

**Archiving  
by Design:**  
Guidelines

# Guidelines for using the Archiving by Design scan

## Foreword

In order to make and keep information accessible in a sustainable manner, information systems must be set up accordingly. The measures that are needed to do so are best determined at the moment of change like:

- the purchasing, the (re)design and building of an information system, or
- a reorganisation or process change which affects the use of information systems.

This approach is called Archiving by Design (AbD).

Proposed measures are based on identified requirements which have been assessed on both necessity and feasibility. These requirements can be derived from different perspectives: legal, business and societal expectations (as described in ISO 15489-1:2016).

While legal and part of business requirements usually are defined by law, regulation and policies, user requirements (from both business users and users from the public) can vary depending on the context of an organization.

The methodology presented in this document aims to allow organisations to identify user requirements and to formulate appropriate measures focussed on improving sustainable accessibility of information within a certain context. These user requirements can be used as an addition to more general requirements that organisations already need to consider from a regulatory and policy perspective. (for more information on those requirements see the general guideline on AbD). The methodology is based on best practices that have proven their value in different European countries.

An AbD scan can be repetitive, allowing it to be used in an iterative approach.

Considering these measures – which could be both functional and organisational – during the design of a system is part of an approach called Archiving by Design. This approach is described in a [white paper](#) of the European Archives Group.

A [glossary](#) is available which provides definitions for most terms used in this document.

## Who is the target audience of these guidelines?

These guidelines are designed to help records managers, information managers and other stakeholders of public administration bodies to use the Archiving by Design (AbD) scan. The scan itself can be used by national archival institutions and departments responsible for the archives and/or records management policy, and that promote the archiving by design approach among other public bodies. When archival institutions, archives and/or records

management policy departments advocating archiving by design make use of this methodology, they play the role of a consultant or a facilitator of the AbD scan for another public body.

## Goals of the AbD scan

The AbD scan aims to:

- Deliver directly implementable recommendations and measures to improve the sustainable accessibility of information within a certain context;
- Share knowledge and facilitate a dialogue between different stakeholders within and outside a public administration organisation, about sustainable accessibility of information and archiving by design;
- Create awareness about the importance of sustainable accessibility and the added value of archiving by design for management and participants;
- Provide lessons learned and takeaways for both the public administration organisation and the facilitator on how to think about archiving by design and implement it further in the organisation.

**As a consultant**, the archival institution or the archives and/or records management policy department may provide advice to an organisation, (public) agency or body on how to better ensure sustainable accessibility to the information of the work processes supported by system(s) that the organisation is going to purchase, develop or revamp.

**As a facilitator**, the institution or department may facilitate the AbD scan by bringing several experts together and helping them to find ways to improve sustainable accessibility from a neutral perspective, not giving advice.

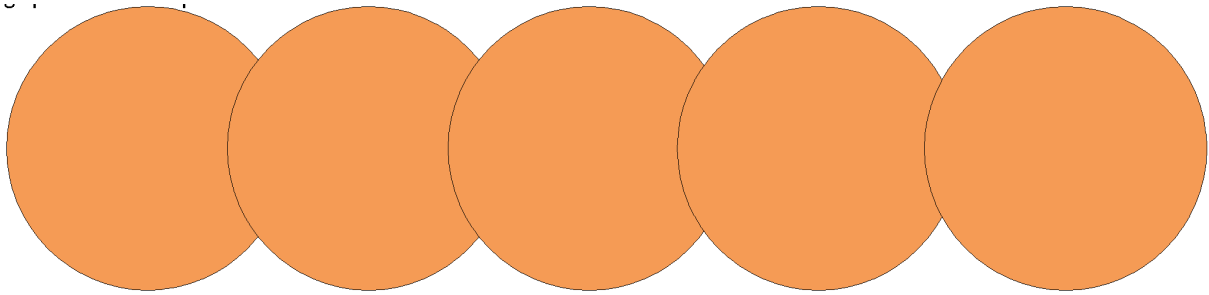
In both cases, the public body, agency or organisation, owning the information system, that agrees to undertake an archiving by design scan should commit to cooperate over the process led by the archival institution or the archives and/or records management policy department.

