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Factors Influencing Employees' Intention to Use an Electronic Recordkeeping System: Development of a Valid Survey Instrument

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Abstract

This study seeks to identify the factors that are associated with the acceptance and use of electronic recordkeeping systems in public sector organisations. These systems rely on ordinary end-users (rather than trained recordkeepers) to select and file appropriate records to comply with organisational and legislative recordkeeping requirements; however, current acceptance and utilisation rates of these systems are often mixed.

The selected methodology is a mixed-methods approach, with this paper focusing on the development of a valid survey instrument. A theoretical model was initially derived from the literature covering three logical areas (and consisting of their supporting and pre-validated constructs): Technology Acceptance (performance expectancy, effort expectancy); Organizational Context (social influence, perceived power security), and Knowledge Interpretation. A new construct – perceived value of records – is introduced in this study to provide a construct in support of Knowledge Interpretation. The derived measurement items are then checked for construct validity before forming a suitable survey instrument.

Keywords

Survey Instrument Validity, Electronic Recordkeeping Behavior, Technology Acceptance

INTRODUCTION

The need to manage electronic records and ensure that they are accessible into the future is driving the development of new theory, standards and legislative instruments. Trustworthy electronic recordkeeping is an essential foundation for accountability and transparency globally, yet the implementation of electronic recordkeeping systems has had limited success. The question arises: why are electronic recordkeeping systems experiencing different rates of acceptance and utilization by end users? This research seeks to address that question through identifying the factors that influence a user's intention to contribute documents into an electronic recordkeeping system.

Although a significant body of research has been dedicated to studying IT acceptance and use in various situations, no research in the information systems discipline has yet focused specifically on electronic recordkeeping and its unique set of use-influencing factors. This research builds on previous theoretical models to address this gap and introduces a new construct: the *perceived value of records*. The purpose of this paper is to record the qualitative development of a survey instrument and, in particular, the identification and validation of a suitable pool of measurement items. A future stage will use the resulting survey instrument to quantitatively evaluate the research model among New Zealand government public servants who are already required to use formal electronic recordkeeping systems.

THEORETICAL BACKGROUND

A record is "information created, received, and maintained as evidence and information by an organization or person, in pursuance of legal obligations or in the transaction of business" (ISO 15489.1 2002, p. 3). Records management is the "field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of records, including processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records" (ISO 15489.1 2002, p. 3). Records are maintained as evidence for the purpose of accountability (Oliver et al. 2009). They must be trustworthy in order to stand as evidence.

Records management practices have developed over time to focus on managing and protecting the key characteristics of records, namely: authenticity, reliability, integrity, and usability (ISO 15489.1 2002; Upward 1996). The limitations of applying practice developed initially for the analogue environment has motivated the reconceptualization of records management as recordkeeping informatics (Upward et al. 2013). As society has

increased its requirements for maintaining reliable evidence, recordkeeping has sought to meet those requirements through evolving mechanisms – with an aim to maintain reliable and trustworthy records to a level acceptable in that society. As such, recordkeeping is primarily governed by the norms and needs of the society that it supports. However, societies interact and change over time, and given the complexity and volume of information created in today's digital age, it has been necessary to develop a theoretical foundation to build new solutions and strategies. Giddens' structurational concept of space-time distanciation is one of the important concepts underpinning the development of the Records Continuum Model (Upward 1997).

Structuration Theory is a general theory of social organization (Giddens 1984). It is a commonly accepted platform upon which we view and consider people's actions and the structure of society as they recursively evolve over time (Jones et al. 2004; Jones and Karsten 2008). To help practitioners move to a more unified approach to the records-archival relationship, Upward introduced a new theoretical model based on Giddens' notion of time-space distanciation (Giddens 1984). In short, a record can *exist* and *be interpreted* in many dimensions across time. Upward's Records Continuum Model created an intersection of the main records processes (Creation, Capture, Organization, and Pluralization) and dimensions of "recordness" including Evidentiality, Transactionality, Recordkeeping Containers, and Identity. The continuum approach to records as they exist in both space and time is critical to the mental move required to address the functional requirements and need for virtual archives for the future's electronic records (Cook 1994). Nevertheless, both structuration theory and the related records continuum model are an abstraction of reality – and they still required a tangible method of application to recordkeeping in general and electronic recordkeeping specifically.

