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Abstract

Government agencies are becoming increasingly dependent on e-mail systems as communication and information transfer tools. Many e-mail messages contain information vital to the business of government, and therefore organisations need to manage the messages in accordance with managerial, legal, and democratic requirements. On a daily basis, government employees send and receive numerous e-mails and, on behalf of their organisations, make decisions about how to manage them.

Although the New Zealand Public Records Act (2005) provides guidelines for records management to New Zealand government agencies, the question is what methods and behaviours are individual employees using to manage business e-mails. So far, however, there is no empirical knowledge available on how individual employees in New Zealand central government agencies manage business e-mail messages.

This paper presents the findings of a recently conducted online survey examining how individual employees of New Zealand central government departments identify and manage e-mails of significant value to the business of government. The results show that employees tend to recognise e-mail as a critical tool in the workplace; however, they also tend to make decisions on identifying and managing the messages on an individual basis, rather than in compliance with organisational requirements.

Keywords

Electronic Mail; Recordkeeping; Electronic Government; New Zealand

INTRODUCTION

E-mail is an indispensable communication and information tool used by public servants to communicate within government agencies, as well as externally with members of the public. Originally designed as an asynchronous electronic messaging tool, currently e-mail users employ e-mail to manage to-do lists, tasks, reminders, and contacts, as well as for diary management and archiving functionality (Renaud, Ramsay, and Hair 2006).

Many e-mail messages contain information vital to the business of government, and therefore organisations need to managed the messages in accordance with managerial, legal, and democratic requirements. E-mails can be official records of an organisation according to government and archival agencies (Archives New Zealand 2006a; Digital Preservation Testbed 2003; Library and Archives Canada 2006; National Archives of Australia 2007), as well as by the International Organization for Standardization (2001). The identification of a public record takes place based on the content of an item, rather than the format, which means that, as with other forms of correspondence, the value of an e-mail differs on a case-by-case basis. Therefore, not all e-mails sent and received in the workplace have the same value to the organisation. Often it is the operational responsibility of public servants to identify business e-mails for retention and to ensure appropriate management of these e-mails. The management of electronic records, including e-mails, presents further challenges for government agencies as traditional methods of recordkeeping are not always applicable or easily applicable to emerging online environments (Winget, Chang, and Tibbo 2006).

Consequently, for government agencies, it is of increasing importance to ensure the appropriate identification of e-mail messages that are critical to their business, and to guarantee suitable and consistent management of these messages. Moreover, in New Zealand, starting in 2010, Archives New Zealand will facilitate audits of government agencies for their compliance with recordkeeping requirements under the New Zealand Public Records Act, 2005. This situation will put further pressures upon government organisations to ensure comprehensive frameworks and toolsets are in place to manage government records effectively, and to ensure employees practice appropriate recordkeeping behaviours.

However, to be able to decide upon proper frameworks, toolsets, and appropriate recordkeeping behaviours, agencies need to know more about how public servants are actually identifying and managing e-mail messages of significant value and importance to their organisation. Unfortunately, there is limited empirical data available on how individuals in government organisations manage emerging electronic records such as e-mails. In this paper, we present research findings of a recently undertaken online survey investigating e-mail management methods and behaviours of individuals employed at New Zealand central government departments.

THEORETICAL ASSUMPTIONS ON PERSONAL E-MAIL RECORDKEEPING

So far, there is little empirical research available on how individuals employed by government organisations manage e-mail messages that are critical to the business of government (Meijer 2006; Rocheleau 2002). In addition, Winget, Chang, and Tibbo (2006) did not identify any research into e-mail management, particularly comparing the habits of e-mail users, the design of technological tools, in light of accepted archival, and recordkeeping practices. More generally, however, available research demonstrates that due to the rapidly increasing quantities of e-mails, including attachments delivered to people each day, many individual users have designated e-mail as a personal information management tool (Ducheneaut and Bellotti 2001). In addition, research among corporate e-mail users in Singapore found that the majority of respondents manage e-mails of critical business value in personal information management systems, such as in personal folders on their own computer systems, or in personal paper-based files in hard copy format (Seow, Chennupati, and Foo 2005).

