

The effect of digitalization on the daily use of and work with records in the Norwegian public sector

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Abstract

Purpose – This paper presents an exploratory case study on the impact of user-oriented digitalization on records management in the Norwegian public sector. The purpose of this study is to identify some of the opportunities and issues that may arise for records management professionals, case workers and citizens.

Design/methodology/approach – The concept of administrative burdens and how user-oriented design can reduce or increase them is the main theoretical focus. A series of five interviews with records management professionals from five municipalities and three with IT staff members from two larger state institutions served as the primary source for this qualitative case study in conjunction with a literature review. The interviews were conducted in a semistructured format with a general interview guide.

Findings – Smaller municipalities lack the resources of larger state institutions, and they do not involve users in the same extent, even though their records management professionals strive for user-orientation. The work with directly involving users appears to vary in larger institutions, where resources must still be properly prioritized. Reducing administrative burdens is vital for user-oriented design, but digitizing services often increases them, so service delivery must consider the benefits of local, in-person guidance in relation to wholly digital services.

Originality/value – While much research has been conducted in Norway on digitalization, little has been done to examine the implications for records management work or the public's use of records. By identifying some key concerns, this paper hopes to serve as a springboard for further research in these areas.

Keywords e-Government, Digitalization, Records management, User-orientation

Paper type Research paper

Introduction

The study was presented as part of PhD research into how digitalization has affected the participants' work with records management. Topics like systems development, privacy regulations and needs and linked data are closely related to some of the discussion but are outside the scope of this study, which focused on user-oriented design to reduce the impact of administrative burdens.

The digitalization of the Norwegian public sector is a large undertaking. From hundreds of smaller municipalities dealing mainly with their local citizens to agencies with state-wide responsibilities and huge volumes of data processing, digitalization endeavors have generally been successful. Indeed, Norway is ranked fifth on the EU's *Digital Economy and Society Index (DESI) 2022* (European Commission, 2022). The Ministry of Local Government and Regional Development (formerly the Ministry of Local Government and Modernisation, as per some references) compiled and presented related requirements and recommendations in its yearly circular "Digitaliseringsrundskrivet" (Kommunal – og distriktsdepartementet, 2022). The strategy "One digital public sector" presents the overarching stratagems and goals of digitalization, primarily to achieve a "simpler life for citizens and the business sector,"



supported by creating “better services,” “efficient public use of resources” and “increased value creation” (Ministry of Local Government and Modernisation, 2019, p. 9). This lays the foundation for digitalization in the Norwegian public sector.

The first point in the guidelines for digitalization from the Ministry of Local Government and Regional Development (MLGRD) is “putting users in the center” when designing services. In their *Handbook of Usability Testing: How to Plan, Design, and Conduct Effective Tests*, Rubin and Chiswell emphasize some basic principles of user-centered design (which is used interchangeably with “user-oriented design” in this paper):

- early focus on users and their tasks;
- evaluation and measurement of product usage; and
- iterated [or iterative] design (Rubin and Chisnell, 2008, p. 13).

The first two principles overlap with the guideline from the MLGRD. User-orientation in archives is not a new idea. Helen R. Tibbo noted the importance of user-needs “It is equally essential that archivists assess what users want and need and how they go about locating information before repositories spend precious resources on technology projects” (Tibbo, 2002). User-needs should be the driving force of services digitalization, and users may include private citizens, case workers and organizations. The key component of this approach is that “end-users influence how a design takes shape” (Abrams *et al.*, 2004), which can be done in many ways.

In this paper, the term “user” will refer to the citizens who use digital public services and act as co-producers of records, unless otherwise specified, as opposed to a definition such as “[. . .] anyone who employs records or seeks information about them” (Yeo, 2005, p. 26), which could also include case workers and records management professionals. The theoretical lens of administrative burdens is used to analyze how digitalization affects records end users and also when discussing the user-oriented design process and how it takes the alleviation of administrative burdens into consideration in the development of user-friendly systems.

Administrative burdens

Administrative burdens, as conceptualized by Moynihan *et al.* (2015), consist of three components: *learning costs*, where “Citizens must learn about the program, whether they are eligible, the nature of benefits, and how to access services”; *psychological costs*, where “Citizens face stigma of participating in an unpopular program, as well as the loss of autonomy and increase in stress arising from program processes”; and *compliance costs*, where “Citizens must complete applications and reenrollments, provide documentation of their standing, and avoid or respond to discretionary demands.” (p. 46).