The National Archives of Australia created a strategy called "Designing and Implementing Recordkeeping Systems" or DIRKS ("DIRKS" 2001), which was designed to assist organizations in setting up a compliant enterprise-wide recordkeeping system. DIRKS provided a practical method for an organization to determine and document their recordkeeping requirements and contextual metadata strategies. The resulting enterprise-wide recordkeeping requirements created a need for a technology solution that was rapidly filled in the market by a number of commercial electronic recordkeeping systems. The uptake of these systems however has been variable and often disappointingly low (for example, the following give some insight into a range of different experiences: Jones 2012; Nguyen et al. 2009; Smyth 2005; Wilkins et al. 2009; Williams 2005).

Given that electronic recordkeeping systems are implemented at the organizational level, conditions specific to the context of the organizational user were considered. Davis's (1986) Technology Acceptance Model (TAM) is one of the most influential theories in technology systems adoption and use behaviour research (Venkatesh et al. 2003; Venkatesh and Davis 2000). Adapted from Ajzen and Fishbein's Theory of Reasoned Action (TRA) (1980), TAM was designed to explain why organizational users accept and use a technology. Their dependent variable was *intention to use*, based on the high correlations which have been found between *intention to use* and actual *usage* (Bagozzi 1982). According to TAM, two constructs, *ease of use* and *perceived usefulness* determine one's *attitude* towards use and in turn, *attitude* influences *intention to use*.

Initially *perceived usefulness* was described as the person's belief that use of a certain system would enhance their job performance (Davis 1989). However, in 2003 Davis contributed to the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al. 2003), and the construct was renamed *performance expectancy*. It includes elements of *perceived usefulness* (Davis 1989; Davis et al. 1989; Venkatesh and Davis 2000); *relative advantage* (Moore and Benbasat 1991); and *outcome expectation* (Compeau et al. 1999; Compeau and Higgins 1995), and was defined as "the degree to which an individual believes that using a system will help him or her attain gains in job performance" (Venkatesh et al., 2003, p. 447). *Perceived ease of use* describes the freedom from effort involved in the use of a particular system (Davis 1989). In a revision of the concept, UTAUT's *effort expectancy* was defined as "the degree of ease associated with the use of the system" (Venkatesh et al. 2003, p. 450). As well as drawing on *perceived ease-of-use* it also encompassed *complexity* (Thompson et al. 1991); and *ease of use* (Moore and Benbasat 1991). *Effort expectancy* is especially significant in the early periods after training.

However, TAM constructs center on an individual's acceptance of a technology, and thus do not take into account the influences of the organizational context (user-influences). With regard to the organizational/social context, Giddens' (1984) Structuration Theory named three main interactions of individuals in the act of structuring their society – communication, power, and sanction; while Schultze and Stable's (2004) categorization of four knowledge management discourses highlights the importance of the political climate and culture – particularly on the power-politics continuum of consensus versus dissensus organizations. This led to the development of the concept of *perceived power security* which Ong, Lai, Wang and Wang (2005 p. 3) defined as "the degree to which a person believes that using a particular system will be free from threats of insecurity regarding loss of power and influence."

From a different perspective, Ajzen and Fishbein (1975) had introduced the notion of the *subjective norm,* or perceived social pressure to behave in a certain way. This concept, together with elements of *social factors*

(Thompson et al. 1991); and *image* (Moore and Benbasat 1991) contributed to the formation of *social influence* by Venkatesh et al. (2003). They defined *social influence* as "the degree to which an individual perceives that important others believe he or she should use the new system" (Venkatesh et al. 2003 p. 451).

An important consideration of the intended use of an electronic recordkeeping system is the user's interpretation of what is record-worthy. In addition to the power-politics continuum of consensus and dissensus, Schultze and Stable (2004) included a knowledge interpretation dimension, with some users believing that stored knowledge can be an 'asset' that has a value that can be applied in future situations, whereas other users believe that knowledge can only have value while in use, as working knowledge. Accordingly, it would appear that only one of Schultze and Stable's (2004) four knowledge discourses is conducive to the willing use of electronic recordkeeping – that of the Neo-Functionalists, who both believe knowledge can and should be stored and who also exist in an organizational environment that encourages and supports that belief.

The literature thus indicates that there are three main categories of electronic recordkeeping system-use antecedents: technology acceptance; organizational context; and knowledge interpretation/perceived value of records. It also indicates that use-intention is a strong predictor of actual use.

