Electronic Information and Records Management: Survey Results of 22 State Universities of Turkey as part of InterPARES Project supported by TÜBİTAK

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InterPARES Project
International Research on Permanent Authentic Records in Electronic Systems

project overview

The International Research on Permanent Authentic Records in Electronic Systems (InterPARES) aims at developing the knowledge essential to the long-term preservation of authentic records created and/or maintained in digital form and providing the basis for standards, policies, strategies and plans of action capable of ensuring the longevity of such material and the ability of its users to trust its authenticity. The findings and products of the first three phases of the project can be found on this website.
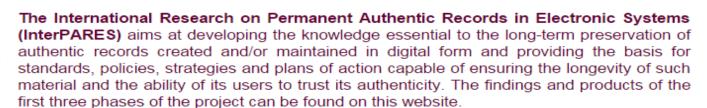
Welcome message from Project Director, Dr. Luciana Duranti

The **fourth phase of the InterPARES Project**, which focuses on digital records entrusted to the Internet, can be accessed here.

InterPARES Trust

Research

Studies: Abstracts

Project List by Title

Title	Code	Domain
Assessment of privacy-preserving and security techniques for records management in cloud computing	NA18	Security
Calculus of Trust in Records, The	NA02/Transnational	Control
Chain of Trust	AS03	Infrastructure
Comparative Analysis of Implemented Governmental e-Services	EU09	Control
Contract Terms for Cloud-Based Record Keeping Services	NA10	Infrastructure
Core Terminology for InterPARES Trust	NA01/All Teams	Terminology
Credibility of electronic document process management in a government cloud	AS07	Control
Developing Model Cloud Computing Contracts	NA14	Legal
Digital Preservation in the Cloud	AA01	Policy
Electronic records as evidence in courts of law in Zimbabwe	AF01	Legal
Ensuring authenticity in digitising religious archives at Pietermaritzburg Cluster of Theological Libraries	AF02	Control
Ensuring Trust in Storage in Infrastructure-as-a-Service (IaaS)	EU08	Infrastructure
Ensuring Trustworthiness of the Agent of Public Trust in China	AS02	Access
Enterprise business records management in the cloud	AS05	Control
Establishing Retention and Disposition Specifications and Schedules in a Digital Environment	NA09	Policy
Evaluating Metadata Description Schemas of the Cultural Heritage Organizations in Electronic Environments for Interoperability	EU07	Control
Exploration of electronic records' authenticity: social awareness	AS08	Social/Societal Issues

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Research

Domains

* The cross-domains cover topics and issues of relevance across all five research domains.

Research Domains

- **Infrastructure:** This domain considers issues relating to system architecture and related infrastructure as they affect records held in online environments. Examples of areas to be investigated include such topics as: types of cloud and their reliability; types of contractual agreements (service level agreements or SLAs) and their negotiation, coverage, flexibility, etc.; costs, up front and hidden.

- **Security:** The security domain considers records issues relating to online data security, including: security methods (encryption, sharding, obfuscation, geographic location); data breaches; cybercrime; risks associated with shared servers; information assurance; governance; audits and auditability; forensic readiness; risk assessment; and backup.

- **Control:** The control domain differs from the security domain in its focus on the management of digital material in online environments. It addresses such issues as: authenticity, reliability, and accuracy of data; integrity metadata; chain of custody; retention and disposition; transfer and acquisition; intellectual control, and access controls.

- **Access:** The access domain researches open access/open data; the right to know/duty to remember/right to be forgotten; privacy; accountability; and transparency.

- **Legal:** The legal domain considers issues such as: the application of legal privilege (including the issue of extra-territoriality); legal hold; chain of evidence; authentication of evidence offered at trial; certification; and soft laws (in particular UN standard-setting instruments) - mapping, scope, potential impact, and constraints.

Research Cross-Domains

- **Terminology:** This cross-domain is concerned with the ongoing production of a multilingual glossary; a multilingual dictionary with sources; ontologies as needed; and essays explaining the use of terms and concepts within the project.

- **Resources:** This cross-domain is concerned with the ongoing production of annotated bibliographies, identifying relevant published articles, books, etc., case law, policies, statutes, standards, blogs and similar grey literature.