*Be advised that there is no legal requirement for an AbD scan and that in any means it can't be used for certification.*

## Methodology description

The methodology consists of a number of steps, which are reflected in the figure below. Each step is described separately in this document. As the methodology reflects best practices from some but not all European countries, it may be necessary to adjust it to work better in national or local context.

## High-level overview of the Archiving by design scan:



Step 1: Activities related to the initiation of the scan, such as intake and planning.

Step 2: Gathering of (context) information relevant for the AbD scan

Step 3: Check on general AbD requirements

Step 4: Execute workshops or interviews with users and developers

Step 5: Translation of user needs to recommendations, which can be presented and implemented

## Step 1 Initiate AbD scan

### Intake process

The process of starting an AbD scan should always involve one (or more) intake interview(s). An intake has multiple goals:

- To get acquainted with the organisation which intends to undertake an AbD scan;
- To explore their questions and needs related to the purchase, design or revamp of the information system;
- To clarify goals of and expectations related to the AbD scan (i.e. is a scan the right answer to the question?);
- To determine the necessary context for change (is there room to make design choices/changes based on recommendations and suggested measures which the scan delivers, within a reasonable time period?);
- To identify a sponsor at the managerial level; and
- To make practical arrangements related to the execution of the scan (i.e. availability of staff for interviews or workshops, meeting facilities)

If both parties agree that an AbD scan can be executed, this agreement can be formalized. A scan can be seen as a project, for which a project description can be made to document the purpose and scope of the scan, and to outline the AbD scan process and its execution.

### Description of the scope of the AbD scan

The scan should be applied in well-defined use cases. There should also be a context of openness to change and strategic level sponsorship. Part of the project description is to scope the AbD scan. This includes:

- A brief description of the work process that is supported and/or is performed by the information system (activities that result in information);

- the primary and secondary users of the information in the system (current and (potential) future users of information);
- the information objects processed in this work process and information system (information that is received and created);
- a description of the information system and, if applicable, its services and components (where information is being retained and managed);
- the context of change, be it either a project or a programme or other occasion that organises people and resources in the organisation as the cause by which an organisation purchases or (re-)designs a new (or an existing) information system and implements it in the organisation. (developments which lead to changes in a work process and information systems; for instance, a change in law and/or regulations);

The project description can be informed by the intake interview(s).

It is strongly advised to start having a look at available documentation during the intake . Step 2 will elaborate more on the aspect of documentation.

## Planning the actual Archiving by Design scan

The other part of the project description involves planning and timelines, and selecting people which should be involved (based on their roles). Planning depends on the availability of people involved. The agreements on who will process the possible output and deliverables during the AbD-scan and afterwards must also be described. Arrangements should be made to present the outcome to the sponsor of the AbD-scan within the organisation that has requested the scan. Also, an evaluation moment should be planned sometime after the AbD-scan is executed (anywhere between 6 to 12 months) to check whether or not improvement measures have been implemented and if further advice would be needed.

## Roles involved in preparing and executing the Archiving by Design scan

An AbD-scan demands the involvement of people performing certain roles. Typical roles are:

- **Archiving by Design advisor(s):** The advisor(s) is knowledgeable about archiving in general, the archiving by design approach, the scan methodology and general requirements related to sustainable accessibility of information. At the same time, the advisor should be open to embrace ways of implementing the requirements proposed by users and not previously envisaged in the implementation advice of the Archiving by Design requirements. The advisor defines the scope of the project and coordinates the process of selection of users, the preliminary identification of problem areas, the active gathering of information needs and in the identification of recommendations.
- **AbD-coordinator or AbD-coordination team within the participating organisation:** At least one expert in information and/or records management within the organisation, one person representing the business process(es) and one person representing the IT development team must ensure the completion of the gathering of documentation. They also provide input for the definition of the process(es) in scope, the known problems and the known characteristics of the information system.