THE RESEARCH MODEL

The theoretical research model – see Figure 1 – asserts that a user's intention to contribute a document into an electronic recordkeeping system is influenced by the accessibility and usefulness of the software (Technology Acceptance); the power and influence of others associated with using the system (Organizational Context); and whether the individual interprets the task (recordkeeping) as being a valuable one (Knowledge Interpretation). The dependent variable, *intention to use*, follows Bagozzi's (1982) indication that intention is strongly correlated with use.
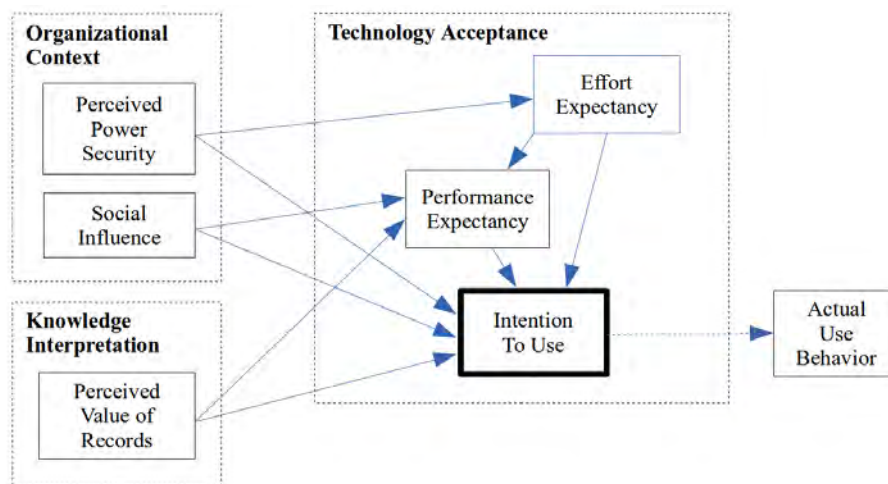

Figure 1: The theoretical research model – antecedents of electronic recordkeeping systems use

Technology acceptance is reflected by *performance expectancy* (PE) and *effort expectancy* (EE), both of which are constructs borrowed from the UTAUT model (Venkatesh et al. 2003). Following the UTAUT, both of these impact *intention to use*, with *effort expectancy* also influencing *performance expectancy*. Together, these two constructs capture the core aspects of software system acceptance – namely, how easy the system is to use, and how useful the system is perceived to be by its end users.

Organizational context is represented by *social influence* (SI) and *perceived power security* (PPS). The former is derived from the UTAUT model (Venkatesh et al. 2003) and also reflects the communication and sanction interactions of Giddens (1984), whereas the latter is derived from the *perceived power security* of Ong et al. (2005) and embraces Giddens's (1984) notion of power interaction. *Social influence* is depicted as impacting *performance expectancy* and *intention to use*, whereas *perceived power security* is depicted as impacting *effort expectancy* and *intention to use*.

Knowledge interpretation is captured by a new construct, *perceived value of records* (PVR). This new construct was necessary to take into account the specialist functionality of electronic recordkeeping systems. The *perceived value of records* is defined as "a user's belief that knowledge artifacts (e.g., written documents, letters, emails, etc.) have value beyond the current application and are worthy of storing for the future". The *perceived value of records* influences both *performance expectancy* and *intention to use*.

METHODOLOGY AND RESULTING INSTRUMENT

Once the theoretical research model had been identified, the next phase of the research sought to develop a valid survey instrument to verify the selected constructs and identify suitable measurement items. The objectives of this phase were to:

1. Validate the proposed constructs and measurement items derived from the literature in the context of electronic recordkeeping;

2. Validate the new construct, *perceived value of records*;

3. Identify additional factors that may impact a user's intention to contribute documents into an electronic recordkeeping system and that are not specifically covered by the constructs of the research model; and

4. Validate the respective measurement items of the identified constructs.

This phase comprised three stages: in-depth personal interviews to develop an initial pool of factors and items; proof reading and consideration of the comprehensiveness of the items; and card sorting to validate the factors and items thus identified.

Stage 1

In the first stage, twelve interview participants were sought from the New Zealand Public Sector. A convenience sample of three different organizations was selected and four existing users representing a variety of roles were identified in each organization. The interviews were semi-structured and were designed to identify factors that could influence a user's intention to contribute documents into an electronic recordkeeping system. Each interview was approximately one hour long, was digitally recorded, and was transcribed.

