Guidelines for using the archiving by design scan

Foreword

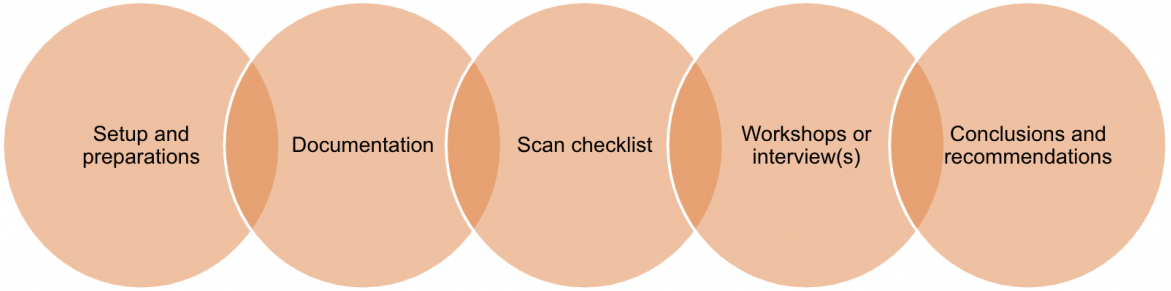
In order to make and keep information accessible in a sustainable manner, information systems must be set up accordingly. The measures that are needed to do so are best determined at the moment of the purchasing, the design and building, the revamp or phasing out of an information system. Although there is an increasing interest in archiving by design, application in practice appears to be a challenge. Information professionals are not always naturally involved in the change processes in their own organisations. Suppliers are not always familiar with the requirements for sustainable accessibility. This results in implemented information systems that do not suit the needs of the users of the information. Also, the policy on information management of the organisation is sometimes difficult to apply in practice. There is no easy, standard solution to these problems. Information professionals start archiving by design themselves with the creation of tailor-made solutions.

These guidelines present a methodology for archiving by design. We call this methodology the archiving by design scan (AbD-scan). The AbD-scan provides organisations with a format to take the first steps towards implementing archiving by design. Based on feedback, note that these guidelines can be subject to improvements in the future.

The methodology provides steps to apply archiving by design during the purchasing, the design and building, the revamp or phasing out of an information system within a public administration. It is addressed to the public body, agency or department that owns (and/or uses) the system to be developed or revamped and that decides to undertake an archiving by design scan. The object of the scan is the information system that is going to be newly purchased and/or developed, or an existing system that is going to be revamped or phased out, and the related work processes, the processed information and its users. The system might be developed in-house or outsourced.

More general background information about archiving by design can be read in the White Paper.

High-level overview of the Archiving by design scan:



Who is the target audience of these guidelines?

These guidelines are designed as a methodology to help records managers, information managers and other stakeholders of public administration bodies to implement archiving by design within their organisations. It can be used by national archives, other 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 or 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.

How to use these guidelines?

The methodology of the AbD-scan is a methodology for acquiring user requirements and formulating appropriate measures focussed on sustainable accessible information. It helps public organisations to take the first steps into applying archiving by design. It is based on best practices that have proven their value in different European countries. Sustainable accessibility consists of six high-level quality requirements. These are; findable, available, readable, reliable, interpretable, sustainable and future proof.

The scan is executed on a concrete and demarcated case. A context for change should be present and sponsorship from a strategic level is essential. The AbD-scan aims to:

- Deliver directly implementable recommendations and measures to improve the sustainable accessibility of information;

- Sharing knowledge and facilitating a dialog between different stakeholders within and external to a public administration organisation about sustainable accessibility and archiving by design;

- Create awareness about the importance of sustainable accessibility and the added value of archiving by design;

- 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.

Step 1 Setup and preparations

Intake process

The process of starting an AbD-scan should always involve one (or more) intake interview in which both parties get acquainted, i.e. the archival institution or the archives and/or records management policy department and the public body, agency or organisation (or business department within), owning the system and that intends to undertake an archiving by design scan. This enables them to explore the questions and needs that guide the purchase, development or revamp of the information system and also to discuss which challenges there are in implementing the correct measures in order to make and keep information accessible in a sustainable manner. The end result of the intake process is an agreement (or contract) to execute the project and a project description to document the purpose and scope and to outline the AbD-scan process and its execution.

Before entering the agreement, both entities need to clarify goals and expectations to assess whether the project can take place. Determining the context of change is about assessing if there are ongoing or soon to be planned developments which lead to changes in a work process and information systems in which the expected benefits (recommendations, design choices and/or improvement measures) of the AbD-scan can be incorporated and implemented. If this context is lacking one should consider not to start an AbD-scan.

