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Abstract or Executive Summary

The proposal has the ambitious goal of analyzing and assessing the role and the quality of policies dedicated to the recordkeeping and digital preservation in the new digital environment characterized by a large use of networking systems in the web environment. The critical questions at the basis of the research were related to the capacity of the policies of mitigating the risks of technological obsolescence and improving the access to the digital records and systems interoperability when i-cloud systems are involved, thank to the active presence of record keepers and custodians in defining and defending good and flexible internal policies and specific procedures.

The proposal has identified a specific set of terms of reference (digital preservation handbook, interoperability, manual for record management procedures, policy and responsibility). The project group has also defined a survey template for collecting experiences in many domains and analyzed the legislations and the practices in Italy, Spain and at the European Union. Some deliverables of European projects (Erpanet, Aparsen) have been considered.

The final results testify a delay in taking into account the impact of the web dimension, but – at the same time – the presence of flexible tools (specifically in the Italian legislation) seem able to provide a common basis for developing in the next future recommendations in the area as a sort of general but flexible guidelines.

Policies for recordkeeping and digital preservation. Recommendations for analysis and assessment services - Code 04

Research team

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The project has been guided in the first phase by APARSEN and Digilab (whose researchers are already involved in defining recommendations in this field both for their own archival repositories and for the development of a service to be implemented within the future APARSEN Virtual Center Of Excellence (VCoE) (see work package 35).

Within InterPARES team the institutions involved are: APARSEN, Digilab, Regione Toscana and Regione Emilia Romagna, ICCROM, Consob and the University of Udine. The universities or research consortium involved in the project (such CINI for APARSEN and Digilab - Sapienza) have provided students effort (in the form of thesis or project work) to investigate national legislations, practical examples, standards and guidelines.

Background

Within the InterPARES Trust as referred to a networked environment the role of policies is recognized as a crucial issue (both in the main goal of the project and in the specific research areas), but the question is more complex than expected. For this reason the policy has been identified as one of the research cross domains and has been at the centre of many other InterPARES Trust research projects. More specifically, the issue has been at the centre of a number of international projects (specifically APARSEN, 2011-2014) and of the majority of standardization processes dedicated to the recordkeeping and to the digital repositories (such as ISO 16363 on certification of digital repositories and standards/recommendations for records management such as ISO RM15489, ISO 30300, ICA-Req).

In many legislations and recommendations for the preservation of digital resources (records but also data and documents) policy tools are considered a key issue for supporting digital heritage access and preservation in complex and conflicting environments. Very often these tools are not defined by domains, specifically when digital libraries and institutional repositories are involved. The policies are more specific in case of digital records, especially for the creation and keeping of digital records. In this case, the legal requirements have implied more consistency and detailed requirements in terms of action plans and definition of responsibilities and controls.

The term (as the concepts and methods behind it, even if their relevance is generally recognized) is ambiguously defined also because the approach to the digital preservation in many projects and in many domains still lacks of consistency. Some good examples are provided by some achievements at international level: for instance the categories of policies listed by the International Foundation of Information Technology – IF4IT (www.if4it.com/taxonomy.html) cannot be concretely implemented or at least identified if the taxonomies at their basis are not comparable thanks to a common terminology and if a general conceptual framework is not discussed and available.

The recordkeeping domain has developed – more than other sectors – well defined robust principles and comprehensive frameworks both for the digital records creation/management and for their preservation, as InterPARES 2 outputs testifies. Policies – even if not always clearly defined – take a stable place in the national legislation and in the international standards and recommendations and could provide – if based on a standardized structure – meaningful and effective examples for other domains. By the

way, to develop such potentialities, the main ambiguities and open questions must be recognized and solved and best practices must be identified, the legislations consistency (at least at European level) must be analyzed with specific reference to the new dimensions of the recordkeeping systems.

Research questions

The research questions at the basis of the proposal concern the role and the quality of policies for digital recordkeeping and preservation. These questions, already defined when the research started, have been partially redefined with reference to the web environment:

- In general, which is the role of qualified policies for supporting the trust on the archival custodians and records keepers in the web environment? Is this role changing and increasingly addressed to mitigate the risks of technological obsolescence and/or to improve the access to the digital records and systems interoperability when i-cloud systems are involved?
- Which capacities/competencies and knowledge are required for building policies? Which level of interdisciplinary approach is required? Are the present educational and training programs able to provide adequate skills and capacities?
- Which kind (if any) of self-auditing tools are required to verify the consistency and adequacy of policies for recordkeeping and digital preservation? Are present standards and recommendations able to provide guide and support in this direction?
- Is the recordkeeping sector able to provide solutions (in term of frameworks and principles) for other sectors like data management policies for science (APARSEN project)?

Aims and Objectives/Goals

The aims of the proposal were very ambitious (as indicated by the research questions listed above), but were also limited to the more traditional area of electronic recordkeeping and preservation environment due to the delay observed in Europe and more specifically in Italy and in Spain where the most part of the analysis has been conducted. The main goal was to identify (thanks to the analysis of legislative frameworks in EU, Spain and Italy and to the collection of experiences in many domains) a common basis for developing recommendations in the area, as a sort of general guidelines

Methodology

The methodology has been based on two main tools: the state of art analysis with specific attention to the legal frameworks in EU, Italy and Spain (see annex 1-3) and the survey conducted on the basis on a similar APARSEN survey and on the questionnaire developed by InterPARES 3.

Findings

1. First step: state of art and legal frameworks in Europe

According to the framework approved by the European team the project group has conducted the analysis of the main literature in the sector and has investigated the role of the policies for the recordkeeping and digital preservation systems in Europe with specific attention to the rules applied to the European Union institutions (**Appendix 1**), to the Italian legislation (**Appendix 2**) and to the Spanish legal framework (**Appendix 3**). Annex 1 briefly introduces the European Cloud Computing Strategy adopted in 2012.

2. Second step: analysis of the terminology

Because of the ambiguity of the terms used in the domain related to policies for preservation and access (as recognized in the APARSEN deliverable n. 35 published in 2014) the project group has planned to identify concepts and terms which should require more attention and better definitions in the specific domain. The terms identified for further exams are those not yet included in the i-Trust dictionary. More specifically, in the area of policies for records keeping and preservation the project group discussed the fact that the terminological ambiguities could have a serious impact on the whole record management and preservation functions, as the terminology consistency often reflects the reliability of the contents themselves. For this reason a specific effort has been developed to identify the main concepts and analyze their related definitions.

As already stressed, the main reference of the work has been the InterPARES Terminology Database (<http://arstweb.clayton.edu/interlex/index.php>). Only in very limited cases, it has been necessary to internally define concepts and terms relevant for the domain, more specifically referred to the Italian traditions and recent legislation in creating digital preservation systems.

In details, the terms and syntagms selected for a specific analysis are:

- *interoperability* (present in the InterPares Glossary, but further analyzed in this context),

- *manual for records management* (in Italian *Manuale di gestione*: term identified by the Italian legislation but also generally referred to tools which identify the main rules and procedures for the recordkeeping systems in many countries),
- *manual for digital preservation* (in Italian *Manuale di conservazione*: term identified by the Italian legislation referred to tools which identify the main rules and procedures for the digital preservation systems in many countries),
- *policy* (not present in the InterPARES Glossary),
- *responsibility* (not present in the InterPARES Glossary).

For each of these terms, the report includes not only the translation and the term definition but also a brief information note where to make explicit the decisions taken by the working group in selecting and defining the concept. In particular the note includes the reference to the legal environment, to the standards and other projects used for the final definition here proposed (**Appendix 4**).

3. Third step: the survey

A survey has been organized for collecting cases of policies for preservation in different domains. The survey is based on a similar APARSEN survey and on the questionnaire developed by InterPARES 3. The final version of the questionnaire (**Appendix 5**) includes specific questions related to the policies in place for i-clouds services.

The limits of the results are mainly related to the low level of answers the project group has been able to collect (**Appendix 6**).

The questionnaire framework includes six sections:

- identification (5 questions)
- governance (3 questions)
- policy (7 questions)
- records preservation (7 questions)
- responsibility and policy adherence (9 questions)
- other information (2 questions)

The project group has collected about dozen answers from different country, according to the following geographical distribution:

- Europe 64%
- America 36%

With details:

- Italy (37%)
- Spain (27%)
- North America (27%)
- South America (9%)

Through a statistical inference processing (**Appendix 7**), the survey can represent a statistic sample of about 50-60 international organizations interested on digital preservation policies. This evaluation is based on Pareto “80-20 rule”.

In order to define a comparative level of the application status of digital policies between these organizations, the project group has elaborated a “maturity model” (Appendix 6). The model is based on a numeric evaluation of:

- single questions
- questionnaire framework
- received answers

The numeric evaluations are based on “Saaty semantic scale” (Table 1):

Scale	Small description
1	NEUTRAL
3	WEAK
5	ESSENTIAL
7	STRONG
9	FULL
2,4,6,8	Intermediate values

These evaluations have been linearly combined each other to identify the score of the organizations.

#	Organization	Country	Score	Maturity level
1	Sapienza University of Rome	Italy	5,7	4
2	Ayuntamiento de Cartagena	Spain	6,0	4
3	City of Toronto	Canada	5,5	4
4	NATIONAL ARCHIVES OF COLOMBIA (ARCHOVO GENERAL DE LA NACION)	Colombia	6,9	4
5	ICCROM	Italy	4,8	3
6	FCA	USA	5,4	3
7	CONSOB Commissione Nazionale per le Società e la Borsa	Italy	6,5	4
8	Regione Emilia - Romagna; IBC PaRER - Polo Archivistico Regione Emilia Romagna	Italy	6,3	4
9	City Council of Girona	Spain	6,3	4
10	University of Wisconsin-Whitewater	USA	5,0	3

Finally, in order to define the maturity level of digital preservation policies, the score of organizations is compared on Table 2. The maturity level is specified on the previous table.