Administrative burdens are often used for studying the challenges of applying for benefits like sick leave or unemployment pay, but they can also apply to records used by the general public. First, the acquisition and use of records can be an important step in claiming benefits or other social services, such as compensatory damages from inadequate health care. Second, while the consequences of administrative burdens are smaller when the user is not applying for social services but merely reviewing archives for personal purposes such as genealogy or historical research, government officials and records management professionals still wish that records can be accessed and used in whatever way the citizens prefer. Administrative burdens can make this difficult, thereby complicating or sabotaging the very processes that user-oriented digitalization sets out to simplify.

Reducing administrative burdens this way can be helpful to both case workers, who can spend less time attempting to alleviate those burdens themselves, and to users, who do not

have to treat their objectives of receiving benefits or accessing documents as a job in and of itself. Where the user is not currently employed, simplifying receipt of necessary benefits is both an individual good because it causes less stress on the person and a social good because it allows the person to spend their energy on securing employment instead of struggling with navigating a difficult welfare system, as described by Breimo in her study on rehabilitation (Breimo, 2015).

Literature review

While recent research has been conducted in Norway on digital services, such as a determination of the actual value of digitalization for schools (Høydal and Haldar, 2022), an expert study on the benefits and challenges of digitalization for seven different public organizations (Danielsen, 2021) and an analysis of automation in government digital systems and its effect on administrative burdens (Larsson, 2021), less has focused specifically or exclusively on digitalization of archives, which is often studied in conjunction with libraries and museums as a part of the library and information science field (Yeo, 2005, p. 32). This is true of Henningsen and Larsen's study on "digitalization as a policy imperative" (Henningsen and Larsen, 2020) and Sigrid Stokstad's work on "national policies for digitalization in the LAM sector" (Stokstad, 2020), and might be because the value of digitalization in archives is small compared to the financial, health or education sectors. Although historically there was a relatively small body of work of user-focused studies in records management (Yeo, 2005 p. 46), there is increasing interest in the concept of "user experience" in records management systems, possibly influenced by the shift to cloud computing-based models. Examples include research on user acceptance of records management systems by Feng and Pan (2016) and the study by Madariaga *et al.* (2019) on user experience of government documents.

"Archiving by design" (Saaman, 2023) is currently an important strategy of the National Archives of Netherlands (NAN), as well as for the National Archives of Norway. It does not have as much impact elsewhere, but it should be noted that similar guidelines exist, for example, in the New South Wales government in Australia (State of New South Wales, 2023). Archiving by design should be seen in light of the discussion of technological versus managerial strategies as tools to guarantee proper archiving practices. This approach is distinct, as it is rarely seen in other countries, but has been thoroughly examined in the literature (Bearman, 1992). NAN underscores that "[...] designing information systems to support the work process [...] [also] offers the opportunity for archiving [...] to take account of other key issues, including user-friendliness, privacy, security and open data" (Saaman, 2023).

Digitalization of records management functionalities

While *digitalization* can include relatively simple processes such as switching from analog letters to e-mail and conversion of information from physical to digital formats (often referred to as *digitization* of physical records), *it is actually* much larger in scope (Pettersen, 2018). While there is certainly a national push and will digitalize, archives and records management professionals have their own set of challenges. For example, Sigrid Stokstad claims that "the questions regarding management of electronic records have somehow been neglected for quite a long period" (Stokstad, 2020, p. 103).

There was a general agreement amongst the study's participants that digitalization should be done according to government policies and procedures. One of the main priorities of the *Digitalization Strategy* (Ministry of Local Government and Modernisation, 2019) is a move toward user-centricity in digital services. This means that software and processes are

shaped to benefit usability, availability and the like. There is an important historical aspect tied to Norwegian welfare systems as objects of discussion since the 1880s (Bjørnson, 2001), in which the benefits and importance of the welfare system has often been categorized as a public societal good. Conversely, the user-centric approach “[...] depicts an individualized concern for the well-being of specific users of public services” (Jensen and Andersen, 2015).