Based on available knowledge, an important assumption in our research is that e-mail users apply their personal information needs when they identify and manage e-mail messages in the course of their roles within New Zealand central government departments. As a result, the so-called Personal, Anticipated Information Need (PAIN) theory offers an appropriate analytical lens for this research. This theory hypothesises that the anticipated need of information by individuals drives behaviours associated with collecting information. The following propositions form the basis of the PAIN theory (Bruce 2005):

- Personal, anticipated information need is triggered by information events

- Individuals have different sensitivity and reactions to their personal, anticipated information needs

- Personal, anticipated information need predicts, but does not guarantee, future information usefulness

- Personal, anticipated information need informs the investments and valuations that underpin the processes of personal information collection

- Sensitivity to personal, anticipated information need is a critical component of information literacy

In this research project, we have understood the personal, anticipated information need of a public servant as an individual's need to identify and manage e-mail messages as official government records appropriately, that is on the basis of their professional role and in anticipation of future information requirements within and to government. Applying PAIN theory to a government context, existing managerial, legal, and democratic frameworks is likely to influence the personal, anticipated information need of a public servant, by identifying and managing e-mails, and the future information requirements derived from those frameworks. In New Zealand, by the New Zealand Public Records Act (2005) provides a number of existing managerial, legal, and democratic frameworks for public records management. In addition, the New Zealand Official Information Act (1982) aims to increase progressively the availability of official information to the people of New Zealand and the New Zealand Privacy Act (1993) protects personal information. The New Zealand Public Records Act sets out two fundamental duties for organisations. Firstly, all agencies must create and maintain full and accurate records of their activities; these records must be accessible over time and maintained in a recordkeeping system, therefore. Secondly, no person may dispose of, or authorise the disposal of, records without prior approval from the Chief Archivist.

Another important theoretical assumption has been that the role characteristics of government employees may influence their e-mail management behaviours. Research undertaken by Danis et al. (2005) forms the basis of this assumption, because of their investigation into how managers and non-managers think about their e-mail.

Danis et al. (2005) found that the occupation of an individual in an organisation influences the way that e-mail messages are categorised. Similarly, research on potential factors associated with e-mail strain demonstrates that people with greater management responsibilities perceive e-mail as more important to their work (Dabbish and Kraut 2006). Moreover, some research suggests that gender might influence e-mail management behaviours, for instance, in research into the costs of responding to e-mail Renaud et al. (2006) found that women perceive e-mail to be more of a problem than men. They found that women felt significantly more pressure to deal with messages, they checked their e-mails significantly more often than men in similar occupations did, and they tended to see e-mail as more disruptive to their work.

In terms of identifying e-mails of critical value to the organisation, a longitudinal large-scale research among e-mail users in the USA indicated that as e-mail users become more knowledgeable on how to identify and effectively manage spam messages, increasingly spam bothers them less (Fallows 2007). Although empirical data on e-mail users in New Zealand is lacking so far, this assumption may also be applicable to the New Zealand central government context. Furthermore, contrary to conventional wisdom, Dabbish and Kraut (2006) concluded on the basis of their research that checking e-mail accounts whenever new messages arrive, rather than at restricted times, is an important method to reduce e-mail overload. Other e-mail-management practices they observed include trying to keep e-mail accounts small, keeping messages as reminders of tasks, and deleting e-mails after dealing with them. In order to explore how New Zealand government employees manage their e-mail accounts, we used these practices as indications of potential e-mail management behaviours of research respondents.

RESEARCH METHODOLOGY

We developed an online survey to explore empirically those methods used by employees within New Zealand central government departments to manage their e-mail accounts. Because New Zealand central government departments have substantial dealings with the public through public service provision, and must comply with the Public Records Act (2005), the scope of the research was restricted to government employees working in those agencies. To gain empirical insights into the variety of e-mail management methods and behaviours deployed by these employees, the project team selected an online survey method. This mode of data collection provides relatively easy access to an 'unknown' population, a low unit cost of data collection, and potential high speed of returns. An online survey instrument, being self-administered and computer-assisted, allows respondents time for thoughtful answers and the ability to check responses (Creswell 2003; Fowler 2002).