Digital Preservation Policies Maturity Model (Tab.2)			
Level	from	to	Small description
1	0	1,8	INITIAL
2	1,81	3,6	SYSTEMATIC
3	3,61	5,4	STANDARDIZED
4	5,41	7,2	CONSOLIDATED
5	7,21	9	EXCELLENT

Note: Range interval = scale nr. / level nr. = 9 / 5 = 1,80

Conclusions

The project work and its findings testify (from many points of view) the need for a more precise and detailed effort in the definition (including the terminological dimension) of tools able to guide and normalized the recordkeeping and digital preservation when a network environment is involved. The survey has collected a limited number of experiences and has shown the delay in some countries, such Italy and Spain, in recognizing the main risks in the new environment for the digital records. The role of manuals and procedures are, in general, considered and handled (when identified in the legal framework and in the practice) as a crucial defense and the basis for a proactive perspective, as in the recent past some European projects (Erpanet, Aparsen) have been already able to recognize.

In general, the final results testify a delay (in the areas here considered) in taking into account the impact of the web dimension, but – at the same time – a large presence of flexible tools (specifically in Italy, thanks to a legislation dedicated to digital preservation) could be able to provide a common basis for developing in the next future recommendations in the area as a sort of general but flexible guidelines.

With reference to the European Commission, despite the efforts expended by the EU and its Member States to enhance cooperation and coordination on archival policies and practices through different EU-funded projects and expert groups, the existing regulations on records management and digital preservation within EU Member States and EU governing institutions are insufficient and fragmented. There has not been a systematic and strategic approach to increase coordination and commonality on archival legislation among European countries. Records and archives management are not among the priority areas of the EU, or its Member States. As a consequence, archives are dealt as a subsidiary topic within the main EU strategic directions and action plans.

The EU has entrusted the progress on archival coordination to recommendations (which are discretionary), and not to binding instruments. Therefore, common archival rules are not available at the EU, or what is the same, there is no Union at archival policy level.

In Italy, the recent national juridical framework, even if not completely updated with reference to the web dimension of the recordkeeping systems and in spite of the long list of open questions, has proved its capacity to offer a good and practical basis for a digital 'ecosystem' able to support reliable and accurate digital records management systems and provide preservation models based on international standards but also on flexible and sustainable principles. A legislation able to provide rules for governing cloud systems (at least for the public administration) is not yet in place, but the general framework for electronic records keeping systems and digital preservation systems is consistent enough to support future risks in cloud environment.

Finally, with reference to the Spain situation, even if the legislation in the sector has been updated in the last years, the analysis of the literature and a recent study on the state-of-art of the electronic administration reveal that the application of electronic management systems in public administrations is being delayed (and presents still difficulties) because of several factors, such as limited human and economic resources, the need of creating interdisciplinary cooperation to manage digital records, the need of elaborating and approving policies that establish guidelines and technical instructions to be followed, the selection of management tools and their integration with existing ones, and the need of personnel training. Coordination and cooperation are also necessary at all levels: among institutions, provinces, regions and State bodies in order to adopt shared services and infrastructures that improve rationalization and efficiency. Because regulations on digital preservation are scarce and developed in a very succinct way, without specific and detailed provisions on preservation strategies, processes, model/standards, or instruments to guarantee long-term preservation, the new risks and potentialities involved in the cloud environment are still lacking of adequate control and or support, as the limited results in our survey also make clear.

Products

The main products have been created as reports dedicated to the state of art: see Appendixes n. 1, 2 and 3 on the analysis of legal frameworks in Europe (n. 1), in Italy (n. 2) and in Spain (n. 3).

References

- Aparsen Project, D24.1 - Report on authenticity and plan for interoperable authenticity evaluation system, 2012, <http://www.alliancepermanentaccess.org/index.php/about-aparsen/aparsen-deliverables/>
- Aparsen D24.2 - Implementation and testing of an authenticity protocol on a specific domain, 2012, <http://www.alliancepermanentaccess.org/index.php/about-aparsen/aparsen-deliverables/>
- Aparsen D35 – Exemplar good governance structures and data policies, <http://www.alliancepermanentaccess.org/index.php/about-aparsen/aparsen-deliverables/>
- N. Beagrie, N. Semple, P. Williams, R. Knight, *Digital preservation policies. Study*, October 2008 <http://80gb.wordpress.com/2008/09/25/national-archives-of-australia-digital-archives/>
- Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *Unleashing the Potential of Cloud Computing in Europe*, COM(2012) 529. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0529:FIN:EN:PDF>
- DCC, Roadshows, Research Data Management Forum and International Digital Curation Conference (Bristol, Bristol, 5-7 Dec 2011), <http://www.dcc.ac.uk/events>
- European Commission, “Document management in the European Commission: Collected Decisions and Implementing rules”, 2010. Available at: http://ec.europa.eu/archival-policy/docs/edomec/recueil_dec_mda_en.pdf.
- European Commission, *National Open Access and Preservation Policies in Europe*, 2011
- ERPANET, ERPAtool, Digital preservation policy tool, 2003, www.erpanet.org/guidance/docs/ERPANETPolicyTool.pdf
- M. Factor, E. Henis, D. Naor, S. Rabinovici-Cohen, P. Reshef, S. Ronen, G. Michetti, M. Guercio, Authenticity and Provenance in Long Term Digital Preservation: Modeling and Implementation in Preservation Aware Storage, TaPP '09. First Workshop on the Theory and Practice of Provenance. San Francisco, 23 February 2009 http://static.usenix.org/event/tapp09/tech/full_papers/factor/factor.pdf
- F. Foscari. *Notes and Communications InterPARES 2 and the Records-Related Legislation of the European Union*, *Archivaria* 63 (Spring 2007): 121–136. Available at: <http://journals.sfu.ca/archivar/index.php/archivaria/article/viewFile/13131/14375>

- M. Guercio, *The Italian case: legal framework and good practices for digital preservation*, in *CULTURAL HERITAGE on line – “Trusted digital repositories & trusted professionals. Firenze 11-12 December 2013*, Firenze, 2013, http://www.rinascimento-digitale.it/conference2012/paper_ic_2012/guercio_paper.pdf
- M. Guercio. *Conservare il digitale*, Bari, Laterza, 2013, chapter 4
- InterPARES, *Strategy Task Force Report*. http://www.interpares.org/book/interpares_book_g_part4.pdf: aims to provide a framework for the articulation of policies; states principles and criteria; includes a useful footnote that clarifies difference between policy, strategy Policies tool: a proposal of OpenDoar project: a tool intended to generate policy statements for legal purposes, <http://www.opendoar.org/tools/en/policies.php>
- R. King, R. Schmidt, Ch. Becker, M. Guttenbrunner. *Research on Digital Preservation within projects co-funded by the European Union in the ICT programme*, 2011. Available at: <http://www.ifs.tuwien.ac.at/~strodl/paper/Report%20-%20Research%20on%20Digital%20Preservation.pdf>
- Ministry of Science and Technology, India, National Data Sharing and Accessibility Policy (NDSAP), <http://www.dst.gov.in/nsdi.html>
- Seguimiento de la adecuación al Esquema Nacional de Interoperabilidad (ENI): Estado de situación a finales de 2014*. Available at http://administracionelectronica.gob.es/pae_Home/pae_OBSAE/pae_NotasTecnicas.html
- TNA (UK The National Archives), *Digital policy guidance*, <http://www.nationalarchives.gov.uk/information-management/projects-and-work/guidance.htm>
- TRAC - Trustworthy Repositories Audit & Certification: Criteria & Checklist. Available at: http://www.crl.edu/sites/default/files/d6/attachments/pages/trac_0.pdf

Appendixes

Appendix 1. POLICIES FOR RECORDS MANAGEMENT AND DIGITAL PRESERVATION AT THE EUROPEAN UNION

Maria Mata Caravaca, ICCROM (May 2015)

Records management and digital preservation policies at the European Union (hereinafter EU) can be analyzed under two main perspectives: the self-regulating activity carried out by EU governing institutions, and the instruments or regulations (either binding or non-binding) made by the EU institutions for its Member States.

Self-regulating activities undertaken by the EU institutions

The institutional organization of the EU is complex and unique, and differs radically from the governing structure of its Member States. The EU is governed by 7 institutions:¹ European Council, Council of the European Union, European Commission, European Parliament, Court of Justice of the European Union, Court of Auditors, and European Central Bank.

The EU institutions are assisted by over 40 agencies, which can be executive (i.e., EACEA - Education, Audiovisual and Culture Executive Agency; ERC - European Research Council Executive Agency) or decentralized bodies (i.e., ACER - Agency for the Cooperation of Energy Regulators; CFCA - Community Fisheries Control Agency, etc). The executive agencies are created by the European Commission for a fixed period. The decentralized agencies are set up to accomplish very specific tasks.

The EU governing institutions are public bodies with autonomous operating administration. Still, they may have developed common systems for specific areas, as in human resources management matters. In this specific case, common standards, methods and arrangements are applied to salaries, allowances and benefits,

¹ The three political institutions, which hold the executive and legislative power of the Union, are as follows:

- The Council of the European Union (informally known as the Council) has legislative and budgetary authority as well as some limited executive powers. It represents governments.
- The European Parliament (EP) shares the legislative and budgetary authority of the Union with the Council. It represents citizens.
- The European Commission (EC) is the executive arm of the Union. Essentially, the Council or the Parliament places a request for legislation to the Commission. The Commission then drafts this and presents it to the Parliament and Council, where in most cases both must give their assent. Once adopted it becomes EU law. The Commission's duty is to ensure correct implementation of EU law by Member States and taking them up to the European Court if they fail to comply.

including social security and pension. This responds to the need of avoiding discrepancies in terms and conditions of employment, competition in recruitment of personnel, etc.

