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ARCHIVING BY DESIGN. ABOUT A RECENT TREND IN ELECTRONIC RECORDS MANAGEMENT IN EUROPE

Abstract

Purpose: *This paper examines the “archiving by design” methodology, recently rather frequently referenced in European professional area.*

Method: *The concept and its main characteristics are analysed and compared with other professional ideas, methodologies and standards and critically examined on its novelties and approaches.*

Results: *The analysis and comparison allowed to localize the “archiving by design” place among the records management activities and to identify roots of professional ideas in other standards or methodologies. It also reveals new evolutions on how management of records is approached and how better solutions for recordkeeping can be identified.*

Conclusions: *Archiving by design is a methodology available for those who want to take care of their records. It may not be THE solution for dealing with records management, but it is a way to cope with it. It may offer better solutions than general standards, since it is tailored on the records creator’s needs, but the implementation of solutions and the outcome resides on the willingness and capacity of the beneficiary to use those solutions.*

Keywords: *archiving by design, records management, information governance, recordkeeping*

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1. INTRODUCTION

In recent years, references to “archiving by design” have been present in many professional discussions from the recordkeeping domain. Since I have seen many fashionable solutions to the issue of electronic records, I was curious to find out more about and understand this approach. This paper is therefore the result of this attempt to examine the topic, as well as to understand its content, goals and to have some preliminary thoughts about it. The present paper will consist of four parts. In the first one I shall attempt to analyse various definitions of this model, then to check on various similarities with other approaches in the past. Next, I shall focus on the proposed guidelines by ‘Archiving by Design’ Workgroup of the European Archival Group (EAG), in order to illustrate the proposed methodology and I shall conclude with some opinions about the potential and obstacles of this approach, as I see them now.

2. WHAT IS “ARCHIVING BY DESIGN”?

Depending on various projects where the archiving by design approach was employed, there are several definitions which may help understanding the concept. In a whitepaper produced by the above-mentioned subgroup of EAG it is stated that *“During the design or adjustment of information systems, the appropriate measures are taken to ensure that the information becomes, and stays, sustainably accessible”* (EAG-Subgroup, 2023b). The consultant Vincent Hoolt defines AbD as a *“method whereby you define measures and requirements during the development of information systems that ensure the sustainable accessibility of the records in the system. It will allow you to manage the records in line with the core principles of sustainable accessibility”* (Hoolt, 2018). Erik Saaman, strategic advisor at the National Archives of the Netherlands, understands the concept as *„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”* (Saaman, 2018). In a presentation given to EAG

meeting in Vienna in 2018, Marens Engelhard says that archiving by design *"...provide[s] conditions for long term accessibility of information in the design phase of information systems"* (Engelhard, 2018).

As it can be noticed, there are two keywords in every definition above. One first concept in the definitions is the "sustainable accessibility", that is the access to records in time. The EAG whitepaper indicates a set of requirements for this accessibility to be achieved: *findable* (information can be found quickly and easily by anyone with the proper rights), *available* (information is available to (re)use as far as legally allowed), *readable* (information can be processed by agents), *interpretable* (the meaning of information is clear and it is known by whom it was created, in which context and for which purpose), *reliable* (information is trusted and complete and based on correct data), *future proof* (information is resilient to changes over time in organization, technology or processes) and *sufficient* (enough information should be captured, according to user needs), though it seems there was not a consensus if the last requirement should be included or not (EAG_Subgroup, 2023a).

These requirements seem close to what was defined as FAIR principles for scientific data: Findable, Accessible, Interoperable and Reusable (Go Fair, s. d.) and also reminds of ISO 15489 characteristics for authoritative records (ISO 15489-1, 2016). It is to be emphasized that similarity is not always at semantic level, but as meanings covered by the terms used (e.g., findability, availability can be seen as parts of usability).

Archiving by Design accessibility	FAIR principle for Data	ISO 15489 for records
Readable	Findable	Authentic
Available	Accessible	Integer
Findable	Interoperable	Reliable
Interpretable	Reusable	Usable
Reliable		
Future proof		
Sufficient		

Despite accessibility being at the core of definitions, some imprecisions are to be highlighted. Thus, there is no indication about differentiation in preservation terms. Using the "long term" or "future proof" may mean "indefinite",

but in practice it may very well not be the case. It is not clear if the short-term records (read information) are in the scope of archiving by design. Secondly, there is no indication about the reasons for access: if it is intended for the primary or secondary usage (in Schellenbergian meaning). Indeed, even OAIS standard use the "designated community" (that is hard to define for national archives, which have a broad range of users and reasons for access). But "interpretable" or "sufficient" for whom and for what purposes—are the kind of questions that do not have an answer within the archiving by design methodology. Making references to the "changes over time in organisation", it seems the focus is on those records within the original context and not considers the case of records accumulated by other institutions.