The *Digitalization Strategy 2019–2025* clearly states its purpose in its introduction:

Digitalisation of the public sector aims to give citizens, businesses and the voluntary sector a simpler everyday life through better services and more efficient use of resources by government agencies and facilitate increased productivity in society at large. (Ministry of Local Government and Modernisation, 2019)

Several key points here can be summarized by the phrase “a simpler everyday life.” Breimo’s study on rehabilitation (Breimo, 2015, p. 86) shines a light on some of the complexities involved in receiving adequate benefits from a digitalized and complex public sector. While digitalization can be a tool used to alleviate hardships, for example, by letting individuals apply for benefits from the relative comfort of their own homes and save time and energy otherwise used on travel, equally it can lead to problems for individuals trying to navigate the welfare state on their own in the absence of helpful case workers. It can also further burden the records management professionals who have to work with digitalization while at the same time trying to provide public service: for the past two decades, handling born-digital materials has been one of the main challenges for archival workers. (Stokstad, 2020, p. 95).

As for what this digitalization actually entails, this varies from institution to institution. For case workers, digitalization can mean that their organization stops using paper and only deals with electronic documents, that their data systems are further enhanced and processes like records management becomes either fully or semiautomated. Records management systems then need to be integrated with business process systems, such as those that calculate benefits or manage school districts and students. This means that when public bodies need to acquire new systems, they need to integrate records management functions.

One of the study participants said that archiving services suffer from this because information is sent to and created in other systems over which the records managers have no control. This means that it falls to case workers to make sure that records are properly archived and metadata is properly assigned. An essential component of success is to make the records management features of business systems easily understandable and manageable so that case workers can uphold their legal obligations and the interests of the public without it interfering with their work.

Case workers should not have to “bother” with managing the records they produce; instead, archiving functionality should be built into systems by i.e. following an “archiving by design” approach. This could be automated archiving, automatic assigning of metadata or other tools to help the case workers fulfill their legal obligation with the minimum amount of effort. One strategic advisor at the National Archives of the Netherlands claims that “Archiving experts often blame poor archiving on the work process that produce the information” (Saaman, 2023). Digitalization of work processes could improve the quality of the information and records being produced.

Case study scope and methodology

A qualitative case study was designed to explore this issue, including a review of external and government literature. Interviews of five records management professionals from different municipalities and three interviews with IT staff members from two larger state

institutions providing welfare services served as the primary research source. While the intention was to explore perceived issues and opportunities from the perspective of records managers through in-depth interviews, the small sample size makes generalizations based on this data problematic. The interviews were conducted in a semistructured format with a general interview guide ([Appendix A](#)) and held over approximately one month in 2021. The interviewees from municipalities were chosen with the help of a representative from The Norwegian Association of Local and Regional Authorities (Kommunesektorenes Organisasjon), whereas the other interviewees were identified by contacting the organizations. These organizations were chosen for their respective sizes and experience with digitalization. Their participants were IT professionals working in management, on digitalization projects and in archiving services.

The interview template is found in [Appendix A](#). It comprised 23 questions divided into five sections. The interview data was transcribed and coded using the NVivo application. Text snippets from the interview data were grouped under nine different subject headings, such as “digitalization,” “workplace organization” and “municipal versus state-wide.” The method was explorative, and the topics and themes were identified and explored through several iterations of analysis. The information in the literature review was identified during a search for recent publications as close as possible to the subject of digitalization of records management systems, with an emphasis on research from Norway, and then categorized and applied where relevant for this research. Analysis of the interviews brought up themes and subjects that were then applied to the literature review. Broader sources such as Bearman and Yeo were included on the bases of their large bodies of work and their recognized contributions to the field.

Results and analyses

User orientation in digitalization is demanding in terms of both human and financial resources. The interviewees all seemed aware of the concept and even worked toward it, with varying degrees of success, seemingly easier for those within the larger organizations. The concept of “archiving by design” seeks to remedy the work processes issues by introducing archiving functionality at an early stage in system design process and including a digital archiving consultant in the design team who can highlight the importance of archiving and explain the requirements to achieve it ([Saaman, 2023](#)). There is a case to be made that simplifying the archiving process should lead to more complete records. There was a general agreement amongst the interviewees when the subject was approached that this was a good idea.