The names and/or contact details of New Zealand central government employees are not publicly available, so a non-probabilistic, snowball sampling method was employed. After seeking approval from the 35 New Zealand central government department Chief Executive Officers for their employees' involvement in our research, we invited Records Managers at these departments to disseminate to individual agency staff members an e-mail providing the link to the online survey. Simultaneously, the project team arranged for the publication of an invitation, including a link to the online survey, on the New Zealand Public Sector Intranet inviting central government employees to participate in the research. We did not perceive the restriction of recruiting survey respondents among e-mail and Internet users as a constraint to our research.

The online survey was available between mid February 2008 and early May 2008. Unfortunately, we did not receive any responses from seven Public Service departments – only 28 departments responded. On the other hand, three of the departments who employ 8% of total Public Service Department employees (State Services Commission 2007) accounted for 45% of all received responses. From a total potential population of 40,445 individuals employed at the 28 responding departments (State Services Commission 2007), we received 562 responses. The project team rejected 46 of these, as the respondents had completed less than 80% of the survey questions. Consequently, the project team used 516 responses (92% of received responses) in the analysis of the survey findings. These limitations to our study lead on to response biases and therefore set restrictions to the generalisation of the survey findings. The following conditions have had an impact on our research:

- Records managers recruiting participants for the online survey

- Variable support for the survey from senior management

- Restricted Internet access for government employees at some departments

- E-mail distribution problems or individual e-mail management issues

- An overload of survey participation requests,

- Work overload for Public Service department employees shortly after the summer holiday period in New Zealand

The survey comprised twenty-seven questions, organised into clusters on personal profile, technical environment, account management practices, e-mail recordkeeping practices, and information management policies. The survey contained mainly closed questions, comprising drop-down selection menus or an ordinal scale to select an appropriate answer. In addition, some open questions enabled respondents to provide further or alternative views on particular issues. Online survey participation took place anonymously, although respondents had the option to name their employer. The approximate response time to the online survey was 10 minutes.

RESEARCH FINDINGS

Profile and E-mail Management Context of Respondents

The profile of respondents to the online survey turned out to be reasonably comparable to the situation across the 28 participating New Zealand Public Service departments. For instance, the majority of respondents were female (51%) compared to 59% of female government employees at the 28 central government departments. In addition, 41% of respondents were employed as analysts or advisors, 27% were managers, 20% were administrative employees, and 12% were in other occupations.

Sixty two percent of all respondents used an Electronic Document and Records Management System (EDRMS) to manage business e-mails. This finding points at a large number of respondents not using an EDRMS to manage e-mails they send or receive; however, not all Public Service departments in New Zealand have an EDRMS. Alternatively, respondents may not be aware of an available system.

Most respondents (86%) sent fewer than 50 e-mails per day. Moreover, the majority of respondents (71%) received fewer than 50 messages in an average day. For 67% of respondents, spam messages amounted to one percent or less of all incoming messages, and for 92% of respondents spam messages amounted to less than 10% of all incoming messages in an average day.

The majority of respondents (62%) spent less than one-hour handling e-mails daily, including 43% of respondents who spent between 30 and 60 minutes, and 19% of respondents who spent less than 30 minutes a day handling e-mails. Almost all respondents (89%) agreed that the use of e-mail was critical in their work.

E-Mail Management Methods

The survey asked respondents to indicate the methods that they used to retain important business e-mail messages.

The most common method used by respondents (63%) was to retain business e-mails in their personal work e-mail account, while 57% of respondents saved business e-mails to an EDRMS. These findings confirm that the majority of respondents use their personal work e-mail accounts as personal information management tools. The overall results, presented in Figure 1, also suggest that single e-mail messages were stored in multiple ways, highlighting the lack of a consistent management approach and possible unawareness of the most appropriate method to manage business e-mails.