They also take part in the process of selection of users. If needed, they will take care of necessary facilities (such as meeting rooms or workshop materials).

- **Client:** This role is responsible for approving the project description from the side of the participating organisation, as well as for receiving and accepting the results of the AbD scan. The client will also have to give enough mandate to allow the AbD coordinator or coordination team to perform their role, for instance to make sure that all necessary capacity in the organisation will be available during the AbD-scan.
- **Facilitator:** A role of interviewer or someone leading the process during group workshops: This might be oriented to prepare (in cooperation with the AbD-advisor) and carry out individual interviews or to guide group workshops. The facilitator does not need to have in-depth knowledge of information- and records management. He/she should have interview skills and/or skills to coach a group. For the latter, the objective is to run the workshop smoothly, to create better interaction between participants, and an environment of trust in which the input of the participants is being appreciated and taken seriously so that they can freely share their insights and needs.
- **Sponsor:** Ideally, this should be someone on the managerial level, a department head or the Chief Information Officer or equivalent. Having a sponsor secures that design choices/improvement measures will be followed up and implemented and may allow for implementation elsewhere or across the entire organization. In other words, it is a means to make sure the AbD-advice or recommendations will receive a favourable reception.

## Work process(es)

The coordination team should describe clearly (1) the objectives of the process(es) supported by the information system in the context of the organisation's general mission and objectives. The team should also document (2) the work process(es) themselves, together with the actors involved and the information inputs and outputs, including the creators of the information. The team should finally describe the (3) known problems in the work process(es) at present that need to be solved regarding the information findability, readability, availability, reliability, interpretability, sufficient and future proof. These problems should be taken with caution since the next stages in the process might unveil that causes or actors are different to those identified thus far.

## The information system

The AbD scan is meant to be applied in the inception of a new system or in the process of revamp of an existing system. Such a difference in the status of the system needs to be taken into account. The coordination team should also document the features and the functionalities that have been already considered for implementation together with their purpose and/or any known limitations to bear in mind in the development of the system. The AbD scan should be embedded in the process of purchasing or developing and building the information system (or its revamp). This can be done as part of the process to unveil the system requirements during the inception of the information system.

## Selection of information users

The AbD scan requires the gathering of the experience of users of information of the work process in scope. By doing so, it will be possible to identify the information needs and problems of the users concerned by the process. For this, it will be necessary to decide 1) the way information will be gathered, e.g. via interviews or via workshops, and 2) the way of selecting the users that will take part in the process of collecting information.

The users to be selected should be both primary and secondary users.

- **Primary users:** are those actors involved in the work process itself;
- **Secondary users:** refer to those not involved in the process but that make use of the information of the work process, at present or in the future, inside or outside the organisation. For instance, those handling (freedom of) information requests, researchers (including journalists) or citizens.

Several primary and secondary user roles should be represented, as well as creators of the information used in the work process. It is advised to create short descriptions of each user type to identify what they do, the information they use or create as part of (or about) the work process, how they use it, how they access it and interpret it. The known problems previously identified can help further describe each of the roles.

In addition, a third group of roles involved is defined: the developers in the organisation. This refers to information/solution architects, business information analysts, functional application managers of the information system and/or developers. These professionals in the participating organisation are best suited to translate the user needs to implementable aspects for the configuration of the information system in order to retain and manage the information in an accessible and sustainable manner.

If available, existing user profiles could be used to identify both primary and secondary roles which should be represented.

## Planning and scheduling

With this information, the coordination group plans the actions to execute. In this process, they should envisage 1) the gathering of documentation, 2) the preliminary identification of problems, 3) deciding on the technique(s) to actively gather information and plan the actual interviews or workshops to do so. Finally, 4) the identification of recommendations, the 5) selection and implementation.