A problem emerges when many of these business systems do not have adequate integration with records management systems, and case workers spend time and energy on poor-quality archival functionality for their document management. One participant stated that in their experience, people use a lot of time trying to find documents that they already know exist but cannot easily locate. This could imply that search methods are not adequate, both in the case of system functionality and the user information-seeking behaviors or that the classification and metadata are inadequate. (It should be noted that no case workers were included in this study, but several of the interviewed records management professionals referenced them because of intertwined workflows. Further conclusions or assumptions about case workers are based on the literature review.) The solution to this problem is not simple, but clearer procurement process requests and more open communication about what capabilities can actually be provided could be a good start to alleviating some of the issues.

Having user needs in mind from the very start of the process, both for citizens and case workers, is central to user-orientation. At the same time, agencies should seek to actively include the records management professionals of their organization in system development or acquisition. A few of the interviewees mentioned that records management systems tend to be marginalized, and therefore, often overlooked or kept to a minimum standard when acquiring new systems. Closer cooperation between records management professionals, users, case workers and staff responsible for systems acquisitions and the vendor service providers could lead to systems that work better for everyone. Several interviewees mentioned that this could be helpfully addressed by involving users in the acquisition processes and by developing more government guidelines for acquisitions.

User-oriented design

Guidelines for user-oriented design are presented in a yearly circular, the “Digitaliseringsrundskriv” (Kommunal-og distriktsdepartementet, 2022). This circular is an example of “soft law.” Where “hard law” refers to “legally binding obligations that are precise” (Abbott and Snidal, 2000), “soft law” refers to other directives such as instructions with room for interpretation or pedagogical approaches (Stokstad, 2020, pp. 93–94).

The stated goals in the “Digitaliseringsrundskriv” mandates that government services should be designed with the needs of the users at the forefront. This is what user-oriented design tries to achieve. The term was coined by Donald Norman as a somewhat general term referring to “design processes in which end-users influence how a design takes shape” (Abrás et al., 2004). How this “influence” is exerted varies from process to process, and this paper discusses some of the forms common for Norwegian digitalization efforts.

The importance of taking a user-oriented approach in developing records management systems has been argued for decades: “Since the goal of the [records management and other related professionals] [. . .] must be to fulfil the needs of the second, end-users are placed at the centre of our research and development” (Sexton et al., 2004, p. 35). A user-oriented design can be summarized by four basic points, originally from Norman’s own book “The Design of Everyday Things” (1998), but is referred to here as summarized by Abrás et al. (2004, p. 2):

Make it easy to determine what actions are possible at any moment.

Make things visible, including the conceptual model of the system, the alternative actions, and the results of actions.

Make it easy to evaluate the current state of the system.

Follow natural mappings between intentions and the required actions; between actions and the resulting effect; and between the information that is visible and the interpretation of the system state.

A key component is that users are actually involved in development (Abrás et al., 2004). None of the municipal records management professionals interviewed had experience with focus groups or involving users directly when developing services. This is not to say that users have not been involved, just that the software developers are more likely to carry out user testing and focus groups, and due to limited resources, the records management professionals have to find other ways to achieve user-oriented design. One of the interviewees stated the importance of keeping user-centricity in mind in a general sense: “we have to [. . .] consider ‘who should our existence benefit?’ I think that’s important in records management. [. . .] We have to make sure that if someone has been wronged, [the Norwegian

archival and public records authority] will make sure that it can somehow be made right and facilitate a regime that makes sure of it.” The importance of a philosophy of the rights of individuals and remedying wrongs done seem to be a priority for this group of interviewees, while the interviewees who worked with developing systems at a higher level involved users in practical testing and other design processes.

When asked about the digitalization of records management systems, another interviewee stated: “Time is freed up that case workers can [then] spend on following up matters related to their actual work.” This statement encapsulates several of the main goals of the digitalization strategy, namely, efficient use of public resources and provision of better services. The important point is that while digitalization efforts might actually be “user-oriented” toward the records management professionals or case workers, the end result can also prove to be a better experience for the citizen-user, thereby benefitting more than one type of user. A participant mentioned that there are several automation possibilities in their systems and that it is up to them which they want to use. They “try to make use of the available functionality,” and one might assume that there is variation in to what extent workers in general use these functionalities in specific case systems, exemplifying how to simplifying records management professionals’ work is still a “technology vs policy” struggle (Bearman, 1992).