Apart from what *sustainable access* would imply, a change of emphasis is visible in describing "archivable" information characteristics. Comparing with ISO 15489, for instance, there is a shift from the focus on the quality of information (read *records*) to the quality of it being accessible in the long run. What matters is to have access to the information, irrespective its status or its diplomatic form of transmission. The concern is not so much the quality of evidence (which is present in part, by *reliable* feature), but on the relevance for beneficiary of the information. It is not the place to assess this shift in detail, but it seems more a practical, user perspective, somehow different from the recordkeeping professionals' one so far.

A second keyword present in all definitions is the "information system". It is a clear statement that the realm of the method does not cover (only) specialized systems for managing digital records, but all system producing digital information. Also, by using constant reference to information system "design" or "development", it is an indication this approach should be used for the IT systems or the old ones that go through a significant upgrading process. It is a method to assess the (recordkeeping) needs to be embedded in the information systems, and not a guideline to archive existing digital information.

A last point I would like to address is about the terminology—the usage of the term "archiving". In archival science, in English, *archiving* may mean: "1. all actions relating to the selection and care of records of enduring value; 2. the storage and preservation of records of enduring value; 3. (in computing) the

offline storage of data from an information system when that data is no longer required for active use". (SAA Dictionary, s.v. "archiving"). It is obvious from the definitions above that *archiving by design* is not employed with the first two meanings. The only one closer to the definitions is the third one, which reflects a rather technical perspective. On the other hand, it is true that in many European languages "archiving" is used to designate the inactive records set aside. However, since these other languages are not English, it remains questionable if "archiving" is properly used, from a linguistic point of view.

3. IS THIS NEW?

Archiving by design is a rather recent trend in European countries, but the concept is barely a new one, at least from the recordkeeping professionals' point of view. The idea that recordkeeping must be involved from the first phases of the digital records lifecycle was present for decades. In 1997, in an ICA guide on electronic records, it is stated that: *"In the field of electronic records it is important that archival requirements are addressed during the design of information systems, and that electronic records are carefully controlled throughout their life cycle"* (ICA Committee On Electronic Records, 1997, 21). In 2008, also in an ICA document, it is asserted that: *"Business information has to be kept and must remain accessible to authorised users for as long as required. Design and deployment of business information software must ensure that records can be searched for, retrieved and rendered in accessible formats and media for as long as is required for business and legal purposes. In this context, organisations should avoid the misuse of digital rights management technology and encryption"* (ICA, 2008, 9)

In 2015, Tasmanian Archive and Heritage Office issued several information managerial advices, that contain (at number 17) recommendations for "recordkeeping by design". Sustaining that *"Planning for the management of information as an asset in business systems is far easier if it is done by design as part of the planning and system specification process. Retrofitting recordkeeping requirements into existing business systems is difficult, sometimes not technically possible, and usually expensive."*, the authors defined recordkeeping by design as *"an approach to recordkeeping that enables it to be built into the design and architecture of information systems, business*

processes and network infrastructure."² (Tasmania Government, Office of The State Archivist, s. d.)

In 2018, a posting on the New South Wales Archives blog was titled: *'Record-keeping by design' – opportunities for local government* (The State Archives and Records Authority of New South Wales, s. d.). Recently, in September 2023, a white paper *Records management by design – some considerations*, written by ISO TC 46/SC 11 Archives/Records management, listed a series of standards developed by this ISO group during last decade, suggesting that even without naming it explicitly, the existing standards converge toward a similar approach³ (ISO TC 46/SC 11 Archives/Records management, s. d.) (See also for the set of standards for analysis: Katuu, 2023, 2)

The idea of implementing recordkeeping controls in business systems rather than using specialised systems for managing records is neither new. At least from 2010, MoReq as one possible solutions recommended "the business system as records system": "the adoption of records controls by the business system itself" (DLM Forum, 2011, 18-19). DoD 8180.1, the US specification for electronic records management, was indicating that the acquisition, development, enhancement and the retirement of an IT system must incorporate the records management curation preservation of serrations over records lifespans. All records contained in an IT system or service, managed in accordance with record schedules, which includes positions, must be approved by the NARA authorities (US Department of Defence, 2023, 7).