In other areas, as it is the case for records and archives management, each EU institution operates autonomously. Except for the regulation concerning the opening to the public of the EU historical archives (Council regulation (EC, Euratom) No. 354/83),² a common system or regulation on archival matters, such as records management and digital preservation, is not in place. Coordination among the EU governing bodies is stimulated through inter-institutional committees; nevertheless, they are high level boards with very limited influence on daily practices.

The 1983 regulation on the opening of the EU historical archives establishes that the EU historical archives can be opened to the public after 30 years. In March 2015 the Council of the European Union amended the decisions of 1983 with the Council Regulation (EU) 2015/496.³ The amendment establishes that non-digital archives are deposited at the EUI (European University Institute) for permanent preservation. In the case of digital archives, the originating institutions remain responsible for the permanent preservation of their archives. The EUI should have permanent access to these digital documents to fulfill its obligation to make the digital historical archives accessible to the public from a single location. Therefore, the EUI makes available to the public the EU historical records (both non-digital and digital) but, in the case of digital records, the EUI does not coordinate and it is not responsible for their preservation. This political decision has been largely criticized by EU archivists, whose technical objections were not adequately considered.

The executive agencies of the EU follow the same administrative rules of the European Commission, including the Commission policies for records management. On the contrary, the decentralized agencies, which are also European public bodies, are not bound to any specific records management policy, if not stated in their constitutional acts.

This study will address the case of the European Commission, as it has been the first (and apparently the only) EU institution in developing a comprehensive and state-of-the-art regulation on records management and electronic records. Other EU institutions either lack written policies on the topic or are in the process of

² Council regulation (EC, Euratom) No. 354/83, lately amended by Regulation (EC, Euratom) No 1700/2003, concerning the opening to the public of the historical archives of the European Union and the European Atomic Energy Community. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003R1700&from=EN>. (Accessed: July 2016).

³ Council Regulation (EU) 2015/496 of 17 March 2015 amending Regulation (EEC, Euratom) No 354/83 as regards the deposit of the historical archives of the institutions at the European University Institute in Florence. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:2015:079:FULL&from=IT>. (Accessed: July 2016).

developing them. In most cases, the provisions made by the Commission are taken as a model by the other EU institutions.

European Commission

In 2000, the Commission started a process to simplify working methods and procedures in order to improve the quality, effectiveness and transparency of its work.⁴ This process intended to implement an efficient e-government, and was known as e-Commission.⁵ The e-Commission strategy has to be seen in the context of the administrative reform of the European Commission and the e-Europe initiative, which was launched by the EU in 1999 to encourage e-government in its Member States.⁶ One of the aspects included in the e-Commission work plan was the review of the management of the Commission's records. In view of the problems arising from the absence of a uniform archiving system throughout all Directorates-General, the Commission decided to equip itself with standardized procedures for registering and archiving records.

In 2002, the Commission started the e-Domec project ("**E**lectronic archiving and **D**ocument⁷ management policy of the **E**uropean Commission"), a set of rules on records management and electronic records. The legal basis for e-Domec consists of the following decisions, rules and tools:

- Commission Decision 2002/47/EC, ECSC, EURATOM on document management.⁸
- Commission Decision 2004/563/EC, EURATOM on electronic and digitized documents.⁹
- Implementing rules on document management and on electronic and digitized documents, SEC(2009)1643.¹⁰

⁴ Commission of the European Communities, Brussels, C(2002) 99-1, Communication to the Commission on Simplification and modernization of the management of the Commission's documents (Action 9 of the interim action plan on simplification). Available at: <http://ec.europa.eu/transparency/regdoc/rep/3/2002/EN/3-2002-99-EN-1-1.Pdf>. (Accessed: July 2016).

⁵ Commission of the European Communities, Brussels, 8.06.2001, Memorandum to the Commission, Towards the e-Commission: Implementation Strategy 2001 – 2005 (Actions 7, 8 and 9 of the Reform White Paper). Available at: http://ec.europa.eu/dgs/informatics/ecommm/doc/sec_2001_0924_en.pdf. (Accessed: July 2016).

⁶ *Electronic Government: Second International Conference, EGOV 2003, Prague, Czech Republic, September 2003, Proceedings*, Volume 2, Roland Traunmüller (ed). Available through Google books.

⁷ The European Commission uses the term document, as a synonym for record, or "archival document," following usage in the Latin countries.

⁸ Commission Decision 2002/47/EC, ECSC, Euratom of 23 January 2002 amending its Rules of Procedure, annexing the provisions on document management (OJ L 21, 24.1.2002, p. 23). [OJ L is the abbreviation of Official Journal of the European Communities (currently, Official Journal of the European Union), Series: Legislation.]

⁹ Commission Decision 2004/563/EC, Euratom of 7 July 2004 amending its Rules of Procedure, annexing the Commission's provisions on electronic and digitized documents (OJ L 251, 27.7.2004, p. 9).

- First revision of the Common Commission-level Retention List for European Commission files, SEC(2012)713.¹¹

The two decisions, which are annexed to the Commission Rules of Procedure, and their subsequent implementing rules are gathered in the report “Document management in the European Commission: Collected Decisions and Implementing rules”, 2010.¹² The Common Commission-level retention schedule was subjected to updates in 2010, and was not included in the report.

Provisions on document management

The provision on document management states that records shall undergo several archival operations, such as registration, filing, storage and transfer of files to the Historical Archives. The operations apply uniformly to all the Commission’s Directorates-General and equivalent departments. The Secretariat-General in coordination with the Directors-General and Heads of Department are responsible for ensuring compliance with these provisions.

Provisions on electronic and digitized documents

The provisions on electronic and digitized documents determine the conditions of validity of electronic and digitized documents. They are also intended to ensure the authenticity, integrity and legibility over time of these documents and of the relevant metadata. Furthermore, they state that signed original electronic documents should bear an advanced electronic signature. Documents have to be preserved in the form in which they were drawn up, sent or received, and an electronic file deposit system to cover the entire life cycle of the electronic and digitized documents needs to be set up. The technical conditions of the electronic file deposit system are laid down by the implementing rules. Finally, the provisions also indicate responsibilities for implementation and compliance.

Implementing rules on document management, and electronic and digitized documents

The five rules implementing the above two provisions cover the whole life cycle of a document in whatever medium (electronic or paper), and refer to:

¹⁰ Implementing rules for Decision 2002/47/EC, ECSC, Euratom on document management and for Decision 2004/563/EC, Euratom on electronic and digitized documents (SEC(2009)1643, 30.11.2009).

¹¹ First revision of the Common Commission-level Retention List for European Commission files, adopted on 17.12.2012, SEC(2012)713, replacing the document SEC(2007)970 of 04.07.2007. The CRL retention schedule (SEC(2012)713) is available at:
http://ec.europa.eu/archival-policy/docs/edomec/2012_713_sec_en.pdf. (Accessed: July 2016).

¹² The report is available at: http://ec.europa.eu/archival-policy/docs/edomec/recueil_dec_mda_en.pdf. (Accessed: July 2016).

- Registration, which includes indications on the registration process (namely, adding and linking metadata to the documents), and provides information on the documents to be registered and the documents not covered by the registration requirement.¹³
- Filing through an institutional file plan, which includes the principles of the file plan and indications for managing files.¹⁴
- Preservation, which is intended as the physical protection of records to ensure their integrity and legibility over time, whatever the medium. This involves several procedures and operations, such as determining retention periods for files (through the common Commission-level retention list and specific DG/service-level retention list), identifying responsibilities, allowing the elimination of records, managing the areas and infrastructure for storage (including climate and security conditions), incorporating preservation metadata (to be added to the metadata for registration, file plan heading, filing and transfer, listed in Annex 1), rehousing, and migration operations.¹⁵
- Appraisal and transfer of files to the Commission's historical archives, which includes principles and rules for appraisal, sampling/selection, transfer and elimination of files. Transfers to the historical archives take place no later than 15 years after the files are closed.¹⁶
- Electronic and digitized documents, which includes rules for implementing the validity of electronic records (through a simple or advanced electronic signature), records preservation (including the conditions in which records, metadata and electronic signatures should be preserved throughout the required retention period), and electronic file repository (its functionalities

¹³ *Registration and keeping registers of the institution's documents.* Implementing rules for Article 4 of the provisions on document management annexed to the Commission's Rules of Procedure and to be applied in the Commission's directorates-general and equivalent departments (SEC(2003)349/1 of 8 April 2003).

¹⁴ *Filing and the management of the institution's files.* Implementing rules for Article 5 of the provisions on document management annexed to the Commission's Rules of Procedure and to be applied in the Commission's directorates-general and equivalent departments (SEC(2003)349/2 of 8 April 2003).

¹⁵ *Preservation of the institution's files.* Implementing rules for Article 6 of the provisions on document management annexed to the Commission's Rules of Procedure and to be applied in the Commission's directorates general and equivalent departments (SEC(2007)734 of 24 May 2007).

¹⁶ *Appraisal and transfer of files to the Commission's historical archives.* Implementing rules for Article 7 of the provisions on document management annexed to the Commission's Rules of Procedure and to be applied in the Commission's directorates-general and equivalent departments (SEC(2008)2233 of 2 July 2008).

and architecture, which is made up of two separate modules: current and intermediate records, and definitive or historical archives).¹⁷

These rules are compliant with records-related Commission Provisions, such as those on security, security of information systems, protection of personal data and public access to Commission documents.