- **Policy:** The policy cross-domain considers policy-related issues emerging from the five research domains; for instance, it would cover policy issues pertaining to the development and implementation of the 'nfrastructure' or 'security' standards, or as the facilitator for the implementation of laws. In general, it addresses recordkeeping issues associated with the development and implementation of policies having an impact on the management of records in an online environment; policies can be broad, such as a national policy on information management, or very specific, such as a policy on adopting certain standards within an organization.

- **Social/Societal Issues:** This cross domain is concerned with the analysis of social change consequent to the use of the Internet, including but not limited to use/misuse of social media of all types, trustworthiness of news, data leaks (intentional or accidental/force majeure) consequences, development issues (power balance in a global perspective), organizational culture issues, and individual behaviour issues.

- **Education:** This cross-domain is concerned with the development of different models of curricula for transmitting the new knowledge

Title: Evaluating Metadata Description Schemas of the Cultural Heritage Organizations in Electronic Environments for Interoperability (EU07)
Lead Researcher: Özgür Külcü, Haceteppe University
Timeline: 10 months from start of project
Abstract: This study will investigate the systems and models being used by cultural organizations in Turkey for describing cultural heritage resources online. The research will focus on issues of best practices for managing, mapping, integrating and publishing of information resources online, current issues and probable solutions of digital content management and metadata systems of cultural heritage resources in Turkey metadata tags, standards, and practices, describing the condition for interoperability maximizing the effective use of the resources, national and international systems and platforms by creating new opportunities for interoperability, and developing digital content management, and metadata mapping policies.

Title: IFRCjobs Case Study - A SaaS Recruiting Tool (TR02)
Lead Researcher: Grant Mitchell
Timeline:
Abstract:

Title: Metadata, Mutatis Mutandis – Design Requirements for Authenticity in the Cloud and Across Contexts (NA16)
Lead Researcher: Joe Tennis, University of Washington
Timeline: Beginning October 2013
Abstract: Building off of InterPARES 2 and 3 model, description, and metadata work, the researchers will look at case studies of records in systems with suspect or unclear controls. This will enable the development of analytical tools to compare to extant models of systems. The researchers will also cooperate with the new modeling initiative in IPT and from this generate ideal design requirements for the assessment of records' authenticity.

Title: Models for Monitoring and Auditing of Compliance in the Flow from Registration to Archive in e-Register (EU05)
Lead Researcher: Hvroje Stancic, Department of Information and Communication Sciences, University of Zagreb
Timeline: Approximately 8 months from initiation of project
Abstract: A strong European political ambition is to implement eGovernment services with the aim to promote cross-border business development. Open, interoperable and public e-registries play an important role in this context. Therefore, it is urgent to establish harmonized models, processes and metrics for monitoring and auditing of compliance in the flow from registration to archive in e-register. The following overall research question will be addressed: What are the essential components of a cross-border model for testing and auditing of compliance in recordkeeping which supports and meets national and EU legislative and regulatory requirements? In addition, the project will investigate issues in European countries such as, who has the authority to monitor? Could a common strategy for monitoring and auditing digital recordkeeping be developed? What is the role of professional archivists in monitoring?

TÜBİTAK (The Scientific and Technological Research Council of Turkey) UBAP1011 Project

- **Project Title:** The International Research on Permanent Authentic Records in Electronic Systems: The Evaluation of Turkish Universities

- **Grant Organization:** TÜBİTAK (The Scientific and Technological Research Council

- **Umbrella Project:** International InterPARES III Project

- **International InterPARES Project:** 28 Partner countries

- **TÜBİTAK Project team members** : Assoc. Prof. Özgür Külcü (Coordinator), Dr. Arif Yılmaz (Researcher), Assoc. Prof. Nuri Doğan (Researcher), Hande Uzun Külcü (Researcher)

  Tolga Çakmak (Scholarship), Nevzat Özel (Scholarship)

  Prof. Dr. Yaşar Tonta (Advisor)

- **Project Dates**: April 2010 - April 2012

- **Extended to June 2014** bureaucracy!