## Step 2 Gather documentation

The aim of gathering documentation is to achieve a better understanding of the information system under scrutiny. In order for the next steps of the scan to take place, a clear overview of the purpose of the system, related actors, data and documents within and the setup of the system, future development plans, etc. is vital. One of the possible aims here is also to get an initial understanding of user needs.

The documentation needed for this could include technical, organisational information and or data management, as well as other contextual information, and can be obtained from the

organisation owning the system and/or responsible for developing it, any other relevant agencies or from public domain sources. Different information systems in different stages of development can be documented in various ways and levels of detail.

Among others, the necessary documentation includes, for example:

- **Legal documentation:** Applicable legislation, regulations and policies such as acts, statutes, as well as data protection records and privacy statements. The wider scope, in which the system can operate, is usually set with various pieces of legislation. This can be divided into two categories: firstly, legal documentation that has been created specifically for the system under scrutiny (e.g. mandate for developing the system, overall aim and scope, users and their rights as well as official appraisal decisions by public archives), and secondly, general legislative framework (e.g. GDPR, data security provisions, etc.). However, the scope of the AbD-scan continues to be the improvement of the sustainable accessibility of information. Part of the intake process or the actual AbD scan can be actually assessing if and how privacy and security of the information system at hand have been regulated. For instance, a question could be whether a data protection impact assessment has been executed or whether an information technology security assessment has been performed. The aim of the AbD-scan is not to go through these processes or to re-assess these processes.
- **Documentation related to the business:** Classification scheme, process analysis, any other documentation about the business processes supported by the information system. Business processes reflect the activities within the system in order to offer a service for the user. Understanding the business processes is about understanding which and how the services are provided for the user within the system and which information is used and created and how the information is managed (e.g. retention schedule and/or the retention or selection policy of the organisation).
- **Technical documentation:** Information model, (database and/or information/business/technical) architecture, database specification, any other design and requirements documents. The aim here is to get information about the technical aspects of the system, the structure and relations between the information objects, technical metadata, file formats, etc.
- **Documentation related to the users:** User manuals, demos. The aim here is to better understand user needs and experience. If there is a functioning or test version of the system, demos, etc. available, a practical user experience can also be very helpful as part of the intake process. The primary focus is on the subject of user requirements for improving sustainable accessible information.
- **Any other relevant documentation:** In some cases, documentation about other information systems (e.g. earlier systems with the same purpose, interoperable systems), or a wider business and technical context is needed. Also, documentation that states something about the general record- and information management policy of the organisation or from the specific department of the organisation in which the AbD scan is executed.

Gathering key parts of documentation is an essential input for the scan (step 3), but it can continue throughout the scan process, especially when the scan was started at very early stages of the development of the system, or before fundamental changes were being planned to an existing system. Missing documentation therefore is not an obstacle to

continuing the scan; creating the necessary documentation can become an outcome of the scan process.

While gathering and reviewing the documentation as part of the scan, one benefits from making sure it is up to date. Also, the documentation or parts of it that are out of date, should clearly be marked as such. This is especially the case when the scan process takes longer than expected, fundamental changes in development plans are made during the scan, or the development of the system is planned as a long-term, constantly changing agile process.

### Step 3 Perform check on general requirements

The European Archives Group has identified 10 general requirements for sustainable accessibility of information, based on archival and records management laws and regulations and standards. In order to check beforehand whether organisations meet these requirements, the list of basic questions associated with the general requirements can be used. Answers to these questions can be used to identify strengths and weaknesses, either by the agency in the form of self-assessment or as part of the AbD scan. The checklist can be used in preparation for interviews or workshops. When the checklist is used for a self-assessment, then the output is very useful documentation as part of the intake process.