The report is accompanied by six annexes, which are as follows: list of metadata, criteria to be fulfilled by all registration systems, definitions of key notions on registration criteria, structure of the Commission-level retention schedule, exceptional rules for transfer of files, and list of electronic procedures that must be declared compliant with the implementing rules.

This recap report can be considered a records management manual, which guides the European Commission on managing their records along their life cycle. Digital preservation is dealt in a succinct way and within the wider umbrella of records preservation, regardless the medium (analogue and electronic). The Secretariat-General and the Directorate-General for Informatics, together with the Historical Archives Service, are currently undertaking efforts to develop specific actions, workflows and strategies to guarantee future long-term preservation of records. These practical experiences will lead to the elaboration of specific written procedures for digital preservation.

EU legislation addressed to Member States¹⁸

The EU has issued several recommendations on archival matters, which are non-compulsory instruments for Member States. It has also promoted and supported numerous research projects and initiatives for archival coordination in Europe. Binding instruments for Member States, such as directives, have been produced in the field of Information and Communication Technologies (hereinafter ICT) and e-Government, and in the Data Protection area too, which, either direct or indirectly, influence records creation, management and preservation.

The EU legislation addressed to Member States is not directly applicable to the EU institutions or agencies, which have to develop ad hoc decisions or regulations for its implementation;¹⁹ and vice versa. In the specific case of archives, the regulations

¹⁷ *Electronic and digitized documents*. Implementing rules for the provisions on electronic and digitized documents, annexed to the Commission's Rules of Procedure by Commission Decision 2004/563/EC, Euratom (SEC(2005) 1578 of 29 November 2005).

¹⁸ The EU legislation comprises primary legislation (treaties and international agreements) and secondary legislation (binding legal instruments: regulations, directives, and decisions; or non-binding instruments: recommendations/resolutions).

¹⁹ For example, the Directive 95/46/EC of the European Parliament and of the Council of 4 October 1995 on the protection of individuals with regard to the processing of personal data and on the

governing the archives of the European institutions are not binding for Member States.

The legislation and activities/initiatives developed by the EU on records and archives management are presented below.

Archival coordination in Europe

In matter of records and archives management, each country belonging to the EU retains its own legislative and regulatory autonomy. However, actions have been undertaken by the EU to enhance cooperation and coordination on archival policies and practices in Europe.²⁰ This coordination was initiated in 1991, at the time in which The Netherlands held the Presidency of the EU. A Council Resolution on arrangements concerning archives²¹ stated the need for adequate archives policy and efficient archives management to provide accessibility to records and contribute to democracy. A first Report on Archives in the EU was published by the Commission and favorably received by the Council in 1994. The subsequent Council conclusions²² led to a number of important results, in particular the organization of the DLM-Forums²³ on electronic documents and archives, and the production of INSAR (Information Summary on Archives), a periodical news review of developments in the field of archives in Europe. The most visible achievement of the DLM Forum is the MoReq specification ("*Model Requirements for the Management of Electronic Records*"), firstly published in 2001.²⁴

free movement of such data, was adopted in the EU institutions through the Regulation (EC) No. 42/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data.

²⁰ *Notes and Communications InterPARES 2 and the Records-Related Legislation of the European Union*, Fiorella Foscari, *Archivaria* 63 (Spring 2007): 121–136. Available at: <http://journals.sfu.ca/archivar/index.php/archivaria/article/viewFile/13131/14375>. (Accessed: July 2016).

²¹ Resolution of the Council and the Ministers of Culture meeting with the Council of 14 November 1991 on arrangements concerning archives (91/C314/02). Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:41991X1205%2801%29&from=EN>. (Accessed: July 2016).

²² The Council Conclusions of 17 June 1994 concerning greater co-operation in the field of archives (94/C 235/03) are available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31994Y0823%2803%29&from=EN>. (Accessed: July 2016).

²³ The Council of the European Union asked the Commission to organize a multidisciplinary forum to be held in the framework of the Community on the problems of management, storage, conservation and retrieval of machine-readable data with the participation of public administrations, national archives services, as well as representatives of industry and of research. DLM stands for Document Life Cycle management. The first forum was held in Brussels in 1996.

²⁴ The original MoReq specification was first conceived in the late 1990s, following the development and publication of US DoD 5015.2 by the United States Department of Defense. MoReq was intended to serve the same function as 5015.2, namely to describe a good electronic records management system. The first version of Moreq was published by the DLM Forum and the

In 2003, a new Council resolution on greater archival coordination in Europe was brought forward by the National Archivists of the EU Member States. This resolution led to the elaboration of the “Report on archives in the enlarged European Union. Increased archival cooperation in Europe: Action plan” (2005).²⁵ The Council adopted then a Recommendation on priority actions to increase cooperation (2005/835/EC).²⁶ This Recommendation called for the creation of an European Archives Group (EAG),²⁷ comprising experts designated by the Member States and the EU institutions, to follow-up on the priority measures,²⁸ e.g. the priority n° 2: “Reinforcement of European interdisciplinary cooperation on electronic documents and archives”, meant to stress the importance of implementing Europe-wide collaboration for establishing authenticity, long-term preservation and availability of electronic documents and archives. Practical results of this priority action were MoReq updating and the reinforcement of the DLM network and forum.

Until now, the EAG has presented two Progress Report to the Council: 1) On the implementation of the 2005 Council Recommendation (COM(2008)500),²⁹ and 2) On Archives in Europe: Facing the Challenges of the Digital Era (COM(2012)513).³⁰ Regrettably, the decisions and recommendations made by the group have not been properly followed up by the EAG members themselves. Furthermore, even if the EAG holds the status of expert group of the European Commission, “the EAG has not formally been consulted by the European Commission, nor has it requested to be consulted proactively.”³¹

European Commission in 2001. MoReq2 was published in 2008 and MoReq2010, in 2011. Moreq has become a *de facto* standard throughout the EU.

²⁵ The report is available at: http://ec.europa.eu/archival-policy/docs/arch/reportarchives_en.pdf. (Accessed: July 2016).

²⁶ The Recommendation is available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32005H0835&from=EN>. (Accessed: July 2016).

²⁷ The European Archives Group was created as an expert group of the European Commission in 2006 with the Commission’s Secretariat General as its overseeing body.

²⁸ Priority actions are five: 1. Preservation of and prevention of damage to archives in Europe; 2. Reinforcement of European interdisciplinary cooperation on electronic documents and archives; 3. Creation and maintenance of an internet portal to the archival heritage of the Union; 4. Promotion of best practice with regard to national and European law with regard to archives; 5. Measures to prevent theft and facilitate the recovery of stolen documents.

²⁹ The report is available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0500:FIN:EN:PDF>. (Accessed: July 2016).

³⁰ The report is available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012DC0513&from=EN>. (Accessed: July 2016).

³¹ *The European Archives Group: making the most of European collaboration*. Discussion paper for the EBNA meeting in Athens on 6 June 2014, by Michael Hollmann, Josee Kirps, Karel Velle, Martin Berendse, p. 7. Available at: <http://www.arhivelenationale.ro/images/custom/image/serban/2014/atena%20iunie%202014/Discussion%20paper%20session%20E%20The%20future%20of%20European%20cooperation>

Digitization and digital preservation of cultural material

In relation to digitized resources and preservation of digital information (not strictly records), an expert group of the European Commission was set up in 2007, the MSEG (Member States Expert Group on Digitisation and Digital Preservation), which replaced an informal intergovernmental group on digitization. The group monitors progress on the implementation of the Commission recommendation 2011/711/EU³² on digitization and digital preservation, i.e. the progress of digitization plans of cultural content, cross-border collaboration and public-private partnerships for digitization, web visibility through wider use of open formats or social media, increasing the number of objects available through Europeana, setting up digital repositories for the long-term preservation of digitized materials, etc. The group is composed of representatives coming from the national ministries and/or national cultural institutions of all EU countries (not specifically National Archives).

In relation to digital preservation, the 2014 report elaborated by MSEG invites Member States “to strengthen long-term preservation strategies and implementation plans, exchange with each other on both, provide in their legislation for multiple copying and migration of digital cultural material by public institutions for preservation purposes, make arrangements for the deposit of digital-born material to guarantee long-term preservation and ensure their efficiency by (1) requiring deposit of protection-free material to enable acts required for preservation purposes, (2) making legal provision to allow exchanges between legal deposit library, and (3) allowing preservation of web-content by mandated institutions through appropriate collecting techniques such as web-harvesting. When establishing or updating policies and procedures for the deposit of digital-born material, Member states are also invited to take into account developments in other Member states, in order to prevent a wide variation of deposit arrangements.”³³ Each Member state has, therefore, autonomy to develop their preservation policies, strategies and systems. The EU does not set up binding norms to establish common rules on this field; it only invites the European countries to work in a more coordinated manner.

%20within%20the%20archival%20sector%20%28Berendse,%20Velle,%20Kirps,%20Hollmann%29.pdf. (Accessed: July 2016).

³² The Commission Recommendation 2011/711/EU on the digitization and online accessibility of cultural material and digital preservation, adopted on 27 October 2011, is part of the Digital Agenda for Europe, a Europe 2020 strategy. It calls for the widest possible re-use of cultural material, and the reinforcement of national strategies for the long-term preservation of digital material. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:283:0039:0045:EN:PDF>. (Accessed: July 2016).

³³ The 2014 MSEG report is available from: <https://ec.europa.eu/digital-agenda/en/news/european-commissions-report-digitisation-online-accessibility-and-digital-preservation-cultural>. (Accessed: July 2016).

