Archiving by design (1)

Archiving by design means designing information systems to support the work process in such a way that the long-term accessibility of that information is taken into account from the outset. This integrated approach to archiving helps to bridge the gap that often exists between the work process and the archiving process.

A government losing its mind?
In 2005, the Dutch Cultural Heritage Inspectorate issued a report entitled '*Een dementerende overheid*?' (A government plagued by memory loss'?). It states: "We are rapidly developing a hole in our collective memory because digital information is often being stored with insufficient care". More than ten years on, almost all government information is now digital. But the hole has yet to be plugged. Time and again, experts are identifying shortcomings in the government's digital archiving. They are also finding it difficult to bring about any improvements. However, there is no lack of good intentions or initiatives. Nor is there any shortage of fine words on the importance of archiving, backed up by numerous digital archiving projects. Despite this, the desired effect remains too small and is coming too late. Why is that?

The scapegoat
Archiving experts often blame poor archiving on the work process that produces the information. You often hear such criticisms as: 'The staff are failing to follow by our rules', 'The work process managers don't support our work properly' and 'The managers are postponing the problems of poor archiving, seeing it as something for the future, when they have more urgent problems to contend with'. In other words, 'They don't really care'.

This kind of scapegoating is all too convenient. But are we, the experts, also doing something wrong? Of course, we know that we struggle to convince staff in a work process of the merits of our case. But that is an easy excuse. It is reminiscent of a political party losing half of its seats and then blaming poor communication or the media. Perhaps it's time to rethink the case we are presenting?

Work process takes centre stage
In archiving, it's time to allow the work process to take centre stage. Why? To enable archive specialists to gain a proper understanding of how the work process and the information systems used for it operate, allowing them to engage in serious conversations about it with managers and staff. To ensure that managers and staff are prepared to take the necessary measures within the work process to enable proper archiving. How? By giving them the space to contribute their ideas on the requirements for archiving and what is needed to achieve them. When? When designing information systems to support the work process (the work systems). That is the time to discuss such measures. That is the time when resources are available to apply them. In addition, the design process offers the opportunity for archiving also to take account of other key issues, including user-friendliness, privacy, security and open data.

Designing
An information system design is a description of how the system should work. It can be compared to an architectural drawing for a building. You draw up a design before the start of construction, renovation or the sales process. During construction, it is often extended and amended. A design has several forms and stages, including a schedule of requirements, functional design, architecture or procurement specifications.

A design is always a compromise between divergent wishes and wide-ranging possibilities. For this reason, drawing up a design involves numerous people with different roles and interests. These include the commissioning party, future users, the architects, the information manager and the security officer. Together, they ensure that a design is balanced.

In archiving by design, a Digital Archiving consultant is part of the design team. He or she highlights the importance of archiving and explains what needs to happen to achieve it. However,

he or she also listens carefully to others' contributions and takes them into account. In this, he or she is creative in devising new ways of reconciling contradictory wishes or requirements.

Designing information systems is not only about automation. It is also about the people and processes around that. Of course, archiving will ideally be arranged automatically, for example by allocating metadata and determining retention periods automatically. But not everything can be automated. Some things still need to be done manually, including the entering of metadata. Some activities are also determined during the design process itself in order to ensure that all interests are taken into account.

Know your goal …
Designing starts with a good shared understanding of the various objectives one would like to achieve. The goal of archiving is to document work processes for different reasons: as input for your own work process and other work processes, to provide accountability, as evidence for the public, businesses and government and to enable historical and scientific research. To achieve that, the information received and created within a work process must be accessible for the long term. That means it must be findable, available, readable, interpretable and reliable – for everyone with an interest in it and for as long as necessary.

… then consider the instruments to achieve it
Only after all of that is it time to consider the instruments that are best placed for achieving the goals. These could include legislation, standards, selection lists, meta-dating, file formats, Document management system (DMS) and e-Depot. The issue of instruments should not be raised to early in the process because they do not appeal to the imagination if it is unclear what purpose they serve. Besides that, they may not necessarily be the most logical instruments for achieving the shared goals. This is why we need to continually reinvent archiving using the appropriate instruments in view of the work process, future users of the archive and the technology available. But we still need to maintain the same underlying archiving objectives.

The archiving system
The central instruments for archiving have always been the archiving systems. The digital versions of these are the DMS, the Records management (RMA) and an e-Depot. These systems are specially designed for archiving digital information. Generally, the idea is that you move the information to be archived from the work systems to an archiving system. This is done as soon as possible, but at the very latest at the time when the dossier concerned is closed. After that, the information can only be consulted in the archiving system.

In the case of paper-based information, it is easy to justify moving it into an archiving system. Otherwise the storage areas and workplace become cluttered and you do not want everyone coming to the workplace to consult long-closed dossiers.