2 It is worth presenting an extended quotation: *"Taking a 'recordkeeping by design' approach aims to ensure that recordkeeping is considered before, at the start of, and throughout the development and implementation of business systems that create and manage records. This approach involves a level of intentionality regarding records management, which indicates a genuine desire to actively manage records well. A 'by design' approach to records management enables IT professionals and those responsible for delivering services to the user community to approach records management as a design feature of agency process and activities, rather than a compliance burden to be endured or to which lip-service is given. It shifts the records management focus to risk prevention rather than compliance, using an innovative approach that is anchored in genuine recognition of the importance of records and information. By focusing on the design and operation of information systems throughout their lifecycle, a 'by design' approach supports efforts to address information risk. Better recordkeeping functionality means that costly records management retrofitting will not be required, generating significant cost savings. A 'by design' approach forces leaders and project managers to direct their attention to the policy and operational objectives information projects are intended to achieve, in a way that recognizes records management requirements."*

3 The listed standards are: ISO 16175-1:2020 Processes and functional requirements for software for managing records – Part 1: Functional requirements and associated guidance for any applications that manage digital records; ISO 15489-1:2016 Records management - Part 1: Concepts and principles; ISO/TR 21946:2018 Appraisal for managing records; ISO/TR 26122 Work process analysis for records; ISO/TR 18128 Risk assessment for records processes and systems; ISO/TR 21965:2019 Records management in enterprise architecture.

4. EUROPEAN APPROACH

Within the European Union, several National Archives have undertaken various interactions with records creators based on archiving by design methodology. The Netherlands National Archives presented their experiences back in 2018 (Engelhard, 2018). Also, the National Archives of Norway had an inspiring experience in dealing with records creators needs, that was shared during the ICA Conference in Rome, 2022 (Sjøvoll et al., 2022). In 2019, the European Archival Group decided in Helsinki to establish a subgroup for "archiving by design". The results of this subgroup, which integrates various European experiences, led to the publication of a white paper and a drafted set of guidelines for the implementation of archiving by design scan (EAG_Subgroup, 2023).

While the whitepaper presents the problem addressed and the solution proposed by archiving by design methodology, the *Guidelines for using the archiving by design scan* goes into details, presenting specific steps to carry out. What is understood as *scan* is in fact an analysis, a survey of the creator's recordkeeping needs. The document proposes 5 steps: Setup and preparations; Documentation; Scan checklist; Workshops or interview(s); Conclusions and recommendations. The preparation includes steps like identifying the key roles, the work processes and information systems associated with them and work planification for the survey. The documentation phase includes the examination of relevant strategic documents, like the one describing the organization's business, the legal aspects, the technical documentations etc. The purpose is to gather information about certain topics, which are listed in the scan checklist. This information will be supplemented by interactions with keypersons from the creator's side (interviews, workshops etc.). The results of these processes will be a set of recommendations on how to best design a system what would fit organizational needs.

What I found particularly interesting is the checklist, because it reveals what is considered relevant from a technical-professional point of view. In the guidelines, 10 areas of interest are defined: information model, information valuer, retention plan, search and representation, preferred/open formats, metadata, destruction, export, right of access, security. In

order to see if there is a shift of interest in the management of electronic records, I have chosen several standards or specifications which have as subject either electronic recordkeeping requirements for software or authoritative standards in the field of records management:

- DOD 8180.1 – US DoD information technology planning for electronic records management.
- ISO 16175-1:2020 – functional requirements and associated guidance for any applications that manage digital records (ISO 16175, 2020)
- ISO 15489-1:2016 – concepts and principles for records management
- MoReq2010 – Modular Requirements for Records Systems

ABD	DODM 8180.1 (2023)	ISO 16175-1:2020	ISO 154589:2016	MOREQ2010
information model	capture	creation, capture & import records classification managing business classification schemes	creating records capturing records records classification and indexing	record service classification service
information value			appraisal	
retention plan	retention planning disposition	retention, review, transfer	disposition	disposal scheduling service disposal holding service
search and representation	find and update	search, retrieval, presentation, use and interoperability		searching and reporting service
preferred/open formats		migration	migrating and converting records	
metadata	metadata	metadata capture	metadata	model metadata service
destruction		destruction		
export		export		export service
right of access	access control	access restrictions and permissions	access control use and reuse	user and group service model role service
security		authenticity and security duplication, extraction & redaction		
	reporting and metrics	reporting		
	storage	storage	storing records	
	maintenance	metadata management		