*EU-funded projects on digital preservation*³⁴

Within the framework of dedicated EU-funded projects or platforms, several research activities have been carried out on digital preservation since 2001. The first project was ERPANET (Electronic Resource Preservation and Access, 2001-2005).³⁵ It was followed DELOS (Developing a European e-Learning Observation System, 2004-2008) and DigitalPreservationEurope (DPE, 2006-2009). These projects aimed to raise awareness and to create a scientific community addressing collaboratively this novel and interdisciplinary topic. To consolidate the existing work in the area of digital preservation, national initiatives and different research projects on a European level were integrated. One result was the establishment of the WePreserve initiative.

The work was influenced by the library and archive community, and focused on the establishment of common terminology and concepts, metadata standards, system concepts, selection and appraisal policies, and format identification. The research was primarily focused on office documents and images in institutional settings.

In a next phase, a series of research projects targeted more technical aspects and actual tool and framework development of digital preservation, such as PLANETS (Preservation and Long-term Access through Networked Services, 2006-2010),³⁶ CASPAR (Cultural, Artistic and Scientific knowledge for Preservation, Access and Retrieval, 2006-2010),³⁷ SHAMAN (Sustaining Heritage Access through Multivalent Archiving, 2008-2011), and PROTAGE (PREservation Organizations using Tools in AGent Environments, 2008-2011).³⁸ These projects have influenced international standardization initiatives with strong European presence (e.g. PREMIS,³⁹ OAIS,⁴⁰ TRAC⁴¹).

In the last years, research activities have focused on the preservation of interactive objects, embedded objects, ephemeral data, methods for object validation, audit and

³⁴ The reported data on this section comes from: *Research on Digital Preservation within projects co-funded by the European Union in the ICT programme*, by Ross King, Rainer Schmidt, Christoph Becker, Mark Guttenbrunner, 2011. Available at:

<http://www.ifs.tuwien.ac.at/~strodl/paper/Report%20-%20Research%20on%20Digital%20Preservation.pdf>. (Accessed: July 2016).

³⁵ Webpage available at: <http://www.erpanet.org/>. (Accessed: July 2016).

³⁶ Webpage available at: <http://www.planets-project.eu/>. (Accessed: July 2016).

³⁷ About the project and results: http://cordis.europa.eu/project/rcn/92920_en.html. (Accessed: July 2016).

³⁸ Webpage available at: <http://www.ra.ee/protage>. (Accessed: July 2016).

³⁹ PREMIS stands for 'Preservation Metadata: Implementation Strategies.' It is available at: <http://www.loc.gov/standards/premis>. (Accessed: July 2016).

⁴⁰ OAIS - Open Archival Information System. Available at: <http://public.ccsds.org/publications/archive/650x0m2.pdf>. (Accessed: July 2016).

⁴¹ TRAC - Trustworthy Repositories Audit & Certification: Criteria & Checklist. Available at: http://www.crl.edu/sites/default/files/d6/attachments/pages/trac_0.pdf. (Accessed: July 2016).

certification, and development of scalable preservation systems and processes. Several projects, started in 2011 and concluded in 2014, dealt with these topics, such as SCAPE (Scalable Preservation Environments, 2011-2014), ENSURE (Enabling knowledge Sustainability Usability and Recovery for Economic value, 2011-2014), APARSEN (Alliance Permanent Access to the Record of Science in Europe network, 2011-2014),⁴² and TIMBUS (Timeless Business Processes and Services, 2011-2014).⁴³

Legislation on ICT and e-Government

The EU has issued directives on ICT and e-Government that deal, directly or indirectly, with records-related issues. Member states are required to implement them by adopting new laws or amending existing ones. These directives have the purpose of establishing a legal framework to ensure the free movement of information society services between Member States. This removes fragmentation and enables interoperability both internally and at the EU level. The directives, firstly issued in the 1990s, refer to data protection, e-signatures, e-commerce, e-privacy, e-invoicing, etc. The recent regulation 910/2014 on “Electronic identification and trust services for electronic transactions in the internal market” provides a sound legal framework for interoperable electronic signatures, seals and time stamps, and electronic documents.⁴⁴

The current programme ‘ICT and e-Government: European Action Plan 2011-2015’ forms part of the 2020 Digital Agenda, which in turn constitutes one of the seven pillars of the Europe 2020 Strategy for the economic growth and progress of the European Union (EU).

*European Cloud Computing Strategy*⁴⁵

Cloud computing is one of the most important current trends in the field of information and communications technology, and ICT management. Within the Europe 2020 strategy, the Commission promotes the adoption of cloud computing in all sectors of the economy in order to encourage productivity. This has led in 2012 to the adoption of a strategy for “Unleashing the Potential of Cloud Computing in Europe,”⁴⁶ which consists of three key actions:

⁴² APARSEN deliverables at: <http://www.alliancepermanentaccess.org/index.php/aparsen/>. (Accessed: July 2016).

⁴³ Webpage available at: <http://timbusproject.net/>. (Accessed: July 2016).

⁴⁴ Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC. Available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.257.01.0073.01.ENG. (Accessed: July 2016).

⁴⁵ From: <http://ec.europa.eu/digital-agenda/en/european-cloud-computing-strategy>. (Accessed: July 2016).

⁴⁶ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *Unleashing the Potential of*

- To develop model contract terms to regulate issues, such as data preservation after termination of the contract, data disclosure and integrity, data location and transfer, ownership of the data, direct and indirect liability change of service by cloud providers and subcontracting, code of conduct for cloud computing providers.
- To assist cloud standardisation and conformity with interoperability standards.
- To establish a European Cloud Partnership (ECP) to bring together industry and the public sector to work on common procurement requirements for cloud computing. Part of the ECP is the Cloud-for-Europe (C4E)⁴⁷ initiative, aiming at helping Europe's public authorities procure cloud products and services.

This strategy is designed to speed up and increase the use of cloud computing across all economic sectors by 2020. The EU's approach to cloud technology and data privacy (so that technological innovation and growth can still occur alongside data protection)⁴⁸ is currently on the table. The location of data hosting is also an important component of cloud computing, and there has even been talk of a European Cloud and a localization process, in which EU Member States would host the cloud service within their own country, mitigating some of the risks that come with foreign host storage. How the EU will regulate cloud technology is still under discussion.

Conclusions

Despite the efforts expended by the EU and its Member States to enhance cooperation and coordination on archival policies and practices through different EU-funded projects and expert groups, the existing regulations on records management and digital preservation within EU Member States and EU governing institutions are insufficient and fragmented.

There has not been a systematic and strategic approach to increase coordination and commonality on archival legislation among European countries. Records and archives management are not among the priority areas of the EU, or its Member States. As a consequence, archives are dealt as a subsidiary topic within the main EU strategic directions and action plans. The EU has entrusted the progress on archival

Cloud Computing in Europe, COM(2012) 529. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0529:FIN:EN:PDF>. (Accessed: July 2016).

⁴⁷ Further information at: <http://www.cloudforeurope.eu/>. (Accessed: July 2016).

⁴⁸ The European Commission plans to unify data protection within the EU with the General Data Protection Regulation (GDPR). The current EU Data Protection Directive 95/46/EC does not sufficiently consider important aspects like globalization and technological developments like social networks and cloud computing. Therefore a proposal for a regulation was released in 2012, and after numerous amendments, its adoption is foreseen by 2015-2016. This EU Regulation will have immediate effect on all EU Member States after the two-year transition period and does not require any enabling legislation to be passed by governments.

coordination to recommendations (which are discretionary), and not to binding instruments. Therefore, common archival rules are not available at the EU, or what is the same, there is no Union at archival policy level.

Author's note

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Appendix 2. THE ITALIAN CASE: LEGAL FRAMEWORK AND GOOD PRACTICES FOR DIGITAL PRESERVATION

Mariella Guercio, Sapienza University of Rome, Digilab (July 2016)

Introductory remarks

On the basis of the legislation approved in 1900 (regio decreto 35/1900) and dedicated to the regulation of records and archives management for public administrations, the Italian legal framework on records management and archival preservation has been always based on a general principle: the public archives are protected since their creation to ensure both the quality of their evidential value and their permanent preservation as accessible and authentic resources. Not only this principle has not been abandoned in the past century, but it has been renewed and reinforced when the ICT innovation has transformed the technological and organizational scenarios and recognized the evidential value of archival records in the digital environment. In this new environment the current records have been considered by the legislator, more than in the past, a strategic tool for the transformation of public administrations and for making the public sector more accountable and efficient.

In the last decade of 20th century a new legislation, whose first step was based in 1990 on the first Italian Freedom of Information Act (Legge 241/1990⁴⁹), concerning electronic records and ICT innovation was approved. This legislation, summarized in 2000 (decree DPR 445/2000), listed the requirements for the records systems in the public sector and obliged all the government agencies to transform their traditional record management systems into electronic recordkeeping systems. This regulation, updated and integrated in the last ten years, has defined the basic principles and methods for the e-government records:

- the capture and acquisition of the records (both analogue and digital) with a unique and persistent identifier,
- the obligation of filing and aggregating the records at the creation phase on the basis of classification plans articulated on functions and activities,
- the integration of the classification plan and the retention schedule to support the analysis for appraisal and disposition,
- the definition of well-defined procedures and directives able to govern the whole chain of creation and preservation.

At the conclusion of a long period of innovations and thanks to a continuing (even if not always consistent) effort for defining a new regulation system, an updated set of

⁴⁹ A new act, called Italian FOIA, based on principle of transparency, was recently approved and published (D. Lgs. 97/2016: <http://www.gazzettaufficiale.it/eli/id/2016/06/8/16G00108/sg>)

directives and detailed rules are in place for the Italian public administrations with the aim of enabling the implementation of integrated electronic records management and keeping systems. Some contradictions have characterized the regulations in place since 1994, specifically with reference to the legislation for the digitization and preservation processes, whose last decrees have been approved in 2013 (dpcm 3.12.2013 *Regole tecniche per il sistema di conservazione dei documenti informatici*) and 2014 (dpcm 13.11. 2014 *Regole tecniche in materia di formazione ... dei documenti informatici*).