The transcribed interviews were processed using thematic analysis (Byrne 2001; Woods et al. 2002). NVivo 10 qualitative data analysis software assisted in the analysis. Every phrase and paragraph was separately considered and categorized. Each theme (or 'node' in NVivo) was both labeled and defined at creation. Several iterations were necessary to code interview phrases consistently. A thematic analysis document was then prepared that consisted of ~60 themes, their working definitions, and 1-2 illustrative quotations. These were eventually reduced / combined to form 40 themes that emerged from the interviews as potential factors that may influence employees' intention to contribute to an electronic recordkeeping system.

Two main measures were used to determine the relative importance of a particular theme: the number of participants that mentioned the theme, and the total number of times it came up in the interviews. For example, the *importance of effective search* was a theme mentioned by all 12 participants and that was referred to 51 times. Whereas, the *influence of organizational policy on use* was only mentioned by 3 participants and on only 4 occasions, and the need for a more *flexible interface* was only mentioned once.

The resulting themes were then transformed into a pool of measurement items. Where possible, validated items from the literature were used, either directly or reformulated to reflect the context. Further items were developed for newly emergent themes. For example, the theme – *document security* – was mentioned by 9 participants 37 times. However, *document security* must then be converted into a measurement item, such as: *The system effectively manages security to the level required for my sensitive records* (agree / disagree). The initial pool of measurement items had to be aligned and standardized, and needed to go through an iterative refining process (Lewis et al. 2005; Moore and Benbasat 1991). This took place in the second stage.

Stage 2

The second stage – proof reading – required input from ten volunteers who were selected from two New Zealand public sector organizations and represented three different business units. These volunteers were given limited background concerning the research project – simply that the 'system' referred to was an electronic recordkeeping system. They were then asked to review the pool of 43 measurement items (presented on paper).

The proof readers considered the 43 measurement items and collectively raised 90 issues (questions/comments) that affected 32 questions, with many reiterating the same or similar problems. The issues were addressed, resulting in a final pool of 55 measurement items. These measurement items were then sorted logically under the research model's constructs in order of relative importance, and labeled using the construct abbreviation – e.g., PE01, PE02, etc. There were no themes that did not fit logically under the research model constructs. Nonetheless, many themes were quite specific to electronic recordkeeping and could fit under more than one of the model's constructs.

The feedback on the measurement items was then transcribed on to a single 'master copy' in order that they could be viewed simultaneously and considered in context with other feedback. Problematic measurement items were

then re-worked to incorporate the best of the feedback. The final wordings were next checked for tense and clarity and only then were the measurement items tentatively associated with a parent construct.

Stage 3

The third stage – card sorting – employed a technique selected to develop and explore measurement-item-to-construct validity (Hinkle 2008; Moore and Benbasat 1991). The goal of this stage was to verify that the pool of measurement items loaded appropriately onto one (and only one) of the constructs in the research model. Two variations of card-sorting – *closed card-sorting* (Spencer and Warfel 2004) where the categories are provided to the participants; and *open card-sorting* (Faiks and Hyland 2000) where participants are asked to create their own groupings – were used to measure two different aspects of validity (Boudreau et al. 2001; Rugg and McGeorge 2005). Items demonstrating lower statistical reliability may be candidates for elimination, as these items would likely have low explanatory power in the research model (Hinkin 1998; Moore and Benbasat 1991).

Twenty-four participants (twelve for each card-sorting variation) were recruited to participate in card-sorting to obtain a suitable sample size to measure validity (Wood and Wood 2008). The participants were drawn from a single organization, but represented a number of different levels within the organizational hierarchy – including a director, several functional managers, and a range of team leaders and workers from various functional areas who were attending an out-of-town conference together.

The card-sorting data were collected and entered into two spreadsheets, one to capture the open cardsort data and the other to capture the closed cardsort data. The data were entered by participant and by group, using "1" to denote a positive sort in the expected construct group, and "0" to represent that item's absence from the group. The analysis software used was R Statistics (R Core Team 2012) running on an Ubuntu 12.04 Linux platform.