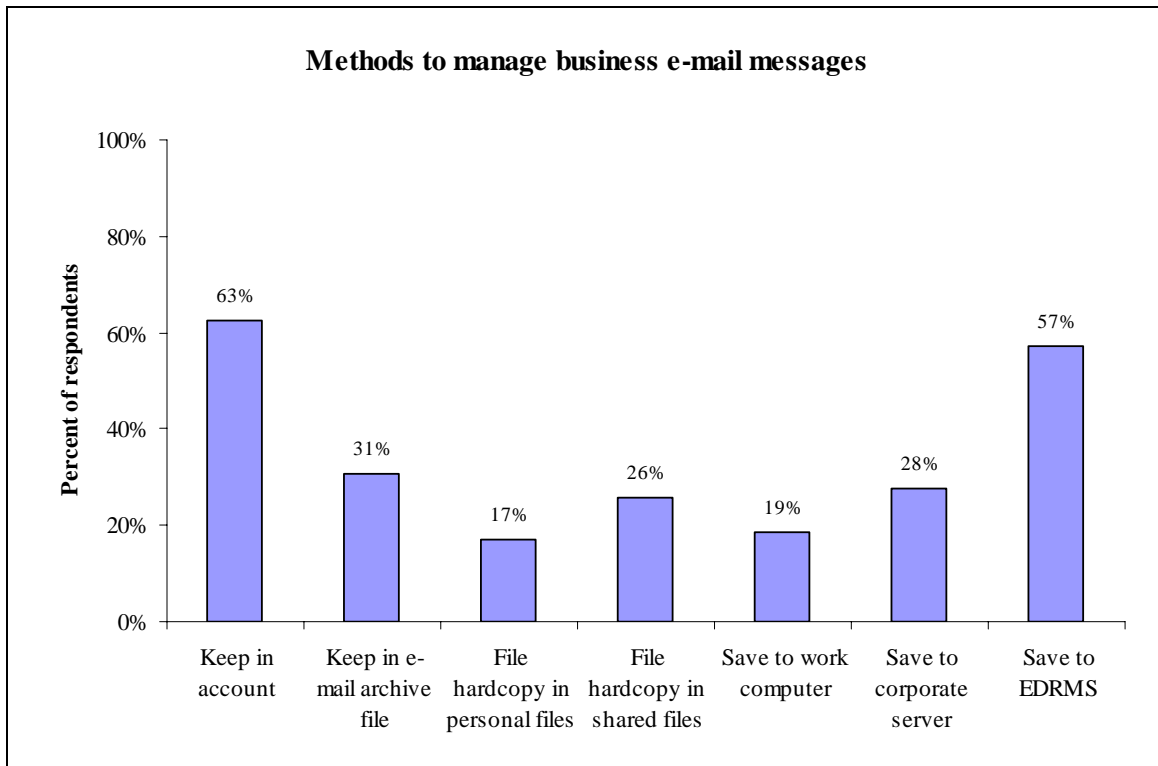## Methods to manage business e-mail messages

Figure 1: Methods used by respondents to manage business e-mail messages

Furthermore, our research findings indicate that respondents used more than one method to manage business e-mails. Several of the identified e-mail management methods essentially make the information contained in business e-mails inaccessible to the rest of the organisation, representing considerable potential loss of organisational information. These methods included managing e-mails of significant value in an e-mail archive file, for example, a .pst file, (31%), in personal electronic folders on work PCs or laptops (19%), and filing printed e-mails in personal files (17%).

Moreover, our research findings suggest that a substantial number of individuals employed by New Zealand central government departments had not receive regular information on how to keep e-mails of significant value. For instance, 26% of respondents indicated that they had not received any information on how to keep e-mails, while a further 24% had received this information, but not in the last 12 months. These findings reflect a significant gap in ongoing recordkeeping education for individuals employed by New Zealand Public Service departments.

Managing E-mail Accounts

Based on research by Dabbish and Kraut (2006), the online survey asked respondents to indicate whether they employed specific behaviours to manage their individual work e-mail account. Our findings indicate that respondents commonly kept messages in their account as reminders of tasks to do (79%). A large majority of respondents also checked their account as soon as a new message arrives (74%). Fifty percent of respondents deleted e-mail messages once they have dealt with them, while 39% of respondents left e-mails in their account after they dealt with them.