One interviewee noted the importance of local actors as records management professionals who are able to help users where they physically reside, expressing distrust toward the centralization of services and responsibilities. Digitalization is often seen as transcending the concept of locality, and one of its strengths is the national/global reach, unbound by geography. The importance of local actors to local users was mentioned by a minority of interviewees, perhaps in the face of all the positive effects that digitalization offers. But these local actors could be an important tool to alleviate the administrative burdens of learning, compliance and psychological costs. The psychological barriers of accessing complex digital systems could be alleviated by allowing users to physically visit locations where records management professionals help them explore digital archives, even if the material could also be accessed from the users’ homes. Learning and compliance costs can be reduced when a records management professional explains and guides users through their systems to help the search through an otherwise insurmountable amount of data. The latter option could alleviate the psychological costs such a task might inspire. In this case, user-oriented design somewhat conflicts with how we typically view digitalization (making as many processes as possible solely digital) but is not actually at odds with it. Rather, the goal is digitalization to increase efficiency rather than digitalization for its own sake.

One participant in particular presented some specific ideas about linking data: “[. . .] we have this thought that we can link some data so if you find a song by a violinist, we can show you a picture of them and maybe present you with old letters that they wrote and received [. . .] [this is] a more advanced approach to digital archives and digital dissemination.” “Linking data” in this context refers to the linking of content with cultural aims, which is related to but separate from linking data for public administration. This approach to digital dissemination is more focused on the cultural aspect of records, letting users explore and discover, not necessarily recover specific records.

The records management professionals of the smaller municipalities appeared to dream bigger, planning for linking records to applications such as Google Maps and offering their users a more holistic experience when navigating their data. This might be because they do not have the resources to immediately achieve this goal, which is just as difficult as actually involving user stories, interviews and focus groups. This also raises the question of whether it would be a beneficial use of resources. Users would have access to a wealth of information

and data that might be more of a curiosity than a useful tool in their search for records. In terms of administrative burdens, it is difficult to argue that this approach would reduce learning, psychological or compliance costs, as its goals are not to reduce administrative burdens; there are cultural and historical aspects to accessing and using archival records that go beyond simply righting wrongs or claiming rights and benefits; and user-orientation can therefore go beyond, and in some cases even subvert administrative burden reduction.

Development of user-oriented systems

The design of systems can have a material effect on citizens (Moynihan *et al.*, 2015). It is not hard to imagine a case where a wheelchair-bound person does not have the same opportunity to physically visit a record's location and would prefer digital access. Differences in digital literacy/competences and tolerance for administrative burdens can likewise lead to material effects, underlining the importance of user-oriented systems design.

User involvement is difficult and requires a whole skillset of its own, which is costly and time-consuming. An infrastructure for user-orientation is required to support effective participation. (Engvall, 2019) Maintaining such infrastructures is easier for larger organizations. Smaller municipalities' user-oriented design is more akin to a "top down"-approach, where the decision-makers do their best to identify the possible needs of their users and implement them through workflows. But larger governmental organizations can both do some of the development themselves and are able to make more demands when negotiating with outsourced developers. In addition, they are more experienced in the process of outsourcing development and know what to ask for. The interviewees from municipal organizations identified a need for more state-wide governance and easier acquisition processes. One participant reported that "in some municipalities, schools find it easier to go and buy a computer or office supplies on the open market instead of using the municipal processes" so that the end users suffer the consequences. Leaving municipalities to make decisions means that the quality of services will depend wholly on the employees in each municipality. This could lead to acquisition of inferior products, either physical computers or digital services, and a harder time communicating the need for troubleshooting or problem-solving to the product suppliers. Another participant claimed that "we forget the citizens when we discuss municipal versus state-wide when creating new systems", appearing to consider the question of acquisitions of less importance than the actual functionality of the systems.

When participating in development processes and systems procurement, direct user involvement varies, but methods are often tailored to identify citizen needs, and alleviating learning costs is often an important goal. One participant noted that they use many workflow diagrams to design user processes. They also noted that while they use workflow diagrams, they do not use user stories. The efficacy of user stories and the overwhelmingly positive reactions developers report when applying this method has been demonstrated (Lucassen *et al.*, 2016), though as one interviewee succinctly put it: "it takes too much time." This illustrates how user-oriented design and its ideals often conflict with the reality of records management professionals and software developers, where time is a dearly valued and limited resource.