Changing conditions

- Changing official communication to electronic environment

- E-services

- Auhentication, reliability and long term preservation

- Standardization and interoperability

- Local needs and international expectations

- Where we are as the Turkish universities in Turkey

New Dimensions

Standards

Dod 5015.2, MoReq 1-2, ISO 15489, TS 13298

Assessment tools

RMCAS, IAMMAT, IP2-3 Tools, RIMAT

Legislations

Organizational, National, International

Projects

InterPARES, CEDARS, CAMiLEON, PANDORA, OAC,

Researches

- Managing systems of the universities with their organizational structures

- Formal communication, work processes and information systems

- Similarities and differences of the practices

- the Consistency and interoperability of organizational information and records systems

- Being evaluated in the 22 public universities of Turkey via structured survey.

Researches

- The transfer of records management applications into the electronic environment

- Digital signature and e-government applications

- Records management works in the institutions includes the process from the creation to the disposition of the records for the purpose of official communication or confirmation

- Focusing on the factors are listed as: the medium, the content, physical and intellectual form, function, archival value and legal and administrative conditions of the records.

Methodology

- Data were obtained from field surveys within the framework of the project InterPARES

- Action research and field survey methodology was used

- Analysis data obtained from 1545 participants in 22 universities

- The analysis was carried out in order to identify the conditions and problems in institutional information systems and electronic records management.

Evaluated Universities

The results obtained from 22 universities, where the examination and research were conducted, are presented. In this study the demographic findings on the participants who provided data are interpreted hence described primarily, and then the analysis findings on records management activities are reported.

	N	%
19 Mayıs University	139	9,0
Adnan Menderes University	67	4,3
Akdeniz University	61	3,9
Anadolu University	51	3,3
Ankara University	20	1,3
Boğaziçi University	6	,4
Celal Bayar University	3	,2
Çukurova University	70	4,5
Dokuz Eylül University	28	1,8
Ege University	138	8,9
Fırat University	42	2,7
Gazi University	4	,3
Hacettepe University	270	17,5
İstanbul Teknik University	15	1,0
Karadeniz Teknik University	102	6,6
Kocaeli University	7	,5
Mersin University	37	2,4
Sakarya University	27	1,7
Selçuk University	50	3,2
Trakya University	61	3,9
Uludağ University	244	15,8
Yıldız Teknik University	103	6,7
Total	1545	100,0

Information and Records Management Activities

it is seen that even though communication at universities in general is based mainly on records, it is observed that documents make up 80 % of the communication among the unit in General Records and Archive Unit

	Printed	E-post	Telephone	ERMS	Other	Total
Personal Affairs	126	15	78	12	3	234
%	53,8	6,4	33,3	5,1	1,3	100,0
Computer Centers	11	9	7	0	0	27
%	40,7	33,3	25,9	,0	,0	100,0
Library and Documentation	24	9	15	6	4	58
%	41,4	15,5	25,9	10,3	6,9	100,0
Administrative and Financial	49	6	31	10	2	98
%	50,0	6,1	31,6	10,2	2,0	100,0
Student Affairs	84	7	47	11	1	150
%	56,0	4,7	31,3	7,3	,7	100,0
Construction and Technical	28	4	7	2	1	42
%	66,7	9,5	16,7	4,8	2,4	100,0
General Records	20	2	2	1	0	25
%	80,0	8,0	8,0	4,0	,0	100,0
Faculties, Vocational Schools	393	68	280	63	12	816
%	48,2	8,3	34,3	7,7	1,5	100,0
Total	735	120	467	105	23	1450
%	50,7	8,3	32,2	7,2	1,6	100,0

The Channels that Official Processes are Mainly Carried Out

Official work processes at the analyzed universities are mainly carried out in printed environment in all units.

	Printed	E-post	Telephone	ERMS	Other
Personal Affairs	196	17	10	26	9
%	75,4	6,5	3,8	10	3,5
Computer Centers	17	7	1	5	4
%	50	20,6	2,9	14,7	11,8
Library and Documentation	48	8	4	5	4
%	69,6	11,6	5,8	7,2	5,8
Administrative and Financial	88	9	5	10	8
%	71,5	7,3	4,1	8,1	6,5
Student Affairs	146	13	9	10	1
%	79,8	7,1	4,9	5,5	0,5
Construction and Technical	37	4	3	3	2
%	75,6	8,1	6,1	6,1	4,1
General Records	28	0	0	1	0
%	96,5	0	0	3,5	0
Faculties, Vocational Schools	668	84	64	135	39
%	66,6	8,4	6,4	13,5	3,9
Total	1228	142	96	195	67
%	70,2	8,1	5,5	11,1	3,8

The Issues on Organizational Communication and Records Management

Slow communication flow as a problem. In all units archive repositories are deemed as the second most problematic subject.