The data were analyzed using a cluster analysis matrix that featured the use of a Jaccard coefficient and a graphical presentation of the output in the form of a dendrogram or 'tree diagram' (Faiks and Hyland 2000; Hinkle 2008; Salmoni 2012) – see an example dendrogram featuring the closed cardsort data after adjustment in Figure 2.
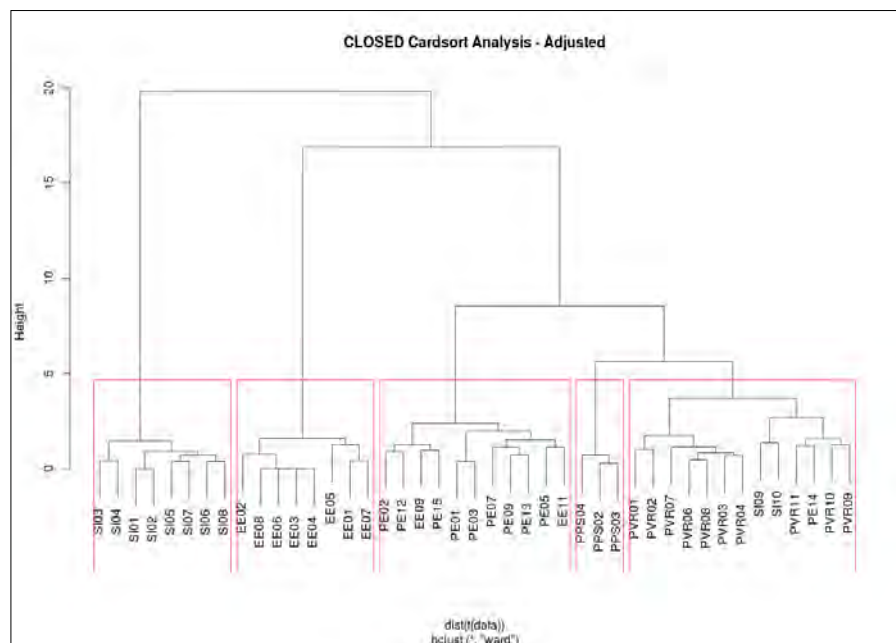

Figure 2: Dendrogram of the adjusted Closed Cardsort Data

The dendrograms were configured to statistically create five clusters based on how the participants sorted the measurement item cards. If the statistical clusters matched the measurement item labeling – e.g., the SI items are grouped statistically – then this provided additional evidence of discriminant construct validity by the proposed measurement items. The resulting dendrogram revealed that the first four clusters of measurement items were solidly clustering as anticipated – i.e., SI, EE, PE, and PPS. However, the dendrogram also revealed that the cluster primarily consisting of PVR items provided less discriminant validity and included measurement items expected to load onto other constructs.

To further assess the loading of measurement items for the closed cardsort data, a matrix was created that described the likelihood of a measurement item being grouped in the expected construct category. Thus, if a

measurement item was sorted in the expected category 9 times out of 12 sorts, it would be awarded a simple agreement frequency of 0.75. An example agreement frequency matrix for the adjusted closed cardsort data is provided in Table 1 – see Appendix for full text of each measurement item.

Table 1: Closed cardsort – the adjusted observed agreement frequency
of measurement items on their related construct category.

Performance Expectancy		Effort Expectancy		Social Influence		Perceived Power Security		Perceived Value of Records	
PE01	0.83	EE03	1.00	SI01	1.00	PPS02	1.00	PVR03	0.92
PE03	0.75	EE04	1.00	SI02	1.00	PPS03	0.92	PVR06	0.83
PE07	0.75	EE06	1.00	SI05	0.92	PPS04	0.83	PVR08	0.83
PE09	0.75	EE08	1.00	SI06	0.92			PVR01	0.67
PE05	0.67	EE01	0.92	SI03	0.83			PVR04	0.67
PE13	0.67	EE02	0.92	SI04	0.83			PVR07	0.67
PE02	0.58	EE07	0.83	SI07	0.83			PVR02	0.58
PE12	0.58	EE05	0.75	SI08	0.83			PVR10	0.50
PE14	0.58	EE09	0.67	SI09	0.58			*PVR09*	*0.33*
PE15	0.50	EE11	0.58	SI10	0.50			*PVR11*	*0.33*

To address measurement items with apparently poor construct loading, any closed cardsort measurement item receiving an agreement frequency of < 0.50 was both qualitatively and quantitatively reviewed in an attempt to understand and address the apparent poor loading in light of the measurement item statement and its relationship with other statements in the dendrogram or agreement frequency matrix. The 0.50 threshold was selected as a conservative cut-off to maximize the number of remaining measurement items (Straub 1989), although some studies go as low as 0.35 (Lewis et al. 2005). Any measurement items achieving an agreement frequency of ≥ 0.50 would thus be retained at this stage, and would be revisited during the pre-test of the survey instrument (outside the scope of this paper).