For substantial upgrades and introduction of new systems, there is a stronger push to involve users. This was positively reported on by the experience of interviewees, with the caveat that you need to involve "the right people", which seems to mean people with a degree of technical expertise and understanding of how software testing works. This conflicts with the goal of making user-centric systems for citizens, no matter their technical competency.

Working with system developers

Several interviewees had experience with outsourcing systems development to third-party consultants, who usually have more resources for and experience with involving users. Early user involvement means that they can play a bigger role in deciding how the systems evolve instead of just being involved as test subjects closer to the end of system development when what remains is smaller tweaks and changes because anything else would be too costly and mean that budgeted resources were “wasted.” This is at the core of user-oriented design (Chammas *et al.*, 2015) and reinforces the hypothesis that larger organizations with more resources can easier properly follow design tenets of user-oriented design. A participant from one state-wide organization shared their experiences with larger projects, where in several cases they had made beta versions of websites “a long time before they were finished” and invited their users to review them and give feedback. In addition to more direct and formal interviews, they have also physically traveled to locations to meet users, invite feedback and talk about their future needs. The participant reports an “internal motivation” in the organization to make their services as user-friendly as possible. While this can clearly be found in smaller municipalities as well, the resources to actually travel and meet their users or hold formal interviews with them are lacking.

Generally, it seems that the smaller municipalities get the “short end of the stick” and have the hardest time with the acquisition of new systems. One municipal participant reported issues with delivering systems specifications to a developer, as opposed to working more closely with them and focusing on system end goals and purpose: “you went in, wrote a systems requirement, found a developer that answered all the demands, but got a system that didn’t work”. Another participant noted the importance of municipalities being “good customers” and knowing what to ask for: “Every time our municipality doesn’t order properly, [the developers] make money. You would be bad at business if you tried to prevent this.” This illustrates the inherent conflict of interest between software developers and their customers, particularly problematic for smaller municipalities with less money and purchasing power.

One participant had recent experience with introducing new records management software in which user-orientation was important from the very beginning. They were working with user stories, but “[. . .] not like in the old days, where we wrote a systems requirement specification. We started out by talking about needs.” This is at the heart of user-oriented design, where the needs of the users are what should guide the software development. Involving users necessitates a skillset in and understanding of development because, as the participant put it, “what I really want to find out is why? Why do you want this? [. . .] they say, ‘I want a button here, and this report there,’ but why do they want this? [. . .] we work towards the core of their wishes.” The participant is referring to how the users might think they want surface level changes like buttons or other options, but what they really want is easier access to documents or other bigger changes: “[. . .] we work a lot with finding out what the users actually need, not just what they want.” User-oriented design work by the records management professional is focused on identifying actual needs. While this can entail a large workload and seem complicated: “[. . .] when we then meet with the software developers, everyone in the project group has the same picture of what we want to accomplish,” meaning that the work that is done upfront assures an easier time when outsourcing the actual development.

Several of the interviewees from municipalities had thoughts concerning their cooperation with private companies. The larger, state-wide public agencies might have an easier time negotiating with their service providers and might have more experience in systems acquisition, and there are several cases where they actually develop them in-house.

The smaller municipalities usually buy “off-the-shelf”-products. There seemed to be a general agreement that this is a necessity, as lack of resources (both in the form of labor and financial capital) would make developing their own systems an impossibility. This is not necessarily seen as a bad thing, as several of the interviewees mentioned being more comfortable with letting private companies do what they do best so they could focus on core records management work: “We’ve seen that as the technology develops [...]. that this [developing their own systems] is not the way to go. We’re not supposed to be entrepreneurial software developers. We have to use off-the-shelf products.”