The main critical aspects of this process have been over and over discussed and highlighted by the archival and record managers community. The main element for the delay in the definition of a satisfactory solution concerns the fact that the efforts for approving these regulations have been developed by separate committees instead of being the result of a common, interdisciplinary and cooperative work: the procedures for digitizing the analogue records were delivered by a working group based on IT competencies and did not include any archival competencies, while the rules for the definition of ERM (Electronic Records Management) requirements have been developed with the support of representatives of the main government agencies and the relevant institutional stakeholders, included the National Archives, the Ministry of Justice, the Ministry of Interiors and the experts from the research. The main and relevant consequence of this duplication and lack of convergence has been the lack of consistency for the whole legislative framework.

The effort for avoiding duplication and fragmentation and ensuring continuity, even if only partially achieved, has been continuously played in the last decade by records managers and archivists, whose analysis has been persistently dedicated to identify and implement (sometimes on voluntary basis) the interrelations between the electronic records management international standards and national prescriptions and the rules for digitization and electronic archiving and to support their maintenance in the application profiles. This effort was fruitful in the e-government sector, where archivists and record managers have been active and their role recognized.

With specific reference to the digital preservation this action has been weak and more uncertain because:

- *the concept of preservation was not defined by the legislator and the related terminology was ambiguous and confusing (i.e. digital archiving, digital reproduction and digital preservation have been used as synonymous in the regulations approved in 1998, 2001 and 2004⁵⁰),*
- *the archival conceptual framework and related definitions and methods have been substantially ignored or misunderstood.*

⁵⁰ See M. Guercio, *Conservare il digitale*, Bari, Laterza, 2013, chapter 4.

The Italian legislation on electronic records management and digital preservation: a recent evolution

More specifically, three parallel and not convergent streams have characterized the Italian legislation processes in the field of electronic records management and digital preservation:

- the electronic records management (ERMS), whose requirements have been cooperatively defined by *IT specialists, archivists/records managers and legal systems experts*: decree of the President of Republic n. 445/2000, part 4 “Electronic Records Management System” (still active and successful), and the related applied regulation approved by a decree of 31 October 2000, recently substituted by a new decree of 3 December 2013, without relevant variations.
- the creation and legal validation of born digital records, whose requirements have been mainly determined by *IT specialists and jurists*: from the decree of the President of Republic approved in 1997 n. 513/1997 to the Code for digital administration approved in 2005 and updated in 2006, 2008 and 2010 (unstable legal framework, continuously updated, unbalanced and now under revision for compliance with EU directives),
- the definition of rules on “legal digital archiving and preservation” and digitization of analogue records, defined by *IT specialists*: many rules since 1993 to 2004 but more specifically the rule approved by Cnipa n. 11/2004. These rules, despite their definition, were more related to legal validation than long term preservation and represented highly unstable framework, very complicated in their first versions, only recently revised for a new more consistent regulation developed in 2011 with a multidisciplinary approach and finally approved and published in 2013 (dpcm 3.12.2013 *Regole tecniche per il sistema di conservazione dei documenti informatici*) and 2014 (dpcm 13.11. 2014 *Regole tecniche in materia di formazione ... dei documenti informatici*).

These new rules on digitization and digital preservation propose now standardized but also flexible and sustainable solutions both for legal validation and for long-term digital preservation, in the form of an integration of the juridical framework in force. The new rules - developed with the support of archivists and records managers appointed as representatives of many central and regional administrations, of the National Archives and the Italian ISO Committee for archives and record management - are based on the principle that the creation, the management and the preservation of electronic records require a *systematic approach* and imply the development of a preservation system integrated as soon as possible with the ERMS.

These interrelations and integrations are carefully detailed in the regulation, specifically with reference to:

- the obligation of *persistent identification of the records* (recognized under the category of *reference* according to the OAIS Preservation Descriptive Information – PDI) and their contextual interrelations (recognized under the category of

- context* according to the OAIS Preservation Descriptive Information – PDI) which include the classification plan and the aggregation criteria for filing the records and/or creating archival series; this obligation concerns the public sector whose electronic records have to be persistently identified in the registry system, classified and aggregated into business files or records series; the classification plan guides the filing plan and defines the aggregations criteria with the consequences that each electronic record is always interrelated to the others in the business process environment and that these reference codes make explicit the documentary context; all these contextual information are part of the PDI and have to be included in the Submission Information Package when the records are acquired by the repository for digital preservation⁵¹;
- the obligation of defining and maintaining the information related to the provenance (both as recognition of the physical person responsible for the record creation and as identification of the producer in term of the organization responsible for it and expressed under the category of *provenance* according to the OAIS Preservation Descriptive Information – PDI): these information have to be maintained not only in the profile of the records to be submitted for preservation but also with reference to the capacity of verifying the records authenticity (identity, integrity, security); the validation of the record implies the documentation of its integrity (recognized under the category of *fixity* according to the OAIS Preservation Descriptive Information – PDI).

The positive consequences of a detailed regulation on the archival functions and the last mile for digital preservation

The approval of rules and standards as part of formal legislation has implied many consequences on the Italian records management function. First of all the obligation of formal definition of procedures for RM in each public agency has increased the quality of ERMS tools in place and of related software procurement. The standardization of the documentation relevant for records creation and for preservation processes (manual of preservation, submission reporting, formal delegation of responsibilities) has provided the simultaneous qualification of controls, of professionals and of training and educational profiles and a better definition and distinction of responsibilities for each phase of digital records life cycle.

The new regulation recognizes the crucial role of the *documentation* both for the electronic records management and the digital preservation processes. The documentation must be qualified and normalized. For this reason the regulations (in

⁵¹ See the annex 5 of regulation published in 2013, related to the metadata for preservation, http://www.agid.gov.it/sites/default/files/leggi_decreti_direttive/metadati_allegato_5_dpcm_3-12-2013.pdf and the annex 4 related to the definition of the Archival Information Package http://www.agid.gov.it/sites/default/files/leggi_decreti_direttive/specifiche_tecniche_del_pacchetto_di_archiviazione_allegato_4_dpcm_3-12-2013.pdf, based on the Italian Standard UNI 11386:2010 (SINCRO) “Supporting Interoperability in Preservation and Retrieval of digital Objects”.

2000 for the RM and in 2011/2013 for digital preservation) define standardized forms and provide guidelines able to ensure completeness and accuracy. More specifically

- the *manual for records management procedures (manuale di gestione)* is an obligatory requirement for all the public administrations (dpcm 30 October 2000, now dpcm 3 December 2013 *Regole tecniche per il protocollo informatico (Technical rules on electronic protocol register)* art. 5,) and includes rules on the records creation, capture, classification, filing, appraisal, preservation (both in paper and in digital form),
- the *manual for digital preservation (manuale di conservazione)* is a new obligation for the digital repository responsible for preservation of public and/or private records (dpcm 3 December 2013 *Regole tecniche in materia di Sistema di conservazione (Technical rules on digital preservation system)* art. 8) and illustrates in details, the organizational obligations, the overall architecture, the infrastructure, the processes, the security measures and all the information required for the long-term digital preservation system management and its auditing (when appropriate or required),
- *submission reports (rapporti di versamento)* and standard models for Archival Information Packages are required for transferring digital records to the repository responsible for preservation (dpcm 3 December 2013 *Regole tecniche in materia di Sistema di conservazione (Technical rules on digital preservation system)* art. 9).

The documentation (specifically the reports and the manual for digital preservation) has to be compliant with the international standards (like ISO 15489 on Record Management, ISO 14721-OAIS, ISO 16363 on the auditing for repository certification) even if this compliance is not part of the regulation but only suggested in the annex n. 3.⁵²

Specific requirements are in place for the manuals for records management procedures:

- directives, guidelines and policy for the records creation/acquisition in the current phase, like the manuals for records management, have to be formally approved and preserved with the records,
- the manuals have to describe in detail how the records are captured, classified and filed and have to identify the relevant metadata for any type of electronic records created in the public sector (e-mails included),
- the formats used for the record creation have to be declared and must be compliant to the prescriptions defined in 2011 and published in 2013 which require openness and complete documentation.⁵³

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http://www.agid.gov.it/sites/default/files/leggi_decreti_direttive/standard_e_specifiche_tecniche_allegato_3_dpcm_3-12-2013.pdf

⁵³ See the annex 2 related to the formats for preservation, http://www.agid.gov.it/sites/default/files/leggi_decreti_direttive/formati_allegato_2_dpcm_3-12-2013.pdf.

According to the new rules the *manual for digital preservation (manuale di conservazione)* has to provide:

- the information about the organization responsible for the preservation function, including the mandate, the functions, the responsibilities and the specific obligations for all the players;
- the description of the types of preserved objects, including the formats accepted and managed, the metadata to associate to the objects/records profiles;
- the description of the preservation process, with specific reference to the transfer and the acquisition of submission information packages and the management of the archival information packages;
- the definition of the access and export processes and the creation of the distribution information packages;
- the description of the preservation system, including the documentation related to the technological, physical and logical components and the procedures for their management and their updating.