In other words, in the intake process the client must express itself on the undertaking of the expected benefits of the AbD-scan at the end of the project so that the archival institution or department can identify any false assumptions at an early stage and, if necessary, redirect the project or bring it to an end. The designation of the role of a sponsor or client leader is very helpful in securing design choices/improvement measures will be followed up and are implemented. It should be someone on the managerial level, either a department head or the Chief Information Officer (CIO) or equivalent.

During the intake’s interview(s), the archival institution or the archives and/or records management policy department should clarify what the AbD-scan consists of, the benefits it brings and the type of support its staff will provide, i.e. providing recommendations and, when necessary, also support for their implementation. Once the agreement has been made, the archival institution or department and the public body or organisation agree (often in an iterative manner) on the project description.This description comprises at least these two aspects, the scope on which the AbD-scan is applied and a description of the process of the AbD-scan itself.

Description of the scope of the AbD-scan

- 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 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 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);
- in the intake process it is strongly advised to start having a look at documentation available. Step 2 will elaborate more on the aspect of documentation.

Process of the actual Archiving by design scan

The planning and timelines, the staff involved both on the part of the archival institution or the archives and/or records management policy department and the roles they will play in the project need to be explicitly identified. The agreements on who will process the possible output and deliverables during the AbD-scan and afterwards and when must be described. Arrangements should be made to present the outcome to the sponsor of the AbD-scan within the public body, agency or organisation (or business department within) owning the system, and to perform an evaluation after the AbD-scan is executed and improvement measures have been implemented.

Staff involved in preparing and executing the Archiving by Design scan

Setting up an AbD-scan demands establishing a coordination team. The staff that will be involved in the project and the roles they will play need to be explicitly identified. This does not refer to the users of information of the work process, but to the staff coordinating and executing the AbD-scan.

- **Archiving by Design advisor(s)**: The advisor(s) is knowledgeable about the Archiving by Design requirements, their implementation advice and checkpoints. 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.

- **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**: This role can also be seen as a principal client. It 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. In other words, it is a means to make sure the AbD-advice or recommendations will receive a favourable reception and to make sure that all necessary capacity in the organisation will be available during the AbD-scan.

The members of the team should have a flexible attitude towards the introduction of elements not planned in the system's development and willing to embrace other views' proposals. They should take part in the selection of users for the active gathering of information and they should plan and schedule the actions of the process.

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.

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.

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 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, etc. 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. 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 data are used and created and how the data 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, including programming language, 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 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 during the whole scan process, 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 Scan checklist

Be aware that information systems or data processing in public administration may be subject to a range of regulations (e.g. from European, national, local legislation or rules within an organisation). Beside archival or records management regulations, a number of other specific regulations are relevant, e.g. in the area of justice, health, education, statistical and demographic outputs like re-use of public data (open data), protection of personal and sensitive data and also cybersecurity. Any design of an information system or export of data from this system should be in line with such requirements.

The following checklist can be used either by the agency in the form of self-assessment or as part of the AbD-scan, to identify the strengths and weaknesses of the assessed information system or business process. The checklist can be used during 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 or it comes in place of actually performing a scan with assistance of the archival institution or records management department. When it is part of the AbD-scan, the checklist is used by the AbD-advisor in the background and not offered as a survey or questionnaire or checklist to fill in or walk through.

The meaningfulness varies depending on which phase(s) of the information system life cycle the scan is performed on. If it is performed at the phase of planning, designing or upgrading , all areas of the scan should be taken into account. When performing an AbD-scan at the phasing-out of the information system, the description and evaluation of the information model, as well as the enablement and conditions for the export of information objects including their metadata and preferred/open formats requirements should be taken into account. These areas are essential for the successful transfer of information objects to another system (e.g. a digital archive). If the information system is to be replaced with a new one, it is possible to perform an AbD-scan on both of them and use the knowledge gained to optimise the design or migrate the data. Data that cannot be migrated to the new system should be appraised in accordance with the applicable archival regulation and, where appropriate, managed in such a way that the information remains sustainably accessible for as long as needed.

