at a lower quality to keep down the ongoing storage costs. This may involve having to scan the original again in the future.

T!P   The Amsterdam City Archive has conducted a study of storage methods for digitised images. You can find the study report on http://stadsarchief.amsterdam.nl/algemeen/organisatie/projecten /digitalisering_ontrafeld_web.pdf

Appendix D   Checking the resolution

When a supplier is commissioned to digitise image material, agreements are made about the resolution at which the images are to be scanned. This appendix explains how you can check whether the delivered resolution does in fact correspond to what was agreed.

Check 1: Examine the file resolution

A simple check is to call up the file resolution. Select the file in Windows Explorer and right-click on the file. Select 'Properties' and then the 'Summary' tab. Next, click on the 'Advanced' button to display the horizontal and vertical resolution of the image. If this differs from what was agreed on, the image has not been delivered as agreed.

T!P   If the resolution is correct, this still does not mean that scanning was done at the right resolution as it is possible to heighten the resolution by reducing the physical dimensions of a file. For example, a 10x10cm image at 150 dpi contains exactly the same information as a 5x5cm image at 300 dpi.

Check 2: Compare sizes

To check that the image has not been reduced in order to heighten the resolution, you can calculate what the size should be (in pixels) in order to compare it with the delivered size. To determine the delivered size, simply select the file in the Explorer. The size in pixels will now appear in the status bar.

To determine the size as it should be, it is important to proceed from the original. Measure the original in centimetres (width x height). Convert this to inches by dividing it by 2.54. Multiply this by the agreed resolution in dpi (dots per inch). The result gives you the number of pixels (width x height) that the scan should have.

Example:
- You have agreed that a photo of 10x15 cm will be scanned at 300 dpi 10x15 cm = 3.94x5.91 inches
- The horizontal measurement should therefore be 3.94 inches * 300 dpi = 1182 pixels, and the vertical measurement 5.91 inches * 300 dpi = 1773 pixels
- If the scan is smaller than 1182x1773 pixels, the agreed resolution has not been delivered

T!P   Even if a file passes both checks, you still cannot be certain that the scanning was carried out at the right resolution. This is because graphic software can be used to artificially give images a higher

resolution. The missing pixels are calculated (interpollation), which never gives the same quality as a high-resolution scan. It is difficult, if not impossible, to check whether the resolution has been artificially boosted in this way.

Index

The section numbers in bold indicate the fullest entry on the subject.