When it is part of the AbD scan, the checklist is used by the AbD advisor as background knowledge and not offered as a survey or questionnaire or checklist to fill in or walk through. Be aware that information systems or data processing in public administration may be subject to a range of laws and regulations (e.g. from European, national, sectoral, local legislation or rules within an organisation). Any design of an information system or export of data from this system should be in line with such requirements. Identifying applicable laws and regulations and related requirements is part of step 2 of the methodology.

### Step 4 Conduct the AbD scan workshop(s) or interview(s)

The aim of the AbD-scan workshop(s) or interview(s) is to encourage participants (the users of information and developers within the organisation ) to go into dialogue and exchange thoughts about how the accessibility of information could be improved in a sustainable way (requirements). And how that could be translated in the design and configuration of the information system (functional and/or organisational, i.e. policy or procedures) when implemented.

Actively engaging the primary and secondary users and developers of the information system enhances the aspect of ownership as the participants of the AbD scan have themselves come up with the user needs and the improvement measures based on their (organisations) specific needs.

Another aim of this step is to get a better understanding of what is really going on in the user process, and to be able to prioritise between the different user needs. The level of detail in this step can vary a lot in implementation.

In this step, you should:

- carry out workshop(s) to gain a deeper understanding of what actually happens in the process/system
- double-check any user needs and/or areas identified in Steps 2 and 3
- discuss any gaps in documentation

## Tips when planning and facilitating a workshop

Getting a better understanding of the user process can be achieved through one or several workshops. The workshop is the preferred tool, but if several of these are not achievable, it can be supplemented by interviews. See more in step 1 about who should be participating in said workshops.

An important part of the workshop is getting different primary and secondary users (representing a user role) in the same room. The different users have valuable information about different aspects of the process. They will also have different backgrounds and knowledge, which makes it important to use language that everyone can understand. It can be very helpful to give a short presentation about what sustainability of information encompasses (the what, why and how) so get the participants on the same flight level. When facilitating, you want to make sure that all relevant user needs are discovered and explored.

A best practice for formulating user needs in a standard way is to use user stories. In a user story, the user role is mentioned, as well as the requirement and its intended result. An example:

**‘As** a legal professional (role), **I need** to be able to search across information systems (need), **so that** I can find all information relevant for a case (result).’

If there are a lot of user needs, it is advised to ask the participants to prioritise them. This helps to determine which needs should be addressed first from the user perspective. The user needs and their prioritization are documented by the AbD advisor.

Next to this, either in the same workshop or in a follow up, these user needs are discussed with the developers in the organisation, i.e. information/solution architects, business information analysts, functional manager of the information system, developers. The needs with the highest priority should be discussed first. These professionals in the participating organisation are best suited to translate the needs into improvement measures/recommendation/design choices. And to define whether these are feasible or not (time- and/or moneywise). The AbD advisor documents both improvement measures/recommendations/design choices and their feasibility.

A conclusion could also be that a used need is already met by the system or existing policy and that users are not aware of that – here the value of the dialogue between users and developers could come at hand.

Here is a list of questions that can be used by the AbD-advisor as inspiration for creating material for an interview or workshop:

- Who are the users, both current and future and what are their needs?
- What issues are experienced related to the use of information?

- Is your interest in information/records/data based on government, professional, research, commercial or citizen (public) mandate?
- What information/records/data are you interested in?
- How would you like to get access to the information?
- In which form would you like to use the information?
- How long should information/records/data be accessible (may differ for internal or external use)?
- Do you agree that required information/records/data may be accessed just in anonymised or pseudonymised form?
- Do you require that the accessed records/data have authentication features to ensure their authenticity and legal validity?
- Should required records/data have any specific features (e.g. specific metadata, machine readable text layer, visualisation of 2D/3D models, etc.)?
- Do you plan or need to share information/records/data and how?