On the other hand, there seems to be a suspicion that service providers are comfortable with developing sub-optimal systems if that makes the most financial sense for the providers. “There are two conflicting areas of interests here”, one of the interviewees said. “What is cost effective for the municipalities vs. what makes the service providers the most money”. A proposed explanation for this as a reoccurring issue is that there is not enough governance of how the municipalities acquire their systems, as explicitly mentioned by some interviewee’s desires for stricter government oversight, guidelines and even sanctions on service providers that deliver subpar products. One of the participants said that the most important thing is that the service providers need to be held accountable when they do not deliver as promised. In contrast, another interviewee claimed that the municipalities themselves need to be better at purchasing what they actually need, so they work toward becoming “more competent purchasers.” This problem might be exacerbated by the fact that the records management systems market is much smaller than other business-systems markets, such as HR or financial systems. Systems developers naturally have more experience with developing these systems for a larger market where it makes the most financial sense. To recoup costs, records management systems developers charge more for off-the-shelf products and for customized features. Easier delivery through cloud-based systems/software-as-a-service might contribute to mitigating costs for developers in the future, but a few interviewees mentioned the related risk of ongoing high-cost service contracts as opposed to delivery of one-time up-front payment for development.

Another participant expressed skepticism toward the competency of digitalization in some enterprises and wished for stricter governmental regulations: “I think there’s often digital incompetence in organizations, a kind of reluctance to implement basic functions. Some people have to make it difficult, expensive, and confusing. That’s why I wish there was much stronger management by the state.” Here, state governance could have several facets in which clearer and more concise governance in how systems should be developed, produced and put in use is desired; while also holding system developers more accountable in the form of legal obligations and consequences if they fail to deliver products as planned, agreed upon or advertised.

Alleviation of administrative burdens

User-oriented design largely sets out to alleviate administrative burdens. Simplifying the processes required to access records (or public benefits in general) should lead to lower learning costs, increased digitalization and a higher possibility of accessing records from the comfort of one’s own home, which in turn can reduce psychological costs. Automatic data gathering from or dissemination to citizens can also mean a reduction of compliance costs.

However, attempting to alleviate one administrative burden might worsen another. While the psychological costs of participating in stigma-prone social programs (such as welfare benefits or certain forms of health care) can be reduced by digitalization, related learning and compliance costs may increase. Records management professionals and case workers (who as shown are often more closely involved with the development of the records

management software) interests may also collide with the interests of citizen-users. One participant noted that some records management workers thought it “[. . .] very nice when the citizens walk up to the counter and chat with them.” On the other hand, the interviewee noted that some of the other records management professionals and “modern citizens” would prefer to “sit at our own desk and get hold of these documents.” While rarely thought of as an important roadblock to digitalization, this still tells of a workplace culture where the needs and wishes of both users and records management professionals can be subject to legitimate differences of opinions or priorities.

Conclusion

User-orientation is central to the Norwegian digitalization endeavors and as shown in this paper, can be present in all phases of systems development, from initial conception to daily use. The interviewed records management professionals and other IT professionals seem generally positive and mindful of user-orientation, albeit with differing perspectives of how it can best be achieved. While some of the interviewees had lofty goals of broad cultural dissemination and direct, seamless online access to records and documentation, others focused on the importance of user involvement in systems development. Alleviation of administrative burdens for the end user can be viewed from several perspectives, ranging from ease of systems use by involving end users in the development process to reduction of compliance costs when applying for benefits by the automatic gathering of data from other public administrative bodies.

Automating routine tasks, such as freedom of information requests, can allow the records management professional to spend their time on tasks they may deem more important (or complex), such as archives preservation. However, this way, digitalization might also increase the administrative burdens of users by forcing learning and compliance costs upon them because of reduced availability of case workers. This creates a situation where digitalization increases administrative burdens and can begin to resemble a cyclical problem, where the digitalization needs of case workers and records management professionals conflict with the needs of the user.

The study showed that user-oriented design must balance both administrator and user interests, differing local and state governance requirements and digitalization of services with in-person user help services. Reducing end-user learning costs can increase compliance costs, and both can have an effect on related psychological costs.

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Further reading

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Appendix

Interview guide

The purpose of the interview guide

Semi-structured interview with the goal of mapping the organizations' archival processes before and after the digitalization of their services, mapping resulting projects or programs the organizations have completed as a part of their digitalization, understanding how archival processes have been affected by these projects or programs.

I tell the interviewees that I will e-mail them after a few days if I need clarifications or have any additional questions.

I want to use some of the same or similar questions, in several of the interviews with people from different organizations. I am therefore trying to keep the questions general, with adaptations where necessary.