Information model

Description	The organisation maintains an information model that describes all the information objects that the information systems contain.
Objective	The information model must present the information objects in a way that allows them to connect to the organisation's grouping or classification of all its information.
Implementation	An explicit listing and description of all information objects is the cornerstone for many archival (incl. Archiving by Design) actions. An information model allows stakeholders to understand the context of the information object, assess their value and need for restrictions, assess if information is complete and correct, and how it should be interpreted. For now the AbD requirements do not pose a specific template or notation for an information model. However, any reasonable information model should: * Describe the semantics of the information object, ideally be based on a solid business vocabulary; * Explain the structure of and relations between the information objects; * Include basic information about the use and management of the information objects (i.e. who are responsible and who are the main users of the object(s)); * Describe both the data and metadata of an information object; * Be developed using a standardised notation (e.g. UML); * Be available in an open format which is easily accessible for all relevant stakeholders (data managers, archivists, users, business owners); * Be regularly checked and updated in order to uphold its usability and accuracy; * Be automated if possible and reasonable (e.g. that updates in a database model are automatically reflected in the information model). Please note, that for larger information systems an information model might consist of multiple sub-models!
Questions	* Are all information objects covered by the information model? * Is all metadata covered by the information model? * Are the descriptions of the information objects sufficiently understandable? * Does the information model provide an overview of the owners and users of the information objects? * Is the information model available in a sufficiently standardised and accessible format? * Is the information model up to date?

Information value

Description	The organisation has assessed all its information objects for their reuse value and required accessibility levels. The reuse value of information can for example be legal, administrative, financial, historical, etc.
Objective	An organisation must have a clear understanding of "why" it gathers and maintains the information objects and "how" these information objects must be available. Such insights allow the organisation to determine which information object must be sustained for the long-term and which must not.
Implementation	* Information value can be recorded as part of the information model described above; * Organisation should make an effort to document the justifications for the assigned value (e.g. is there a legal act requiring the collection of the information, which business function(s) make use of the information, which stakeholder groups reuse the information); * The value of information can be determined by using risk assessment techniques (i.e. what are the risks if the data is not available any more); * Accessibility levels should be recorded using a consistent taxonomy (e.g. public, available for registered users, available after 5 years, available if anonymised); * Information value is often seen as subjective. Make sure to involve ALL stakeholders into the assessment!; * In practice the assessment of information value can be done in parallel with assigning retention periods, and to some extent it is possible to also apply local, national or international appraisal techniques for this task and, depending on legal requirements involvement of archive, it is necessary or recommended to set the enduring value of information.
Questions	* Is the information value recorded for all information objects? * Are accessibility levels recorded for all information objects? * Are the explanations and reasoning for information value appropriate and understandable?

Retention plan

Description	The organisation has assigned a retention period for each information object and/or group based on the value of the information object and/or group.
Objective	The definition of retention periods allows organisations to implement appropriate information lifecycle events into information systems (destruction and export for archiving or migration to other systems). The timely destruction of information objects is also a crucial component of GDPR compliance.
Implementation	* Many countries have established rules for determining retention periods (i.e. appraisal). Make sure to check for your national rules with the appropriate records management or archival agency;

	* Note that in some cases it is necessary to have a different retention period for data and metadata (i.e. some metadata is left available after the retention period for data is over); * Retention periods should also be recorded within the information system, as the basis for executing relevant destruction and export events; * Retention periods (including the retention periods as recorded within information systems) should be possible to be reviewed and changed in order to meet with changing user needs and legislation; * Note that retention periods should be implemented across all relevant information systems (e.g. if the information object is maintained as versions in various systems).
Questions	* Do all information objects have a retention period? * Is the retention period logical and appropriate (in regard to the information value determined in information value requirement)? * Have relevant national appraisal rules and legislation been respected? * Have retention periods been implemented into the information system(s)?

Search and representation

Description	A representation of each information object is defined and available within the information system. A search function is available that makes it possible to easily find the information object.
Objective	Long-term accessibility of information means that at each point in time information objects can be searched for, and can be represented in a meaningful manner.
Implementation	* A search function should include both full-text and metadata based advanced search; * A search function should be possible to be limited on specific information objects; * One information object can have multiple representations, however there should be at least one full representation including all relevant data and metadata of this information object; * The search and representation must be available for all users who are entitled to do so; * The search and representation should be based on user needs analysis, ideally developed including UX design competencies; * If reasonable, search and representation capabilities could be structured across core user groups (e.g. Employees and customers can have different possibilities to search for and view the information object); * Ideally one information system implements only one search engine for all its information objects (i.e. users do not have to switch between different search engines when looking for information); * The representation of an information object should be connected to a permanent URL which allows it to be referred or linked.

Questions	* Does the full-text search cover all information objects? * Does the advanced search cover all information objects? * Are search and representation capabilities appropriate for defined user groups? * Are search results consistent and reliable? * Are representations of information objects using a permanent URL?