## Creating awareness in the organisation

In the workshop setting, you also want to make sure that participants understand sustainable accessibility of information and why this is important. This allows participants to reflect on their different user needs in the right context. It is a valuable workshop exercise, as it creates awareness about each other's needs, sustainable accessibility of information in general and the application of Archiving by Design in the organisation.

If there is time, it could be valuable to elaborate on this in a separate, second workshop. Allowing for some time between the first and a second round of discussions will allow room for the participants to reflect on the outcome from the first workshop, and hopefully increase the impact. In a second workshop, a topic for discussion could be the needs identified in the first workshop .

## Step 5 Formulate conclusions and recommendations from the AbD scan

Eventually, the results of the workshop(s), interview(s) as described in step 4 can be used to formulate conclusions and recommendations for system design and/or implementation. In the project description, the agreements have been described on who will process the possible output and deliverables during and afterwards the AbD scan, and when. That is what takes place in step 5.

The output from the workshop(s) or interview(s) or self-assessment, is documented, as mentioned preferably already prioritised based on need and feasibility. Ideally, these needs are related to one or more characteristics of sustainable accessible information, such as findability. This allows for clustering of user needs, other than on the basis of priority – it can give insight into which characteristic is deemed most important. Based on prioritised user needs, a first draft of a report of the scan is created, in which conclusions and recommendations to improve sustainable accessibility of information are at the core. The order of recommendations is based on both need and feasibility (proposed

measures that are most needed and are most feasible – the low hanging fruit – are usually listed first). This first draft is created by the AbD advisor.

This first draft is then worked through with at least the AbD coordinator within the participating organisation – for completeness and to check if the tone meets the organisation.. This might take a few iterations to come up with a definitive report. In this final report, the recommended improvement measures (which should be able to be implemented almost directly) are separated from the more general findings and recommendations.

These recommendations provide answers to the following questions:

- What can be done to improve sustainable accessibility of information within the information system that is the object of the scan?
- If applicable, what general (also non-functional)
- improvement measures are recommended to the organisation as a whole?

## Recommendations regarding the information system that is the object of the scan

In order for organisations to use these recommendations, it is important to:

- Formulate as specific and practical as possible;
- Prioritise the recommendations (for example using the MoSCoW-method) based on need and feasibility;
- Explain why specific requirements are important. Align the proposed measures to public values, organisational goals and/or legal obligations, so that it is clear what the supposed outcome of a recommendation is;

Examples of recommendations:

- Create a policy which prescribes the use of open and sustainable file formats;
- Develop viewers for relevant file formats (at least those which are prescribed); and
- Enable federative search across business applications.

Archiving by Design is not about creating the perfect solution right away. Sometimes the implementation of a recommendation proves to be complex, expensive and/or time consuming. In these cases, it is useful to create a couple of scenarios or divide a recommendation into several smaller recommendations. Maybe a first step in the right direction can already be taken, after which the original recommendation can be deprioritised. Or further steps can be addressed in a later stage.

## How to present recommendations

The form in which recommendations are to be presented by the AbD coordination team, depends on what is the most effective way in that specific situation. Some options are the following:

- Presentation to the sponsor or project board;
- Written report;
- Integration in general project documentation;
- A combination of these.

## How to implement the recommendations

Recommendations have no value as long as they are not being followed up. Therefore, it is important to organise this. This follow-up can take on different shapes. For example:

- Make the recommendations part of an implementation plan;
- Add the recommendations to a backlog;
- Make the recommendations part of an internal audit plan of the organisation;
- Organise a follow-up workshop that focuses on how to implement the recommendations;
- Make agreements within the organisation on who takes on responsibility for every recommendation.

The implementation may depend on the methodology used (waterfall, iterative, etc). Information professionals of the organisation are in the lead for implementation, but could be assisted by the AbD advisor if needed and possible.

It is advised to plan for an evaluation with the AbD advisor somewhere between 6-12 months after the scan, to see how recommendations are being processed and if the organisation could benefit from further advice from the AbD advisor.