Several of the poor-performing measurement items were found to be ambiguous across all construct categories. As such, PE06, PE10, and PVR05 were removed from the measurement item pool. However, five of the measurement items were found to have achieved a ≥ 0.50 loading on to different constructs than expected – PE04 (SI: 0.58), PE08 (EE: 0.58), PE11 (PVR: 0.50), EE10 (PE: 0.50), and PPS01 (SI: 0.50). These were re-coded to the new construct and removed from their original construct pool. In addition, some items (PVR09, EE11, and PVR11) were slightly reworded in an effort to improve their loading on to their new construct areas – resulting in an *adjusted* measurement item-to-construct pool. After the final adjustment and culling, the remaining pool of validated measurement items would form the survey instrument (see Appendix).

DISCUSSION

The initial results of the survey instrument development phase appear to provide solid support for the research model. The research model was created based on a review of the literature and is supported by theory. The appropriateness of the research model was then confirmed by conducting semi-structured interviews and developing a list of emerging themes derived from actual end-users and their experiences. These emergent themes appeared to fit well under the existing constructs, without the requirement for additional construct categories to explain them, thus achieving the first and third objective – namely, verifying that the existing research model constructs are both *necessary* (i.e., they are reflected in actual use situations) and *sufficient* (i.e., there are no themes that suggest the addition of new constructs to the research model).

This research was not designed to provide a hierarchy of importance among the constructs. However, the interviews provided some insights into possible relative importance. The *perceived power security* construct initially appeared to be quite important in explaining some perceived barriers to using an electronic recordkeeping system – primarily through the vehicle of capturing the personal risk associated with creating a record and then being judged on its qualities. However, among the interview participants, the importance of "power security" in electronic recordkeeping systems did not come out with as much importance as anticipated. Even when emphasising during interviews the potential risks associated with transparency, judgement, and power-loss, the majority of the interview participants appeared unconvinced as to the importance of power security in explaining system-use. For example, one interviewee commented:

> "I guess there is always that risk, but as long as I am happy with the standard that I produce,
> then I don't think that it's an issue for me."

Finally, the new construct – *perceived value of records* – resulted in 10 new measurement items. The foundational themes that emerged for this construct were all quite strong, ranging in thematic support from a low of 7 participants making 10 references to a high of 12 participants making 47 references to associated themes. The pattern of emergent thematic coding for this construct was further considered through the lens of the Records Continuum Model (Upward 1997) – the foundational theory in recordkeeping and archival science. The Records Continuum focuses on overlapping characteristics of recordkeeping: evidence, transaction, and the identity of the creator. The emergent themes mapped well on to the continuum of evidentiality. With this in mind, the themes (and the resulting measurement items) were able to be easily grouped into three main dimensions: 1) Ownership of accountability, 2) Need for reliable evidence, and 3) Need or value of 'organizational memory' – with the measurement items mapping equally to each of these dimensions. The easy mapping of the emergent themes and measurement items to the underlying theory bodes well for the construct; particularly the convergent validity of its related measurement items. However, the "overlapping characteristics" of the Records Continuum Model are also evident, with PVR being the weakest of the constructs in terms of discriminant analysis in the dendrograms. To reduce the risk of undesired statistical loading onto other constructs, the survey instrument will be presented with measurement items grouped by construct, which will assist survey participants with interpreting the measurement items in the context of records, rather than in a social or performance context.

In a later phase of the research, the survey instrument will be trialed, and additional statistical validation techniques will be used to further improve and refine the set of measurement items and determine the explanatory value of the research model.

CONCLUSION

From a records perspective, the impact of low utilization of an organization's electronic recordkeeping system means that documents are not being properly managed, can be lost through destruction or deterioration, or else can be made irretrievable through lack of an indexing mechanism (Wilson 1995). Loss of these records also has an impact on society. In the short term, the loss of accountability – a cornerstone of our legal system and civilization; and in the long term, ultimately a loss of history (Johnston and Bowen 2005). One interviewee summarised their system – *and the motivation behind this study* – very aptly:

> "It handles everything! It's just that nobody uses it."