	Slow Inf. Flow	Retention Disposition	Security Preservation	Duplication	Repositories	Access	No Problem	Total
Personal Affairs	91	12	9	18	46	14	68	258
%	35,2	4,7	3,6	7	17,8	5,4	26,3	100
Computer Centers	9	0	1	2	4	3	8	27
%	33,3	0	3,7	7,4	14,8	11,2	29,6	100
Library	19	1	0	2	10	9	22	63
%	30,2	1,6	0	3,2	15,8	14,3	34,9	100
Administrative	39	2	1	10	19	12	25	108
%	36,1	1,8	0,9	9,3	17,6	11,1	23,2	100
Student Affairs	59	14	8	11	40	11	27	170
%	34,7	8,2	4,7	6,5	23,5	6,5	15,9	100
Construction	13	2	--	3	6	8	14	46
%	28,3	4,3	0	6,5	13	17,5	30,4	100
General Records	11	2	1	2	2	1	11	30
%	36,7	6,7	3,3	6,7	6,7	3,3	36,7	100
Faculties	332	58	36	48	114	80	236	904
%	36,7	6,4	4	5,3	12,6	8,8	26,2	100
Total	573	91	56	96	241	138	411	1606
%	35,7	5,6	3,5	6	15	8,6	25,6	100

Where the Reasons for the Issues of Organizations

About where the reasons for the issues of institutional communication, some differences have occurred between units concordant with their working areas. Within this framework, while the issues of institutional communication, information, records, and archive systems at all units except the Directorate of Computer Centers.

	Re-Construction	Lack of Resources	Lack of Personnel	Lack of Education	Central Archive	Total
Personal Affairs	33	37	53	79	40	242
%	13,6	15,4	21,9	32,6	16,5	100
Computer Centers	3	10	1	3	5	22
%	13,6	45,5	4,5	13,6	22,8	100
Library	10	8	11	18	8	55
%	18,3	14,5	20	32,7	14,5	100
Administrative	11	14	15	37	19	96
%	11,5	14,6	15,6	38,5	19,8	100
Student Affairs	27	24	32	47	23	153
%	17,6	15,7	20,9	30,7	15,1	100
Technical	10	6	11	14	6	47
%	21,3	12,8	23,4	29,7	12,8	100
General Records	3	7	2	10	9	31
%	9,7	22,6	6,4	32,3	29	100
Faculties	115	135	137	284	113	784
%	14,7	17,2	17,5	36,2	14,4	100
Total	212	241	262	492	223	1430

Usage of Electronic Systems and Conditions for Integrated Models

Within this scope, activities carried out at the highest level in electronic environments are in-house correspondence. Then comes the choices of Registrar's Office and Administrative and Financial Affairs,. According to the results, the least electronically carried out activities at universities are confidential works and works which are related to legal processes

	Internal Correspondence (n=817)	Internal Directives (n=303)	Administrative Fiscal (n=355)	Student Affairs (n=402)	Confidental works (n=189)	Legal Processes (n=176)
Personal Affairs	122	29	37	39	10	5
%	93,8	69,0	74,0	76,5	41,7	25,0
Computer Centers	17	4	5	9	0	0
%	100,0	80,0	83,3	90,0	,0	,0
Library and Documentation	35	7	14	5	4	4
%	97,2	77,8	93,3	83,3	80,0	80,0
Administrative and Financial	43	14	15	12	6	1
%	93,5	60,9	68,2	57,1	37,5	9,1
Student Affairs	63	15	15	46	6	4
%	92,6	55,6	55,6	90,2	28,6	21,1
Construction and Technical	19	6	1	3	1	1
%	90,5	75,0	33,3	60,0	25,0	25,0
General Records	13	3	1	2	0	1
%	100,0	75,0	50,0	66,7	,0	50,0
Faculties, Vocational Schools	457	121	174	190	32	29
%	94,0	65,4	75,7	74,5	27,4	25,4
Total	769	199	262	306	59	45

Positive effects of the implementation of enterprise information services

Survey participants were asked whether integrating different information systems such as web, email, document and record management used within an institution and providing relevant services at common platforms would improve the present conditions for information services, and it turned out that participants have highly positive opinions. The percentages demonstrate that the judgment of above 95 % benefit would be reaped for all groups is supported.