There was little difference between behaviours used to manage e-mail accounts by male and female respondents. However, the professional role of respondents did seem to influence their approach to managing e-mail accounts; for instance, administrative staff tried to keep the account small, and deleted e-mails after dealing with them more often than respondents in other occupations (see Figure 2).
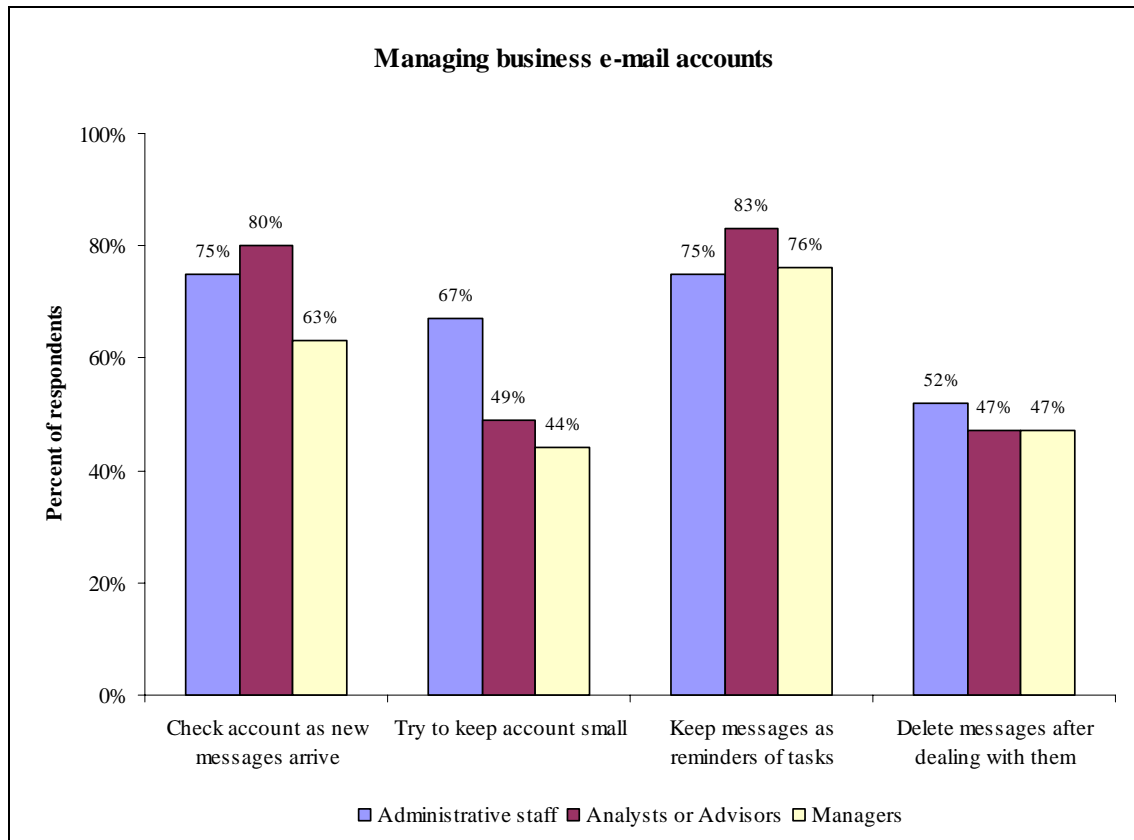
Managing business e-mail accounts

Figure 2: Behaviours used by respondents to manage business e-mail accounts, by occupation

Managing Business E-mail Messages

The survey asked respondents to indicate the behaviours they used to manage business e-mail messages. Analysis of Archives New Zealand recordkeeping guidelines provided the basis for identifying these behaviours (Archives New Zealand 2005; 2006a; 2006b; 2007), reflecting acknowledged requirements for effective recordkeeping in New Zealand government departments.

The most frequently employed behaviour of respondents was to store attachments with related e-mail messages (85%). In general, respondents maintained the integrity of e-mail messages as only 2% of respondents changed the content of business e-mails. In comparison, 42% of respondents retitled e-mail messages; however, some EDRMS require such a change. Eight percent of respondents indicated that they deleted business e-mails of significant value. However, this may reflect occasions when respondents delete copies of messages or previous discussion threads duplicated in the final message. A respondent explained this situation: "Only the initiator is responsible for retaining the e-mail, with all discussion threads."

