

The role of institutional competencies for the long term preservation of electronic records: The Experience of the Turkish Public Sector

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Abstract. A growing number of e-governance applications in use in the public sector in Turkey have been developed since the beginning of the millennium. It is also evident that most government departments now create, use and maintain records in electronic form. This is partly due to standards which were developed in 2007 for managing electronic records; these were made mandatory for government departments in a circular issued by the Prime Minister's Office in 2008. Up until today, the focus of the standard has been on the system criteria for managing these records. The Turkish Standards Institute was granted the mandate to test the software to be used in government departments in order to ensure record authenticity and admissibility, as well as to ensure that the public bodies are informed about the system criteria for accountability, sustainability and security. The 2015 version of the standard for managing electronic records and archives widened its scope making it appropriate for testing the institutional competencies of government departments. This paper aims to address the issues on how institutional competencies can have a profound effect on the continuity of electronic records. First, the scene for the digital outlook of the Turkish public sector will be set and by drawing from the experience of the previous version of the standard, the foundations for the new version of the standard will be established. Subsequently, the test criteria for system requirements and institutional competencies will also be examined. The transformation of government departments that enables them to cope with the challenges posed by electronic records and processing work in the electronic environment has also been undulant. Thus, this paper also tries to address issues surrounding a smoother transition to electronic environment and within this context makes recommendations for a management model.

Keywords: Electronic records, long term preservation, Turkish Public Sector

1. Introduction

The use of computers and communication technologies in the office has transformed workplace, workflow and workers. Although public institutions in Turkey have been slow to adopt new technologies, they have progressed rapidly in the last decade. The development of standards for electronic records

management and the enforcement of these standards within the framework of legislation has created awareness and engagement in government departments.

The efforts to develop standards for the management of electronic records in Turkey dates back to 2003. At that time, the prime minister issued a circular to set up a new committee called *Executive Committee on e-Transformation Turkey*. The committee prepared an action plan and submitted this to the Higher Planning Commission, which subsequently approved and published this action plan as a communiqué called *E-Transformation Turkey Project 2005 Action Plan* (Communiqué, 2005). The communiqué listed 50 actions to be performed by various government departments. Action Number 37 of the plan stated that minimum standards should be defined for the creation, registry, transmission, sharing and disposition of records created in the electronic environment with reliable and secure methods. Action Number 37 was commissioned to the General Directorate of State Archives, which subsequently outsourced this to Marmara University, Department of Information and Records Management (Kandur, 2015).

In July 2005, the first version of the Reference Model for System Criteria for the management of electronic records was announced and submitted for the perusal of stake holders and government departments. After the evaluation of the opinions submitted to the author, the second version of the Reference Model was published (Kandur, 2016). The Reference Model was later submitted to the Turkish Standards Institute and published as TS 13298: Electronic Records Management. The final step in the development process was the circular issued by the prime minister to all government departments, indicating that any application for electronic records management bought or developed in-house by government departments should conform to the rules and regulations set out in TS13298. The applications that were already in operation prior to the issuance of the circular were given a two-year transition period to conform to the standard (Prime Minister's Office, 2008). In the following years, extensive training and awareness programs were introduced. In April 2009, for example, 411 records managers and IT managers from government departments were given training in Ankara about the application of the standard for planned or existing projects. An extensive survey was also performed about the use of electronic systems in government departments during these training programs and the results have been published (Kandur, 2011).

The ERMS Reference Model (Kandur, 2006) was designed for government departments and was created under the jurisdiction of the Communiqué by the Higher Planning Commission; the standard developed for the management of electronic records was originally based on this model. Four modules for designing ERMS have been set out in the model. The four modules are System Criteria, Records Criteria, Metadata Criteria and a section concerned with the conformity of the Reference Model to other international reference models and standards. Two new sections have been added to the latest version of the standard; the first defines the rules for sharing records between government departments, while the second sets out the rules for electronic archiving. Some other items have been added regarding the security of electronic records.

The system criteria module of the standard deals with filing systems, retention schedules, creation / reception of electronic records, access control, user roles and definitions, and system design and management. Here the rules for system developers are laid out for design issues and for the policy issues of the organization that are critical for the management of electronic records. The records criteria section of the standard defines what constitutes a record. The attributes of records are defined in order to ensure the integrity, authenticity, reliability and institutional context of the records. Records are defined and dealt with in three different environments; digitally born and managed electronic records, digitized electronic records and physical records. This section also defines rules for all aspects of the digitization process as well as the rules of sharing records between government departments. The electronic archiving section sets out the rules needed for the transfer and digital continuity of electronic records, while the metadata section identifies the metadata elements of the system. In the metadata section the fact that all metadata elements need to be captured before, during and after the creation of electronic records is stated; moreover, the importance of related contextual metadata elements regarding the filing system, organizational hierarchy and so on is emphasized. The final section demonstrates the relationship with other international models and standards.