Cross-examining the areas of interest for each of the documents above, one can remark there are several shared areas of interest. Assessing the value of information and developing a plan for retention is common to all documents. Archiving by design methodology is concerned particularly about destruction process, which is only included in ISO 16175. Search and representation, the metadata and the access control or security are other common areas.

Identification of the formats for records is one part of a bigger topic of migration for preservation. This is why it may look strange that the interest is only on formats and not on other aspects to maintain long term accessibility. On the same topic, export is common for other 2 specifications—an important point to avoid technological captivity.

One noticeable area that the methodology puts aside is the process of creation/accumulation of records. Capturing the records—which is common to all other specifications, is no longer considered relevant in archiving by design methodology. It is preferred to do a general survey to establish the information model, with no individualization of the way information is produced or received by the organization; it suffices that the information exists and it needs to be governed. Also, “archiving by design” pays no interest to storage of records. In my opinion, already presented (Popovici, 2022), as long as carrier is no longer relevant for the individualization of electronic records (Duranti & Thibodeau, 2006), the approach is pertinent.

An analysis of what is included and what is missing, I argue that “archiving by design” is focusing not as much on the management, but on information as such: information that exists (and for how long it exists), that can be retrieved by those who have the right to do it, with a slight interest in technological survival. Hence, my opinion is that this focus may place “archiving by design” rather in the area of information governance, than in the traditional records management. It is not focused on records and the quality of those records—as it is the case with traditional records management, but on managing the information that exists within one organization.

5. SOME OPINIONS ON THE METHODOLOGY

For more than two decades, I have had the privilege to witness several trends in the realm of digital records: starting with document management solutions in the 1990s, then with electronic records management systems with dedicated specifications like MoReq, then modules in content management and many others. Looking back, few of them remained as planned and resisted to the challenge of time and innovation, albeit they were (presented as) top solutions at their time. Hence, it is somehow natural to critically evaluate the "archiving by design" methodology.

It is obvious that "archiving by design" is not a magic wand, helping to solve all problems with digital records/archives. It was not claimed or intended to be. Eric Saaman, advisor for National Archives of the Netherlands, admitted that *"it does not provide any specific guidance on how you should do the archiving"*. He further noted that *"Digital archiving (...) 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 are contradictory, and we do not know exactly what an effective solution looks like"*. On the other hand, as it was shown above, to cope properly with digital records means to get involved from the inception of their existence. "Archiving by design" does this, placing itself in initial recordkeeping analysis or, as it is recently promoted, appraisal (see ISO/TR 21946: 2018).

One important limit for "archiving by design" methodology is that it deals with (re)new(ed) systems. Basically, it talks to the future. If a creator has already deployed systems with digital information, the methodology is less, if at all, useful for proper records management or information governance. Until the next technological cycle, other tools or methods should be employed.

Another situation that limits its usability may be determined by specific societal context. In my experience, many (if not most) organisations prefer to purchase business software, not to support (and experiment) their development. In the end, it is a focus on core business; a strong incentive must exist to support the development of a new product rather than to buy and make it work. In such cases, the space for recordkeeping controls implementation is limited by the space offered by producers of the

software. If there are functions or customisations available, then records requirements, identified by “archiving by design” methodology, may be implemented. If not, a producer will not make major changes in its application, as to fulfil recordkeeping exigences.

Finally, I come to the organization willingness to cope with records: what is the size of budget available for recordkeeping? How much can be spent on customisation of a software, as to satisfy the “archiving” requirements? In my experience, there is little availability for organisation to invest too much in this area. And then we again come to the problem of awareness from the records producers, on the importance paid to their records and their management.

Archiving by design is, therefore, a methodological instrument available for those who want to take care of their records. It may not be THE solution for dealing with records management, but it is a way to facilitate it. It may offer better solutions than general standards, since it is tailored on the records creator’s needs, but the implementation of solutions and the outcome still resides on the willingness and capacity of the beneficiary to use those solutions.

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