Eleven percent of respondents deleted e-mails of significant value automatically, without opening the messages (see Figure 3). Females and males responded similarly to these questions, for example 53% of female respondents tried to keep e-mail accounts small compared with 50% of the male respondents. In general, e-mail management behaviours appear to focus on storing e-mails, rather than deleting those that public servants and organisations can legitimately delete.
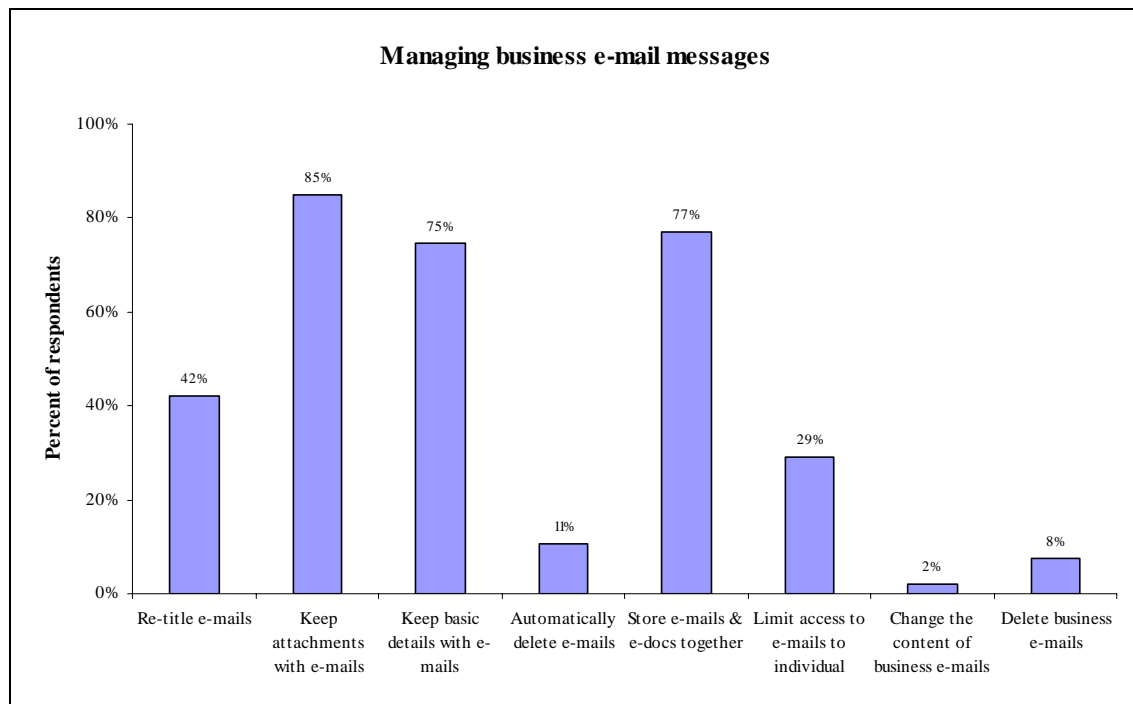
Managing business e-mail messages

Figure 3: Behaviours used by respondents to manage business e-mail messages

Individuals' Concerns Related to E-Mail Management

Analysis of comments made by respondents showed that a major concern raised by respondents included the significant amount of time required to manage e-mail messages effectively: "The majority of work these days is conducted by e-mail and requires time management principles to be applied. Managing e-mails is time consuming and difficult."

Many respondents indicated that the need to appraise and save each message according to their organisation's requirements is impractical and ineffective, particularly in relation to the number of messages that they send and receive on a daily basis.

Moreover, a number of respondents encountered difficulties when attempting to identify which e-mails to retain. "The problem is not that all record should be retained indefinitely, and determining which should be retained and which should be just kept as long as needed, is sometimes difficult. Sometimes something that was entirely trivial at the time can blow up to being highly significant at a later date."

Respondents also expressed concerns about personal recordkeeping decisions made by their colleagues, highlighting the subjectiveness of this decision-making process. Some respondents struggled to locate e-mails that were stored in central repositories; this in turn affected the likelihood of these respondents to use central recordkeeping repositories provided by agencies. "I know I should save e-mails to the document management system but find my own folder system vastly preferable so use that. Few others use the document management system for e-mails either, and it's very hard to find things in, so it's of limited value."