In consideration of the differentiation of the responsibilities involved in the preservation processes (records managers, professionals responsible for digital preservation, professional responsible for privacy and data security and IT systems directors) the regulation implies that these responsibilities have to be coordinated but the coordination has to be sustainable and carefully implemented, not only listed. At the moment three main profiles have been identified by the national legislator:

- *the producer* (not to be confused with the author or the record maker or creator) is responsible for the submission of the records and related PDI to the preservation system; for public administration this profile is the record manager (“responsible for the records management service”);
- *the user* who intends to access the preserved records;
- the *preserver* who defines and carries out all the policies and directives of the preservation system and manages it consistently with the organizational model adopted by the repository, with specific reference to:
 - the verification and acquisition of the transfer/submission information package,
 - the preparation and management of the archival information package according to generally defined procedures (well defined data structure whose fixity is guaranteed by advanced electronic signatures);
 - the preparation for access of distribution information packages;
 - the creation of authentic digital copies of digital records or their digital components and related evidence for authenticity to face the technological obsolescence;
 - the appraisal and related disposition according to the agreed retention schedule for the digital records preserved in the repository.

The preserver is also charged of other organizational responsibilities: he updates the preservation system consistently with the juridical, procedural and technological transformations and takes care of the security measures both from the physical and from the logical points of view.

The recognition that the authenticity problems cannot be delegated only to technological solutions, like digital signatures and seals, has increased the institutions' awareness for the risks connected to the long-term protection of digital resources and for the need of adequate investments in this area both from the conceptual and organizational points of view:

- a *new scenario* was established based on a coordinated set of instructions and rules which have been designed thanks to the cooperation among working groups of experts, institutions and market suppliers;
- it has been accepted that the records to be preserved have to be managed in the form of *information packages* (submission, archival and distribution information packages according to the model described by the ISO standard 14721 OASIS);
- the suppliers of private services for digital preservation *have to be certified* and the quality of related processes has to be ensured and verified when they are responsible for preserving public records;
- an *accreditation process* and a certification service are under development (according to the guidelines for auditing digital repositories identified by ISO standard 16363) and will be applied both to the private sector and to public institutions which intend to play as trusted third parties for long-term digital preservation;
- to ensure the *interoperability among different preservation systems*, as already mentioned, a very general and flexible schema for AIP has been defined;
- to ensure the *accessibility*, the preservation system has to be updated in connection with the evolution of the technological context.

This new awareness of the institutions about the risks connected to the long-term protection of digital resources and the need of adequate investments in this area is reflected in local initiatives and new Regional legislation. In particular Regione Emilia-Romagna, with a law approved in 2008 and reinforced in 2013⁵⁴ instituted a regional repository, imitated by Regione Toscana and Regione Marche.⁵⁵

⁵⁴ L.R. 17/2008 and L.R.17/2013, that modifies L.R. 11/2004 and L.R. 29/1995:

http://demetra.regione.emilia-romagna.it/al/monitor.php?vi=nor&pg=Title_leggi.htm&pg_dir=p&pg_t=html&pg_a=y&cp=1d70dc40-0a41-df93-95c2-4d4055e36b75&cp_st=0&cp_cn=1#1d70dc40-0a41-df93-95c2-4d4055e36b75

⁵⁵ L.R. Toscana n. 54/2009

(<http://www.regione.toscana.it/documents/10180/339418/Legge+Regionale+54-2009.pdf/3ae9611d-9694-4d9b-83ad-651da946e723>) and L.R Marche 3/2015

(<http://www.federalismi.it/AppOpenFilePDF.cfm?artid=29372&dpath=document&dfile=11052015175847.pdf&content=MARCHE,+L.R.+n.+3/2015,Legge+di+innovazione+e+semplificazione+amministrativa++regioni++documentazione++>)

Also Provincia Autonoma di Trento defined by law the institution of a local repository.⁵⁶

Open challenges: when and how to manage responsibilities for preservation

Even if clearly and detailed illustrated, the model for preservation approved by the Italian government leaves many questions still open and many challenges unsolved, like those here simply listed:

- how to handle the risks of contradictory or non-integrated analyses and implementations in case of outsourcing?
- how to define priorities specifically when the financial resources are limited and the strategies are not sufficiently detailed?
- in case of more institutional officers involved in the sector (ICT profiles, record managers) how to handle the coordination of responsibilities for digital preservation, specifically when the choices imply a costs/benefits analysis and strategic plans to evaluate the need for accreditation and auditing of preservation services?
- when and how the digitization is required and has a juridical value (not only as a surrogate for originals) if the resources are analogue? at the records creation? when the case file is closed and/or the archival aggregations are at least defined on a logical or chronological basis (i.e. the annual series of the invoices)?
- how early the submission has to be implemented?
- is the distinction of the traditional phases (active/semi-active/inactive) in the records management, keeping and preservation still useful and sustainable in the digital environment according to this new scenario? how to support it in the application environment?
- how to ensure the neutrality of the preservation in the future?
- which level of granularity has to be applied in the preservation processes (as part of PDI) and in the description and dissemination (Info Description and DIS)?
- which criteria have to be followed for packaging the sets of records and related metadata in the archival packages (AIP/AIC)?
- which criteria and how many scenarios can/have to be identified for accessibility?
- how to cope with the hybrid environment (in which countries the analogues originals are destroyed after the digitization process? who has the authority to face the legal issues by destroying the originals if paper based?)
- how and what to appraise and select in digital environment (specifically in case of chronological accumulation of records at the registration phase when the aggregations are not available and managed)?
- how many times the appraisal will take place?
- are the professionals and the available applications able to document all these steps and actions according to a standardized approach and ensure interoperable

⁵⁶ L.P. 16/2012 (http://www.consiglio.provincia.tn.it/leggi-e-archivi/codice-provinciale/archivio/Pages/Legge%20provinciale%2027%20luglio%202012,%20n.%2016_23650.aspx)

evidence for authenticity assessment?⁵⁷

Strategies and sustainable models identified on the basis of concrete experiences are required to answer to these crucial questions. Because of their complexity, it is also necessary to define and develop a bottom up cooperation:

- among researchers and educators at any level (universities, academic and non-academic environments),
- among the various degrees of national responsibilities for preservation (i.e. National Archives, Regions, archival programs within each administration),
- among the stakeholders and professionals already active and available both at public and private sector.

The first step, as testified by other successful experiences like the network

Nestor in Germany or the Digital Preservation Coalition in UK, is the creation of a national *community of practices* for digital preservation: a sustainable and persistent cooperation can/has to be developed in the form of an informal organization, made by the voluntary accumulation of materials, initiatives, events that each producer/preserver/educator has already created and implemented as part of its own mandate and mission. It can include:

- a *monitoring tool/service* to make available and assessable good practices and an updated framework of legal requirements (for example in the form of annual reports),
- *open exchanges of opinions* (as part of a facilitated environment for face to face meetings, web confrontation and interactive forum),
- ‘preservation’ and dissemination of know-how in the *form of technical or scientific documentation* able to collectively represent the state of art of our sectors also in connection with the main international and European projects (like the APARSEN Virtual Center of Excellence at European level or the already mentioned Nestor in German speaking countries),
- a *coordinated* network of links of main initiatives available for high education, training and dissemination.

Thanks to the definition of an integrated set of rules and of a promising experience developed by regional repositories on digital preservation in Florence, in Bologna and now also in Ancona and in Trento, it is possible and it is time for the Italian community of professionals, institutions and stakeholders already facing (on a qualified basis) with the digital preservation challenges to share their capacity, to show their traditional creativity and generosity and to cooperate for a better digital memory, for increasing the awareness in this sector and for supporting young professionals to achieve the required high level capacities the digital future implies. The initial and encouraging form could have the nature of a network of practices supported by a group

⁵⁷ See the proposal of APARSEN on “Authenticity Management in Long Term Digital Preservation”, http://aparsen.digitalpreservation.eu/pub/Main/ApanDeliverables/APARSEN-DEL-D24_1-01-2_3.pdf.

of institutions like the University of Rome Sapienza, the regional repositories of Florence (DAX project) and Bologna (Pa-RER)⁵⁸, the National Archives but also by municipalities, small agencies, the Association of Italian Archivists – ANAI, companies and research centres involved in this specific domain.

In Italy, the recent national juridical framework, even if not completely updated with reference to the web dimension of the recordkeeping systems and in spite of the long list of open questions, has proved its capacity to offer a good and practical basis for a digital ‘ecosystem’ able to support reliable and accurate digital records management systems and provide preservation models based on international standards but also on flexible and sustainable principles. A legislation able to provide rules for governing cloud systems (at least for the public administration) is not yet in place, but the general framework for electronic records keeping systems and digital preservation systems is consistent enough to support future risks in cloud environment.

⁵⁸ <http://parer.ibc.regione.emilia-romagna.it/english/english>

Appendix 3. SPANISH LEGISLATION ON RECORDS MANAGEMENT AND DIGITAL PRESERVATION

Maria Mata Caravaca, ICCROM (May 2015, rev. July 2016)

In force legislation

Spain has a State law on historic heritage (Ley 16/1985),⁵⁹ which regulates its protection, conservation and access. The documentary heritage, as well as museums, libraries and archives institutions are recognized as part of this historic heritage. The subsequent and related decree of 2011 (Real Decreto 1708/2011)⁶⁰ rules the Spanish Archives system and its access. The decree describes the functions that offices managing current records need to accomplish, and presents a series of measures to guarantee digital records retrieval and preservation. The Spanish Archives system comprises archives of the State Administration, autonomous regions, provinces, municipalities, universities, and any other public or private entity incorporated to the system through related agreements. Even so, the provisions made by this decree are specifically addressed to the General State Administration bodies (Ministries and National Institutes or Agencies), as the competence for the protection of historic heritage is decentralized and assumed by the autonomous regions.