In 2015, the new version of the standard for managing electronic records and archives (Turkish Standards Institute, 2015) was developed. The new version, like the previous one, sets out rules for records created in the electronic environment, attributes of electronic records management software and the metadata that needs to be captured. Moreover, the new version defines the competencies that the government departments should have in terms of dealing with electronic records. The following is some of the competencies required by the new version of the standard.

2. Institutional competencies on electronic records management

There have been a number of attempts to identify competencies required for dealing with electronic records. Some of these have been developed as policy documents while others have been geared towards identifying and measuring skills and training which records management staff should have. For example “Records Management Competency Profile”, developed by the Government of Alberta (2004), “Records Management Policy”, developed by the National Archives, UK (2010) or “Guidelines on Electronic Records Management”, developed by the National Archives of Malaysia are a few that can be mentioned. However, there are some areas in dealing with electronic records that need institutional competencies rather than individual ones. Issues like security of records systems or the restructuring of the organization to be part of a wider pool of organizations are needed. That is to say, when re-defining organizational boundaries in terms of sharing electronic public records with other organizations and individuals should be done by meeting authorization and security issues.

As mentioned earlier, efforts to develop standards for electronic records management systems started in 2007 in Turkey. The first version of the standard developed to regulate the electronic records management system in government departments addressed three main issues. The first issue is to regulate how government departments create, use, maintain, store and share electronic records. For this purpose, the standard defines electronic records and the properties that need to be captured. The integrity, authenticity and usability of records are the main concern for this part of the standard. The second issue undertaken by the standard is to define the properties of the system that manages electronic records. The third issue is to determine metadata elements of the system.

The new version of the standard, published in October 2015, goes beyond regulating the software that has been developed or purchased by government departments. A few such requirements for government departments is that they be competent in electronic management issues, especially in developing filing, retention and disposal plans for electronic records, records security, using standard file formats and developing an infrastructure to share electronic records with other government departments.

Developing filing and retention plans

Any records management programme should have a filing plan and a retention schedule based on the analysis of the organizational activities of the institution in question. Similarly, a retention schedule corresponding to this filing plan should be developed according to administrative needs and legal requirements in which the organization operates. The General Directorate of the State Archive has developed a Standard Filing Plan for government departments; this lists and codes common business activities, like human resources management, public relations and procurement (Prime Minister's Office, 2005). However, as mentioned, this filing plan only deals with common business activities. Developing a filing plan and a retention schedule has been left to the organizations. The organizations need to develop competencies for analyzing organizational activities, tracking and documenting organizational changes and developing filing plans for core business activities, as well as complying with the government-wide filing plan. It is also a requirement for the government departments to determine the value of records, identify retention criteria and disposal options and to map these retention schedules according to the file plans.

Records Security

One of the major challenges that ERMS systems pose is the security of the records. The authenticity, reliability and accessibility of records should be maintained for future use. In an electronic environment, the rights and obligations of the staff for the creation, use, retrieval and maintenance of electronic records should be clearly stated and defined and the activities of the users and the staff in the system should be recorded and kept for future reference. Institutions that use electronic records management systems should be aware of and make necessary arrangements for the security of the premises,

hardware, software and data resources, as well as determining security levels for the retrieval and use of records, the maintenance of the system and user logs, maintenance of storage facilities and system documentation. The competency of the institution on records security can be measured in three areas. These constitute the existence of organizational security policies, awareness and enforcement of measures taken and periodic checks. The standard requires that the competency of ERMS and government departments also be checked to see if they comply with the ERMS system and if the institution employs a system, with data security practices and standards. The government department is advised to take security measures within the framework of ISO27001, as well as the TSE-CCCS-PP-003 Electronic Documents and Records Management Protection Profile which has been developed by the Turkish Standards Institute as part of the National Cyber Security Strategy and Action Plan (2013).

File formats for inter-operability and compatibility

Electronic records are created and used in a number of different file formats. In particular, records with attachments like picture, sound, graphics and non-textual form of documents can cause problems when shared. It is also vital to create, use and share electronic records with a format that will ensure the authenticity and reliability of records, as well as the transfer and migration of records to an archive's format. Thus, the records-creating agencies should apply inter-operability and compatibility standards developed by the Ministry of Development, Information Society Division, known as the Guide for Inter-operability Principles (2012).

Sharing records within the government

Despite the wide use of electronic records management systems in the public sector in Turkey since 2007, sharing records between government departments has not yet achieved the desired level. Most government departments have transformed their records systems to be operated in the electronic environment. That is to say, they create and sign records in electronic form within the department, but they use traditional methods when sending the record to a different organization. This is due to the fact that, despite all efforts, incompatible systems and metadata are used.