Respondents pointed at the difficulty of storing threads of e-mail conversations, in particular how to identify when an e-mail conversation has concluded. According to some respondents, they also have difficulties replying to messages saved into the EDRMS. To avoid this situation they indicated the need to save only the final thread in an e-mail conversation. Moreover, respondents raised a number of issues in relation to the role of the sender in improving their ability to manage messages they received, including the use of subject lines, avoiding multiple subjects in the same message, and suitable use of e-mail, as in some cases a face-to-face meeting or telephone call could be more appropriate.

ANALYSIS

Similar to available research (e.g. Ducheneaut and Bellotti 2001; Seow, Chennupati and Foo 2005), our research findings suggest that individuals employed by New Zealand central government departments use e-mail as a personal information management tool. We found that while 57% of respondents saved business e-mails to an

EDRMS, 63% of respondents kept e-mail messages, including those of business value, in their individual work e-mail account. Time constraints, e-mail overload, difficulties to classify messages, poorly created messages, and the ability to find messages stored in central repositories were all concerns raised by respondents. These concerns offer explanations as to why respondents use their individual work e-mail accounts to collect, store, organise, and retrieve business e-mail messages.

The PAIN theory applied to the context of New Zealand central government departments offers further insights into respondents' e-mail behaviours and methods. For instance, individuals were unclear about their anticipated information needs with regard to their professional roles and the prediction of future information usefulness. This was due to the ambiguity and complexity of making individual decisions about retaining messages in accordance with the managerial, legal, and democratic requirements set at the organisational level. Instead, it appears that the anticipated need of information by respondents drives individual behaviours associated with the management of business e-mails within and across New Zealand central government departments.

The majority of respondents acknowledged the need to invest in and appropriately value the identification and management of e-mail messages critical to the business of government, however, personal methods and behaviours formed the basis of e-mail management processes rather than organisational guidelines and needs. The research findings further demonstrate that individual employees in different occupations employ different behaviours to managing e-mail accounts and messages. However, the survey results suggest that males and females use similar methods and behaviours to manage e-mail accounts and messages.

Moreover, the PAIN theory states that sensitivity to personal, anticipated information need is a critical component of information literacy (Bruce 2005). The institutional context of this research implies that, in addition to information literacy, individuals within New Zealand central government departments need to understand specific recordkeeping requirements and practices to ensure effective organisational recordkeeping. Our research findings demonstrate a knowledge gap in this respect for a substantial number of survey respondents. Our research further suggests that while there is significant variance between how individuals manage their individual work e-mail accounts and the records management requirements placed on the government agencies by New Zealand legislation, individuals do not appear to recognise this conflict.

The PAIN theory also indicates that information events triggers anticipated need, including anticipated applications, tasks, decisions, or future interest (Bruce 2005). The information provided by respondents to the online survey suggests that these information events are usually personal (e.g. training, education) but sometimes situated at an organisational level, for instance as a result of the introduction of an EDRMS system or a newspaper article revealing poor e-mail management practice within the respective government department. Furthermore, the research findings suggest that spam messages was not an issue for survey participants, as for the majority of respondents spam messages amounted to only a small percent of all incoming messages in an average day.

CONCLUSIONS

Applying the PAIN theory to the institutional context of the New Zealand central government, this paper provides empirical insights into how individuals employed at New Zealand central government departments manage e-mail messages of significant value. While the research findings show that a large majority of respondents perceive the use of e-mail as critical in their work, there is no standard or consistent method or behaviour among individuals within and across New Zealand Public Service departments towards managing e-mail accounts and e-mail messages of significant business value. The decisions made by central government employees when managing e-mail accounts and business e-mail messages, reflect personal e-mail management requirements, rather than an understanding of legal, democratic or managerial requirements.