By identifying the factors that impact the use of electronic recordkeeping systems, this research will inform future strategies to improve the capture and retention of our digital heritage. As Archives New Zealand states: "Do nothing, lose everything. If no action is taken, public sector digital information will be lost."("Digital Archive Programme" 2011)

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APPENDIX: FINAL POOL OF MEASUREMENT ITEMS BY CONSTRUCT CATEGORY

Performance Expectancy (PE)
PE01   I find the system useful in my job.*
PE02   Using the system enables me to accomplish tasks more quickly.†
PE03   Using the system increases my productivity.†
PE05   Using the system's Search Function allows me to locate records effectively.
PE07   The system effectively manages security to the level required for my sensitive records.
PE09   I have found the system to be reliable.
PE12   The system's ability to integrate with my other computer applications ultimately saves me time in my job.
PE13   I have noticed that the system is often slow in its operation.
PE14   I use the system to report on the status of various records.
PE15   The system is flexible enough to support both my needs as well as the organisation's requirements.
         *Note: *Adapted from Venkatesh et al. 2003; †Venkatesh et al. 2003; all others are new.*

Effort Expectancy (EE)
EE01   I find the system's interface (e.g., its menus and layout) to be clear and understandable.*
EE02   I find it easy to become skillful at using the system.*
EE03   I find the system easy to use in my job.*
EE04   Learning to operate the system is easy.*
EE05   I use the system often enough to maintain my skill in its use.
EE06   The process of contributing a record to the system (electronic filing) is easy and straightforward.
EE07   I have no trouble searching for records in the system.
EE08   I can learn how to do administrative tasks in the system without difficulty.
EE09   I can access the system directly from other computer applications – e.g., directly from Microsoft Office.
EE11   I find that the records are logically organised in the system.
         *Note: *Adapted from Venkatesh et al. 2003; all others are new.*

Social Influence (SI)
SI01   People who influence my behaviour think that I should use the system.*

SI02   People who are important to me think that I should use the system.*
SI03   The senior management of this organisation support the use of the system.†
SI04   In general, the organisation has supports the use of the system.†
SI05   I use the system because many of my co-workers also use the system.†
SI06   People in my organisation who use the system are more highly regarded than those who do not.‡
SI07   People in my organisation who use the system are more dependable than those who do not.
SI08   People in my organisation who regularly use the system acquire a higher profile.‡
SI09   Using the system increases my chances of getting recognition in the workplace – e.g., contributes to promotion chances.
SI10   Placing my documents in the system – where other people may view them – may positively effect my reputation.
        *Note: *Adapted from Ajzen and Fishbein 1975; †Adapted from Thompson et al. 1991; ‡Adapted from Moore and Benbasat 1991; all others are new.*

Perceived Power Security (PPS)

PPS01   Use of the system decreases my power over others.*†
PPS02   By recording my knowledge in the system, I will be less valuable to the organisation as a source of knowledge.
PPS03   By placing my records in the system, I feel that I have more control over them.
PPS04   By putting my documents into the system, there is a potential for people to judge my work.
PPS05   Use of the system does not affect my influence over other people. *†
        *Note: *Adapted from Ong, Lai, Wang and Wang 2005; †Added after cardsort; All others are new.*

Perceived Value of Records (PVR) – new construct

PVR01   Records management is everyone's responsibility.
PVR02   Records management requirements are a barrier to working efficiently.
PVR03   Records management is an essential part of my work.
PVR04   I make sure all my work-related emails are filed appropriately.
PVR06   I regularly refer to records to obtain information needed in my job.
PVR07   Particularly during times of high staff-turnover, records are necessary to provide continuity to my organisation's business processes.
PVR08   I save my records into the system with the thought that someone in the future will read them.
PVR09   I have used records to provide reliable evidence of my personal accomplishments.
PVR10   My organisation relies on records as a way to achieve one or more of its goals.
PVR11   When I store an electronic record, I am confident that it will be preserved and thus be retrievable in the future.

Intention to Contribute (IC) – excluded from construct validation

IC01   I will be using the system frequently to search for records as part of my work.
IC02   I regularly contribute documents into the system
IC03   I predict that I will use the system regularly over the next six months.*
IC04   My personal level of commitment to using the system is low.
IC05   My personal intention to use the system is high.*
        *Note: *Adapted from Venkatesh et al. 2003; all others are new.*

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