Preferred/open formats

Description	Information objects (i.e. their representations) are stored or can be easily exported in open and standardised formats.
Objective	The use of open formats in information storing and/or export extends the practical accessibility and usability period of the information.
Implementation	Binary file formats: * Establish a list of preferred formats (open standards or formats that best meet the objective); * Prefer well standardised and widely used formats within this list; * Lists of "archival file formats" have been prepared by many national archives across Europe; * Implement file format identification procedures in appropriate information creation, information receipt and/or export workflows; * When receiving files in other formats it is recommended to keep the original file, and implement appropriate migration procedures for export purposes only; * Make sure to test any file format migration software thoroughly before implementing it; * Regularly review the list of preferred formats, appropriate information creation and file migration tools. Data formats: * Use open and easily reusable formats for data exports (txt, xml, rdf, json); * Make sure that appropriate metadata (e.g. column names) are possible to be exported along with the data; * Use widely accepted XML schemas and other data structures whenever possible; * Use standard (SQL, XML) data types as much as possible.
Questions	* Is an open format representation or export available for all information objects? * Is a list of preferred formats available and regularly reviewed? * If file migration tools are implemented, have these been thoroughly tested? * Are data (export) structures and formats defined and maintained? * Are data (export) structures and/or file formats appropriate for their intended users?

Metadata

Description	Each information object is accompanied by and can be easily exported with complete and up-to-date metadata. Sufficient metadata must also be available for the search function defined in requirement Search and representation.
Objective	Appropriate metadata allows the information objects to be searched and managed. Appropriate metadata provides context and provenance information relevant for the long-term usability of the information.
Implementation	* Check your national records management, archival and data governance bodies for possible national metadata requirements; * The quality and availability of metadata is especially crucial for the usability of information objects with long retention periods - make sure to prioritise these objects when developing metadata rules; * Automate metadata creation as much as possible; * Where metadata needs to be added manually, there are clear instructions on how and by whom to do so; * Create metadata during the creation of data. The later metadata is added, the greater is the chance of errors and/or high costs; * Make sure that appropriate administrative and provenance metadata is created and stored (in addition to descriptive metadata); * Note that the boundaries between data and metadata are not always clear in the case of structured data. In this case it is recommended to make sure that the information object itself includes sufficient data for object discovery, context and provenance detection purposes.
Questions	* Which metadata standards are implemented in the organisation and within the specific system that is being examined? * Are they compliant with legislative or business requirements if requested?

Destruction

Description	Information objects are destroyed no sooner and no later than indicated in the retention plan. Such controlled destruction of an information object must be documented.
Objective	If the information value and retention periods have been assigned appropriately, the destruction of unnecessary information objects helps the organisation to "clean" the information system and save resources in long-term data management actions, hardware resources, etc. Timely destruction of PII (personally identifiable information) is also key in achieving GDPR compliance.
Implementation	* The retention period should be defined in the metadata of an information object; * The expiry of that period should be automatically flagged, after which destruction follows; * Make sure to allow for a review of the destruction decision, especially if unsure about the appropriateness of retention periods;

	* Maintain clear destruction agreements for information objects for which automatic signalling is not possible with the administrators; * A declaration of destruction should be available; * Make sure that all appropriate versions of the information object are destroyed; * Make sure that the destruction of information objects does not destroy data needed by other information objects (with longer retention periods).
Questions	* Is destruction capability implemented within the system? * Has the destruction capability been appropriately tested? * Are flexible mechanisms available for the review of destruction decisions? * Is a destruction certificate being created?

Export

Description	Information objects can be exported in a standardised and controlled manner for transfer to an archive or any other information system.
Objective	A reasonable, trusted, tested, and easy to use export capability allows for information objects to be migrated into other systems whenever necessary - for example for storage in dedicated long-term repositories, or when changing the technical platform of the information system (potentially due to technology obsolescence). This, in turn, allows for continuing providing long-term access to the information across generations of soft- and hardware.
Implementation	* Make sure that all information objects are covered with export functionality; * Test the export functionality and make sure that the integrity of exported information is not endangered; * Create bulk export capability (i.e. to allow for the export of multiple (thousands) of information objects at once); * If the export to an external system is planned in the information object's lifecycle (e.g. transfer to an external digital archive after 5 years), develop appropriate automatic reminders; * Note that these export reminders are very similar to retention period reminders (though the outcome is export, not destruction); * Make sure to not delete exported information objects from within the information system before you have verified the quality of the export.
Questions	* Are all information objects covered with export functionality? * Are pseudonymised data transferred with key to their interpretation? * Has the export functionality been appropriately tested? * Is a bulk export capability available?