With subject 1, I want to start a dialogue and get to know the interviewee some more by getting them to introduce themselves and give an overview of why this person specifically fits as a participant in the study. Subject 2 is where I want to spend the most time and as much as possible to map digitalization work within the organization. In subject 3, I want to map archival processes within the organization. In subject 4, I want to discuss which rules, laws, and standards the organization has to follow. Finally, subject 5 comprises final questions and comments.

Introduction to the interviewee

Recording starts here

First of all, I want to thank you for agreeing to this interview. Is it okay that I record this interview with zoom/teams/skype and later transcribe it? I will delete the video recording as soon as possible, and the audio recording once I have transcribed the interview.

Okay, let's get started. Today's date is XX/XX/XX, the time is xx:xx, and the interview is being conducted digitally. We have spoken briefly before, but for the record, I just want to repeat that my name is XXXXXX, and I'm speaking today with **informant's full name.**

I'll start with a brief presentation of what I'm working on, just to refresh your memory. I'm a PhD candidate at OsloMet and my research focuses on archiving and documentation in public administration after user-oriented digitalization. I'm currently conducting my first investigation, where my goal is to map the archival processes in public administration bodies before and after their digitalization efforts. In this first interview, for example, I want to find out how this work has been done. The material I'm collecting now is used initially to gain insight into the work of your organization. If you have any questions about my work, I'm more than willing to answer them. Is there anything in particular you'd like to have clarified before we start?

Questions

Subject 1 - Who am I speaking with?

- (1) Can you tell me about yourself and your professional background?
- (2) Can you tell me about your current position?
 - What are the responsibilities of your department, and what are your own responsibilities?
 - How is your department organized internally?
 - How is the department organized in relation to the rest of the company?
- (3) Can you describe a typical workweek for you?
- (4) What do you spend most of your time on?
- (5) What are the most common challenges in your job?
 - Both minor, everyday challenges and larger, more general challenges are interesting to hear about.

Subject 2 – Digitalisation

- (1) How have you been involved in the digitalization work in your organization?
- (2) Can you elaborate on your experiences with this work?
 - Have there been any special challenges or surprises in the work?
- (3) What is your organization currently working on related to digitalization?
- (4) Can you tell me about the digitalization work in your organization to date?
 - Are there any particularly important dates?
 - Start or end dates for projects/programs or similar?
 - I am happy to arrange for the transfer of documents here.
- (5) What future plans do you have for your digitalization work?
 - Both concrete projects and more general goals.
- (6) How has the concept of "user orientation" influenced your work with digitalization?
 - For example, technically in the development of systems? Overarching in the form of policy or similar?
- (7) Do you have any thoughts on the results of the digitalization work, both positive and negative?

Subject 3 – Archival and documentation processes in the organization

- (1) How is the work with archives and documentation organized in your organization?
 - Who is responsible for what? Is the responsibility delegated?
 - Who is responsible for the general tasks related to documentation and archiving - is it the responsibility of all employees?
- (2) What regulates your work with archiving and documentation?
 - Laws and regulations? Internal policies? Overarching goals? Goals set by management?
- (3) Can you tell me a little about your archive and documentation processes?
 - Both generally and specifically.
 - What is the usual process when a document is archived? Who decides what should be archived or not? -> partly follow-up questions
 - Is there documentation here that I can access?
- (4) Do you have any thoughts on changes in archive and documentation processes as they were previously compared to how they are now?
 - A concrete timeline is of course not realistic to expect here, but all information on differences can be interesting.
 - It doesn't have to be from before the digitalization started, changes during the ongoing digitalization project are also interesting.
- (5) Do you have documentation describing the archive processes that I can access to see?
 - Documentation on both previous and current processes, if possible.

Subject 4 – Relation to laws, rules, and standards

- (1) Can you tell me a little about the laws, regulations, and standards that you adhere to in your archiving work?
 - Certifications? Desire for certifications?
- (2) Have you made any assessments of how the new archive law may affect your work? If so, what are they?

Subject 5 – Conclusion

- (1) Are there any topics you think we should have talked more about?
 - Can be addressed in a follow-up email.
- (2) Is there anything I forgot to ask about?
- (3) Do you have any final comments?
- (4) Is it okay if I send you a follow-up email within a week if I have any questions?

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