The new version of the ERMS standard places greater emphasis on sharing electronic records among government departments. In terms of sharing electronic records among government departments the standard has three measures. The first measure is that the standard requires the government department to identify their organizational structure within a nation-wide system, coding all their operational divisions. This information is used by ERM systems to easily and accurately identify the receiving parties.

The second measure is the use of records e-mail system. When ERM systems are unable to share records, this is used to deliver electronic records to other organizations and individuals provided that they have a registered e-mail address. This system has been developed and is administered by the Information and Communication Authority (2011).

The third measure is the use of Electronic Correspondence Package, which was developed by the Ministry of Development (2011). The system requires government departments and ERM systems to pack electronic records, any attachments and necessary metadata together prior to sending them to other departments.

3. Conclusions

The use of electronic records management systems in organizations of the Turkish public sector has surfaced has brought to the surface difficulties and challenges that might help others. During the last ten years, public sector organizations have undergone considerable transformations. First of all, a new culture of doing business in the public sector has proven to cause mixed feelings among the civil servants. While the younger generation is finding it easier to overcome and adapt to technological, organizational, cultural and psychological barriers, it may not be as easy for longer serving staff who may be less accustomed to working with technology. Moreover, developing an infrastructure to address the legal, technological and standard issues with the involvement of many interested parties has also not been easy.

The experience of Turkish public sector organizations can be analyzed in three stages. The first stage is the individual efforts by government departments before 2007. At this stage, many electronic records management projects were initiated, but many of them failed or had shortfalls in terms of sustainability. The second stage is the period between 2007 and 2015. This period is when the first version of the TS13298 standard was in force. During this period, government departments switched to accredited applications thus ensuring a level of standards in electronic records management systems as well as in records management processes. The third stage is post-2015, when the new version of the standard came in force. With the new standard, the public organizations have the mandate to share electronic records between government departments and maintain a digital archive for the records not transferred to the national archives. This new standard has the potential to create a more efficient and effective government in which all the departments function as one organization, provided that the institutional competencies are developed and reviewed regularly.

References

- Communiqué. Republic of Turkey. Higher Planning Commission. Decision No: 2005/5, 24 March 2005.
- Information and Communications Authority. Kayitli Elektronik Posta (KEP), 2011. http://www.btk.gov.tr/bilgi_teknolojileri/kayitli_elektronik_posta/index.php
- Kandur, H. (2006). *Elektronik belge yönetimi sistem kriterleri referans modeli* (2. bs). [Reference Model for Electronic Records Management Systems Criteria, 2nd ed.], Ankara: Devlet Arşivleri Genel Müdürlüğü.
- Kandur, H. (2011). *Türkiye’de Kamu Kurumlarında Elektronik Belge Yönetimi: Mevcut Durum Analizi ve Farkındalığın Artırılması Çalışmaları*. [Electronic Records

- Management in Public Institutions in Turkey: Analysis of the Current Status and Efforts to Increase Awareness]. *Bilgi Dünyası*, 12(1), 2-12.
- Kandur, H. (2015). Setting standards for electronic archiving: the Turkish public sector experience. Historical and Cultural Heritage: Preservation, Access and Use. *Proceedings of the International Scientific Conference*. 170-174.
- Ministry of Development. E-Yazışma Projesi Paket Yapısı [E-correspondence project package structure]. Devlet Planlama Teşkilatı Bilgi Toplumu Dairesi Başkanlığı, 2011.
- Ministry of Development. Department of Information Society. Birlikte Çalışabilirlik Esasları [Guide for inter-operability principles]. Devlet Planlama Teşkilatı Bilgi Toplumu Dairesi Başkanlığı, 2012.
- National Archives of Malaysia. Guidelines on electronic records management. Kuala Lumpur, 2003. http://www2.arkib.gov.my/borang/guideline_eng.pdf
- National Cyber Security Strategy and Action Plan. Published on the Official Gazette 20 June 2012, issue 28683.
- Prime Minister's Office Circular on inter-operability principles. Circular Number 2009/4, Published on the Official Gazette 28 February 2009, issue 27155.
- Prime Minister's Office Circular on Standard File Plan. Circular Number 2005/7, Published on the Official Gazette 25 March 2005, issue 25766.
- Prime Minister's Office Circular on Electronic Records Standards. Circular Number 2008/16, Published on the Official Gazette 16 July 2008, issue 26938.
- Records Management Competency Profile. Government of Alberta, Information Management Branch, 2004
- Turkish Standards Institute. TSE 13298:2015 – Management of electronic records and archives. Ankara, 2015.
- The National Archives. Guide 3 Records Management Policy. London, 2010. <http://www.nationalarchives.gov.uk/documents/information-management/rm-code-guide3.pdf>