Right of access

Description	Information objects are accessible to anyone who is entitled to access on the basis of regulations and policies. If an information object includes some restricted elements, the system allows for the creation and management of an unrestricted representation of the information object.
Objective	For information to be long-term accessible it must be made available to the largest possible extent - users should have access to information as much as possible, subject to any restrictions on public access. This principle also includes information objects that contain parts that are not public but can be published after anonymisation, pseudonymisation, etc.
Implementation	* Provide a list of permissible grounds for restriction of publicity, backed up by legislation and policy, so that it is clear to everyone who has access rights; * Enable organisation-wide identity management and access control. Connect that to the applications in which information objects are stored, allowing an easy check if employees (and partners in the information chain) have access to certain information objects; * When 'blacking out' data it is not just the information object which might be anonymised but also metadata, for example the title of a record or an anonymised view / query; * Make sure that the information model defines which representations are temporary and which should be preserved.
Questions	* Have access rights been evaluated? * Is a list of user groups, their rights and permissions available and implemented within the system? * Is a list of possible restrictions available and implemented within the system? * Have means for data anonymisation, pseudonymisation, etc. been implemented within the system? * Are restrictions recorded within object metadata in a consistent and trusted manner?

Security

Description	The information system complies with applicable institutional, national and international information security standards.
Objective	The application of sufficient organisational, procedural and technical security methods is crucial for the long-term authenticity of information. A user must be confident that an information object is as previously recorded by authorised employees and that it has been protected from unauthorised changes throughout its lifecycle.
Implementation	* In most cases specific security standards and guidelines are available on a national level. Make sure to be aware of the standards that apply to your institution.

Questions	* Is the organisation aware of the security standards and guidelines that apply? * Does the organisation possess a valid security certificate? * Has the organisation undergone a recent security audit (both internal and external)

Step 4 The AbD-scan workshop(s) or interview(s)

The aim of the AbD-scan workshop(s) or interview(s) is stimulating participants (the professionals of the public organisation) to go into dialogue and exchange thoughts about what the improved situation of information that is accessible in a sustainable manner could/should be. How the design and configuration of the information system could/should sustain this and what improvements can be 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 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. When facilitating, you want to make sure that all relevant user needs are discovered and explored.

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. These professionals in the participating organisation are best suited to translate the user stories to

refined user stories and therefore implementable improvement measures/recommendation/design choices.

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?
- 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 the participants reflect on their different user needs for documentation, information sharing and long term preservation. Making the users as a group prioritise between the different needs, is a valuable workshop exercise, as it creates awareness about Archiving by Design in the team and in the organisation.

If there is time, it could be valuable to address this in a seperate and second workshop. Allowing 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 areas identified in the step before.

Experiences from this step could be user needs in the format of user stories or notes formulated during the workshops and/or interviews. The insights from the workshops, along with a prioritised list for user needs, can be used to leverage implementing Archiving by Design in the process of designing or changing a system.

Step 5 Conclusions and recommendations from the AbD-scan

Eventually, the **workshop(s), interview(s)** as described in step 4 lead to formulating conclusions and implementing recommendations. In the project description, the agreements have been described on who will process the possible output and deliverables during the AbD-scan and afterwards and when. That is what takes place in step 5.

As output **from the workshop(s) or interview(s) or self assessment,** the AbD-advisor and the AbD-coordination team, or responsible employee from the organisation have harvested a list of user wishes, as mentioned preferably already prioritised. Then a first draft of the conclusions is created in which these design choices/improvement measures are the core contents. 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. In the context of this guidance, this would be at least one of the members of the AbD-coordination team. This might take a few iterations to come up with a definitive list of design choices/improvement measures as part of the final report. In this final report, we separate the improvement measures (which should be able to be implemented almost directly) from the more general findings and recommendations.

These recommendations provide answers to the following questions:

- What can we do to improve sustainable accessibility within the information system that is the object of the scan?
- What are the next steps towards implementing Archiving by Design?

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);
- 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;
- Check how realistic the recommendations are in regard to planning and budget. If necessary, alternative short-term solutions should be provided.

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.

Recommendations regarding implementing Archiving by Design

As the methodology of the AbD-scan is designed as a first step towards Archiving by Design, it is also important to reflect on further steps regarding Archiving by Design within an organisation. Some questions that can be used to come up with recommendations are:

- How was it to have in one room different kinds of experts that do not usually work together this closely? Which measures can we take to intensify collaboration on a structural basis?

- What possibilities are there to incorporate (elements of) the AbD-scan into regular activities in project management related to designing new processes and/or IT solutions?
- How can organisational policies and governance support the concept of Archiving by Design?

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 implemented. Therefore, it is important to organise a follow-up. This follow-up can take on different shapes. For example:

- Make the recommendations part of an implementation plan;
- 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.