	Internal communication	Information Access	Information integrity	Personnel Issues
Personal Affairs	54	71	49	31
%	26,3	34,6	23,9	15,1
Computer Centers	2	9	9	3
%	8,7	39,1	39,1	13,0
Library and Documentation	25	13	12	3
%	47,2	24,5	22,6	5,7
Administrative and Financial	24	29	24	9
%	27,9	33,7	27,9	10,5
Student Affairs	37	51	33	14
%	27,4	37,8	24,4	10,4
Construction and Technical	13	10	7	2
%	40,6	31,3	21,9	6,3
General Records	5	10	5	4
%	20,8	41,7	20,8	16,7
Faculties, Vocational Schools	202	234	217	63
%	28,2	32,7	30,3	8,8
Total	362	427	356	129

Which working area is positively affected?

Easier and faster access to information more frequently when compared to other choices. It is interesting that the least preferred choice for all groups is the choice of decreasing work load of staff.

	Personal	Administrative	Student	Records	Computer
Personal Affairs	82	21	31	78	30
%	90,1	53,8	63,3	87,6	63,8
Computer	2	3	2	15	2
%	66,7	75,0	66,7	100,0	66,7
Library	13	5	6	31	10
%	92,9	71,4	75,0	100,0	83,3
Administrative	21	26	7	34	21
%	70,0	76,5	41,2	81,0	72,4
Student Affairs	16	7	40	66	22
%	57,1	35,0	76,9	91,7	62,9
Technical	8	5	3	25	4
%	80,0	62,5	50,0	100,0	57,1
General Records	6	3	4	18	2
%	85,7	75,0	80,0	100,0	66,7
Faculties	153	97	132	376	151
%	68,6	56,1	66,7	92,2	67,7
Total	301	167	225	643	242
%	74,1	57,8	66,6	91,9	67,04

Conclusion

- At 22 analyzed universities, printed records are predominantly used for communication and official correspondence.

- The percentage of the universities which officially communicate through electronic environment is 15%

- The surveyed units are firstly complaining about slow communication processes.

- Archival repositories which gradually face difficulties in meeting needs is another topic.

- The institution employees are substantially in need of in-service training in current information and records activities.

- In small units, there is a rising demand for educated personnel.

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Conclusion

- Most of the universities make use of the electronic environment for routine correspondence.

- The biggest problem is how to transfer of all work processes to electronic environment.

- Various information services in an institution to be integrated and to be restructured for enabling mutual data flow will make a major contribution towards expediting and activating work processes.

- Similar endeavors to improve enterprise systems should be repeated within a wider framework in international settings.

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Conclusion

- Generally in official work processes electronic systems are used mainly by Computer Centers along with Faculties, Vocational Schools and Institutes.

- One of the main problem of Turkish universities is bureaucracy from the management units to official areas. Traditional systems should be improved by creating new communication chains and using electronic environment.

- As the universities have a problem of managing archival repositories similar problems are so general for electronic environment.

- If Higher Education Council of Turkey can develop a model for university electronic records sytems it would be helpful.

Recommendations

- One of the other important problems is training the service personnel for the programs that are using for electronic records management in the universities.

- Technical support and training activities should be planned together in the context.

- The least electronically carried out activities at universities are confidential works and works which are related to legal processes. Even Electronic Signature Act was approved in 2004 some organizations can live in stress for using electronic environment against security problems.

- Organizing informational meetings, training programs, seminars can help for changing the ideas against using electronic environment.

- On the other hand especially for some activates it is necessary to be careful to use electronic environment.

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Recommendations

- The implementation of enterprise information services, where work processes of institutional information activities would be brought together in one platform, was studied to show in which areas among institutions it would primarily increase the efficiency in easier and faster access to information.

- Most of the universities make use of the electronic environment for routine correspondence. The biggest problem is the transfer of all work processes to electronic environment.

- Various information services in an institution to be integrated and to be restructured for enabling mutual data flow will make a major contribution towards expediting and activating work processes.

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