Things are different with digital information. Digital work systems are able to contain an unlimited amount of information and can be consulted via the network. Transferring information into archive systems also has several important disadvantages. It is expensive and may also undermine the completeness and original condition of the information. Work system users often find it more difficult to access the information after it has been moved. As a result, there is often a lack of motivation to move digital information into an archive system. This creates the risk that the information may not be moved and may not be accessible over the longer term.

Archiving in the work system
Is there not an alternative approach? In many cases, yes. Information can also be archived in the work system itself. This is providing that the work system meets the requirement for long-term accessibility, i.e. opening it up to other users, making it easier to search and using standard file formats. These modifications can also be of benefit to the work system in other ways. This creates a win-win situation in which archiving is seen as useful. Sometimes, the best and only solution is to move information to an archiving system, but in that case that is the result of the design process rather than its starting point. For that reason, anyone involved will understand why the choice was made. The disadvantages of moving information can be minimized, for example by automating the

process or only moving that part of the information that would otherwise be insufficiently accessible.

Existing work systems
Archiving by design is intended for work systems that are still being built or modified. It cannot be used for existing work systems that are no longer being developed or no longer used at all. In such cases, there is no design process after all. However, if the risks of poor archiving are demonstrably significant for this kind of system, that may justify further modifications to the system. In that case, the design approach can still be applied.

Not a miracle solution
Archiving by design is not a miracle solution. It is a way of tackling the issue of digital archiving. However, it does not provide any specific guidance on how you should do the archiving. Digital archiving remains a stubborn problem. It cannot be resolved by formulating a total solution in advance and then implementing it according to a set plan. The problems are too diffuse for that, the causes too wide-ranging, the interests contradictory and we do not know exactly what an effective solution looks like. It is much more advisable to discover what really works step-by-step and then stick with it. Archiving by design helps us to take these steps. Discover it with us!

Author: Erik Saaman, Strategic Advisor at the National Archives of the Netherlands

Archiving by design (2)

Seven points to consider when designing an information system

Ensuring long-term access to information from the work process, without expensive measures afterwards. Does that sound appealing to you? Archiving by design makes it possible. It involves taking account of long-term accessibility in the design of the information systems that support the work process. Read all about it in this article.

Imagine you work as an archiving consultant. Your help is enlisted in the design of an information system that will support a work process (referred to here as the work system). It may be a business system, a construction management system or an administration system for video reports. The question for you is: 'How can the work system meet the requirements of archiving?' You're the expert, so it can't be that difficult, at least that's what your client thinks!

Real life is less predictable
Your first reaction could be: 'We have a really good archiving system (Document management system (DMS), Records management (RMA) or e-Depot), and the work system will need to link in with that. Here's the plan, I'll help to guide you through all the steps'. In real life, things turn out to be less predictable. All kinds of setbacks mean that the process takes a lot of time and money. The result also fails to meet up to expectations. The creator of the archive no longer sees the value of linking in with the system and loses the motivation to cooperate. The linking up process becomes more or less half-hearted or not even implemented and relationships worsen. All of the energy invested has been wasted.

In recent years, consultants at the National Archives of the Netherlands have been involved in designing various work systems. For determining motor-vehicle tax assessments by the Tax and Customs Administration, for receiving licence applications under the new Environment and Planning Act and for emergency assistance for Dutch people from the Ministry of Foreign Affairs. Through a series of successes and setbacks, a working method has been developed based on seven key lessons learned.

Seven points to consider

1. Room for change
Your client must have the people and resources available to be able to implement what you recommend. This is the case, for example, if there is a project, programme or functional administration in which the work system is being developed. Ask the client in advance if he or she also values long-term accessibility and whether he or she is prepared to consider design choices for that purpose.

It makes little sense to create a design purely as a paper-based exercise. Participants in the design process are more motivated if they have confidence in it and if their contribution is taken seriously. This does not necessarily mean that you know for sure in advance whether all the recommended design choices will also be implemented. That is ultimately up to the client. But there needs to be room to implement changes.

2. Link it to the development process
As consultant, you should link the development of the work system to the existing process. Do not structure a stand-alone consultancy process for archiving, with its own management, documents, participants, meetings, etc.

Instead of that, participate in what is already happening. Make use of the steering committee, project group, working groups, meetings, documentation, website and newsletters that are already being organized to develop the work system. This is the best way to become acquainted with the system and its stakeholders and incorporate the requirements of archiving. It is also the simplest way, because you do not have to organize your own design process as the consultant. It also prevents any overlap between the overarching design process and the design process for archiving.

In an ideal situation, you will be involved from the very start of development work on the work system. Sadly, the archiving consultant often only becomes involved when the design process has largely been completed. In that case, you will be playing catch-up and will need to organize several special sessions yourself. Especially for this purpose, the National Archives have developed the DUTO scan (Long-term Accessibility).

6. Focusing on the problem
Take the problem as the starting point rather than a solution. In other words, it is not a question of 'linking up the work system to an archiving system', but rather 'how the work system can meet the requirements of archiving'.