REFERENCES

Archives New Zealand. 2005. "Electronic Recordkeeping Systems Standard." *Continuum*   Retrieved 9 May, 2008, from http://www.archives.govt.nz/continuum/documents/publications/s5/

Archives New Zealand. 2006a. "Fact Sheet 8: Electronic Records." *Continuum*   Retrieved 1 December, 2006, from www.archives.govt.nz/continuum/documents/publications/factsheets/f8.php

Archives New Zealand. 2006b. "Fact Sheet 14: Are E-Mail Archiving Solutions Recordkeeping Solutions?"
    Continuum   Retrieved 26 October, 2007, from
    www.archives.govt.nz/continuum/documents/publications/factsheets/f14.php

Archives New Zealand. 2007. "Fact Sheet 15: Public Records Act (PRA) and Central Government." *Continuum*
Retrieved October 29, 2007, from
www.archives.govt.nz/continuum/documents/publications/factsheets/f15.php

Bruce, H. 2005. "Personal, Anticipated Information Need." *Information Research* 10: 3 Paper 232. Retrieved 9
May, 2008, from http://informationr.net/ir/10-3/paper232.html

Creswell, J.W. 2003. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. California:
Sage Publications.

Dabbish, L.A., and Kraut, R.E. 2006, 4 - 8 November. "E-Mail Overload at Work: An Analysis of Factors
Associated with E-Mail Strain," *Conference on Computer Supported Cooperative Work (CSCW'06)*, Banff,
Canada: ACM Press: New York, pp. 431 - 440.

Danis, C., Kellogg, W.A., Lau, T., Stylos, J., Dredze, M., and Kushmerick, N. 2005, 2 - 7 April. "Managers' E-
Mail: Beyond Tasks and to-Dos," *Conference on Human Factors in Computing Systems (CHI 2005)*,
Portland, Oregon: ACM Press: New York, pp. 1324 - 1327.

Digital Preservation Testbed. 2003. "From Digital Volatility to Digital Permanence," in: *Preserving email*.
Netherlands: The Hague, pp. 1 - 109.

Ducheneaut, N., and Bellotti, V. 2001. "E-Mail as Habitat: An Exploration of Embedded Personal Information
Management," *Interactions* (September + October), pp 30-38.

Fallows, D. 2007. "The Volume of Spam Is Growing in Americans' Personal and Workplace E-Mail Accounts,
but E-Mail Users Are Less Bothered by It." *Pew Internet and American Life Project* Retrieved 17 June,
2008, from http://www.pewinternet.org/pdfs/PIP_Spam_May_2007.pdf

Fowler jr, F.J. 2002. "Survey Research Methods," in: *Applied Social Research Methods Series*. California: Sage
Publications.

International Organization of Standardization. 2001. "ISO 15489-1:2001 Records Management." Geneva,
Switzerland: ISO.

Library and Archives Canada. 2006. "E-Mail Management in the Government of Canada." Retrieved 9 May,
2008, from http://www.collectionscanada.gc.ca/government/products-services/007002-3008-e.html

Meijer (2006). *CC'tje naar de baas. E-mail en verandering in ambtelijke organisaties*. Den Haag: Boom
Juridische Uitgevers

National Archives of Australia. 2007. "Managing Email: A New Form of Evidence." *Records Management*
Retrieved 9 May, 2008, from http://www.naa.gov.au/records-
management/systems/email/index.aspx#section1

Renaud, K., Ramsay, J., and Hair, M. 2006. ""You've Got E-Mail!"...Shall I Deal with It Now? Electronic Mail
from the Recipient's Perspective," *International Journal of Human-Computer Interaction* (21:3), pp 313-
352.

Rocheleau, B. 2002. "E-Mail: Does it Need to be managed? Can it be managed?," *Public Administration and
Management* (7:2), pp 83-116.

Seow, B.B., Chennupati, K.R., and Foo, S. 2005. "Management of E-Mails as Official Records in Singapore: A
Case Study," *Records Management Journal* (15:1), pp 43-57.

State Services Commission. 2007. "Human Resource Capability Survey of Public Service Departments as at 30
June 2007 (Workforce Profile) ", S.S. Commission (ed.). State Services Commission.

Winget, M.A., Chang, K., and Tibbo, H. 2006. "Personal E-Mail Management on the University Digital
Desktop: User Behaviours Vs. Archival Best Practices," in: *69th Annual Meeting of the American Society for
Information Science and Technology (ASIST)*. Austin, United States: Richard B. Hill.

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