Work with all stakeholders in looking for solutions that are most appropriate for the specific work system. This will ensure your recommendations are a better match for the knowledge, wishes and possibilities of the archive creator. It results in better solutions that are accepted. It also creates an enjoyable and productive working relationship, which should never be underestimated. It is quite possible that linking to an archiving system will be part of the solution, but if so it will be based on insights acquired jointly.

For example: there is almost always a need for a good, integrated search function that is provided neither by the work system nor the archiving system. In that case, connecting to a stand-alone, specialist search engine can be a solution. This ensures you meet the statutory requirement that government information must be findable within a reasonable period based on the metadata linked to it.

7. Understand the work system
In order to contribute as an equal partner in discussions about suitable solutions, you need to understand the work system properly. What is the work process and what information is received and created in it? Which applications are used for it? Who are the current and future users of that information? For this, read the documentation about the system and speak to people who know all about it. A good general knowledge of information systems helps you to recognize patterns. Such as case-oriented working, base registers, databases, search engines, interfaces and linked data.

For example: a joint construction project, such as building a bridge, is a complex collaboration between the commissioning party, project management, engineers, architects, suppliers, contractors, etc. In it, information is managed in the DMS for policy documents or in the Building Information Modeling (BIM) system for architectural drawings and contract administration. The primary users are those directly involved in the project. Secondary users are outsiders that need the information for another purpose. These could be the Court of Audit investigating an overspend, the security services compiling a disaster plan, the future administrator who will need to maintain the bridge or the historian conducting research into the city's spatial development.

Understanding archiving
On the other hand, it is essential for those involved in designing the work system to understand why archiving is important and what archiving means. People often think that archiving is important only for the long-term use of specific information. Or that archiving

means storing this information after a dossier has closed in an archiving system especially set up for that purpose. These misunderstandings can create obstacles in the joint search for solutions. For example, people tend to only consider formal documents within the work process, such as policy documents, decisions, applications and contracts. While these formal documents are of course important, this overlooks a lot of information that gives an insight into the course of the work process. This makes it difficult to provide accountability on how documents were created and processed. The people involved also often fail to realize that a good search function is one of the most important aspects of an archive. What you cannot find no longer exists.

You should therefore redefine the concept of 'archiving' as ensuring long-term accessibility for all forms of information, for all forms of use, in the short and long term. This is most effective if you are as specific as possible and always link things to the actual work done by those involved. Who uses which information, why, how and when? Only then will the concept of archiving come alive in the minds of everyone involved. For example, information will then appear important for complaint handling, reports or reuse.

3. User requirements

Determine the wishes with regard to archiving of current and future users of the information in the work process. What information do they need? How do they want to search for it? How will they determine its reliability? How long does the information need to remain accessible? The basis of any design process is a good understanding of the requirements that the work system must meet. In our case, that requirement is the long-term accessibility of the information. But what does long-term accessibility actually mean? When will information be findable, for example? Will a service desk, where people can request written information, be sufficient? Or is a search engine preferred, in which all of the information is completely searchable? There is no simple answer to this question that applies to every work system. It all depends on the nature, importance and use of the information. This is why the specific requirements need to be determined for each separate information system. This is best achieved by asking the people who use or will be using the information.

Get out and about! Listen to the users. You are doing it for them. Only they can make it clear what is needed. In this process, make sure you talk to a variety of different people. Not only the staff responsible for the work process, but also outsiders who wish to have an insight into what is going on in the work process. These may be policy workers, auditors, members of the public, journalists or researchers.

4. Design choices

Ask the designers how the work system can be made in such a way that it meets user requirements. For example, where the information is stored, which search engine is used, which formats are permitted and which metadata is recorded. Good new ideas often come from unexpected places and may need time to mature. Give everyone an opportunity to speak and do not dismiss ideas too quickly. Then prioritize the design choices together with users and designers. The users can determine the desirability and the designers the feasibility. Put the prioritized design choices to the client for a decision.

By designer I mean anyone who makes a contribution to devising how the work system will look, from the inside and outside. This role is generally not referred to as designer, but as architect, analyst or consultant. It can also include a functional manager, key user and other advisers/consultants (e.g. for security or privacy).

5. There is always room for improvement

People often ask me: 'If we implement your recommendations, will we be meeting all the requirements for archiving?' My answer comes as a disappointment. I don't know and that is inevitable. The requirements set for archiving by legislation and standards can often be

interpreted in several ways. In any case, it is unfeasible in practice to meet all the requirements for all information.

Archiving therefore involves making choices. This means there is also an opportunity for mistakes. If we knew which choices were mistakes, we would not make them. Archiving by design focuses on the best possible design, with common sense and the available people and resources. However, there is always room for improvement.

Author: Erik Saaman, Strategic Advisor, the National Archives of The Netherlands