The Spanish autonomous regions have developed their own legislation on historic heritage, and have also emitted specific laws or decrees on records and archive management.⁶¹ Andalucía was the first region to develop a specific law for its documentary heritage and Archives System (Ley 3/1984), which came out one year before the State law on historic heritage. The modification made in 2011 to the 1984 Andalucía law added a chapter on records management and the custody of electronic records (Ley 7/2011).⁶² The region of Cataluña developed its 2nd law on documentary heritage and Archives System in 2001, introducing for the first time in the Spanish legislation reference to records management. This law requires that each public

⁵⁹ Ley 16/1985, de 5 de junio, del Patrimonio Histórico Español, Last update: 2015. <https://www.boe.es/buscar/act.php?id=BOE-A-1985-12534&tn=1&vd=&p=20151030&acc=Elegir>. (Accessed: July 2016).

⁶⁰ Real Decreto 1708/2011, de 18 de noviembre, por el que se establece el Sistema Español de Archivos y se regula el sistema de Archivos de la Administración General del Estado y de sus Organismos Públicos y su régimen de acceso, <http://www.boe.es/boe/dias/2011/11/25/pdfs/BOE-A-2011-18541.pdf>. (Accessed: July 2016).

⁶¹ Regional legislation on archival matters is available at: <http://www.madrid.org/archivos/index.php/area-profesional/legislacion-archivistica/legislacion-archivistica-autonomica>. (Accessed: July 2016).

⁶² Ley 7/2011, de 3 de noviembre, de Documentos, Archivos y Patrimonio Documental de Andalucía, <http://www.boe.es/buscar/pdf/2011/BOE-A-2011-18654-consolidado.pdf>. (Accessed: July 2016).

administration and entity have a (unique) records management system for the production, processing, control, evaluation, conservation and access of their records (Ley 10/2001).⁶³ Progressively, other regions have developed more advanced legislations on records and archives management (including electronic records management), such as Euskadi, which its Decree 21/2012⁶⁴ on Electronic Administration pursues to regulate digital records; to create a unique digital repository for the preservation of the records of Euskadi's public administration; and to approve a policy for digital records management, which embraces the entire records life cycle, from its creation to its disposal or long-term preservation; and also the Canarias region, which issued in 2014 a decree that establishes an operational framework for the records management of the Presidency of the Canarias Government (Decreto 42/2014).⁶⁵

It is with the progressive introduction of the electronic administration⁶⁶ in the public sector that digital records management is incorporated to the Spanish legislation. The State law of 1992 (Ley 30/1992)⁶⁷ moves towards the e-government, promoting the use of electronic means for the internal activities of the public administration and for its relations with citizens. The law of 2007 (Ley 11/2007)⁶⁸ on electronic access of citizens to public services develops further the e-government in Spain. It responded to the European Union initiatives e-Europe and i2010,⁶⁹ which aimed to activate the economy, and to improve the States government and the accessibility of services for all European citizens. The 2007 law consolidates the right of citizens to communicate with public

⁶³ Ley 10/2001, de 13 de julio, de Archivos y Documentos, Comunidad Autónoma de Cataluña (última modificación: 2014), <http://www.boe.es/buscar/pdf/2001/BOE-A-2001-16691-consolidado.pdf>. (Accessed: July 2016).

⁶⁴ Decreto 21/2012, de 21 de febrero, de Administración Electrónica, Boletín Oficial del País Vasco, <http://www.lehendakaritza.ejgv.euskadi.eus/r48-bopv2/es/bopv2/datos/2012/03/1201134a.pdf>. (Accessed: July 2016).

⁶⁵ Decreto 42/2014, de 19 de mayo, del Presidente, por el que se regula la gestión documental y la organización y el funcionamiento de los archivos en la Presidencia del Gobierno de Canarias (BOC 101, de 27.5.2014; c.e. BOC 115, de 17.6.2014), <http://www.gobiernodecanarias.org/libroazul/pdf/70812.pdf>. (Accessed: July 2016).

⁶⁶ To know the Spanish legislation on electronic administration at the State level, see the following compendium: *Código de Administración Electrónica*, Ministerio de Hacienda y Administraciones Públicas, Agencia Estatal Boletín Oficial del Estado, 2015. Available at: https://www.boe.es/legislacion/codigos/codigo.php?id=029_Codigo_de_Administracion_Electronica&modo=1. (Accessed: July 2016).

⁶⁷ Ley 30/1992 de Régimen Jurídico de las Administraciones Públicas y del Procedimiento Administrativo Común (última modificación: 2014), <https://www.boe.es/buscar/pdf/1992/BOE-A-1992-26318-consolidado.pdf>. (Accessed: July 2016).

⁶⁸ Ley 11/2007, de 22 de junio, de acceso electrónico de los ciudadanos a los Servicios Públicos, <http://www.boe.es/boe/dias/2007/06/23/pdfs/A27150-27166.pdf>. (Accessed: July 2016).

⁶⁹ The eEurope initiative was launched in 2000 by the European Commission to accelerate Europe's transition towards a knowledge-based economy. In order to fulfill the eEurope commitments, two eEurope conferences were held: eEurope 2002 and eEurope 2005. The i2010 initiative was launched in 2005 and was the EU strategy that brought together the various initiatives in Europe heading the benefits of Information and Communication Technologies (ICT) for social and economic life. The current Digital Agenda for Europe forms one of the seven pillars of the Europe 2020 Strategy, and follows the i2010, eEurope 2005, eEurope 2002 and eEurope initiatives.

administrations by electronic means, and incorporates principles related to records management, preservation of digital records and the right of access to information. In this framework, the related decree of 2010 (Real Decreto 4/2010)⁷⁰ regulates the interoperability of the electronic administration,⁷¹ and establishes the development of technical rules, which face more practical and operational aspects to ensure the implementation of interoperability among the public administrations and with the citizens. With this decree, and for the first time, the management of records is explicitly mentioned in a State regulation addressed to the Spanish public administrations. This decree requires a series of measures to guarantee the interoperability in relation to records retrieval and preservation, including the definition of a records management policy for records and files processing. The technical rules that were subsequently elaborated are related to: Digital record; Digitization; Digital file; Authentic copies and conversion; Digital signature policy; Standards; Data models, Policy for the management of digital records (Resolution 28 June 2012, which will be later analyzed),⁷² etc.

Brief analysis of legislation

Ley 16/1985 – Historic Heritage

This law, issued by the Spanish Parliament, aims to protect the Spanish historic heritage, including the documentary heritage and archives. Title VII, Chapter I defines the concept of record, establishes the creation of a census of this heritage and regulates its protection, conservation and access. Title VII, Chapter II defines the concept of archives as an ensemble of records and as a cultural institution, and assigns competences and responsibilities for its management.

⁷⁰ Real Decreto 4/2010, de 8 de enero, por el que se regula el Esquema Nacional de Interoperabilidad (ENI) en el ámbito de la Administración Electrónica, <http://www.boe.es/boe/dias/2010/01/29/pdfs/BOE-A-2010-1331.pdf>. (Accessed: July 2016).

⁷¹ The Spanish legislation on interoperability embraces the European Interoperability Framework of the IDABC programme (Interoperable Delivery of European eGovernment Services to public Administrations, Business and Citizens), and the Decision 922/2009/EC of the European Parliament and of the Council of 16 September 2009 on Interoperability Solutions for European Public Administrations (ISA).

⁷² Resolución 28 de junio de 2012, de la Secretaría de Estado de Administraciones Públicas, por la que se aprueba la Norma Técnica de Interoperabilidad de Política de gestión de documentos electrónicos, <http://www.boe.es/boe/dias/2012/07/26/pdfs/BOE-A-2012-10048.pdf>. (Accessed: July 2016).

Ley 16/1985, de 5 de junio, del Patrimonio Histórico Español (última actualización publicada: 2015).

Título VII: Del Patrimonio Documental y Bibliográfico y de los Archivos, Bibliotecas y Museos.

Cap. I: Del Patrimonio Documental y Bibliográfico (art. 48-58).

Cap. II: De los Archivos, Bibliotecas y Museo (art. 59-66).

Real Decreto 1708/2011 – Archives System

The Royal Decree 1708/2011 is subsidiary to Law 16/1985. It establishes the Spanish Archives System and regulates the Archives System of the General State Administration bodies and their access rules.

Section 1 defines the types of archives based on the records life cycle, describes their functions and assigns responsibilities. The archives are divided in four types: current records, central archive repository, records centre and historical archive. The functions of these archives spans from organization, transfer, appraisal, retention, disposition, to description, conservation, reproduction, access and dissemination. To carry out these functions, several archival tools are mentioned: records retention schedule, records classification scheme and transfer report. The records classification scheme is elaborated at the central archive repository, once the series have been transferred and identified. No mention is made to the use of the classification scheme for classifying current records in offices.

Digital records and electronic management systems are taken into consideration when describing the functions of the central archive repository, records centre and historical archive. No mention is made to the management of current records, which is an archival phase described with less detail. The decree states that the central archive repository should participate in multidisciplinary teams for the design and implementation of electronic management systems for administrative procedures. Besides, the records centre and historical archive will establish strategies for records preservation in the medium and long term (respectively), such as procedures for format emulation, migration and conversion.

Section 2 describes the functions to be carried out by the archives in all phases of the records life cycle, as for example, guaranteeing records integrity, authenticity, reliability, availability, confidentiality and preservation, as established by Law 11/2007 on electronic access of citizens to public services.

Section 3 refers to historical archives made on traditional media. Section 4 focuses on the retrieval and preservation of digital records through their life cycle. The measures that should be adopted are, among others: the use of a univocal code for each record; a minimum set of obligatory metadata; an electronic index for files, signed by the acting entity to guarantee their integrity and retrieval; transfer of files to historical archives for long-term preservation; strategies for medium and long term preservation, such as format emulation, migration and conversion. In addition, the application of information and communication technologies for records management and access of citizens to public services is encouraged.

Real Decreto 1708/2011, de 18 de noviembre, por el que se establece el Sistema Español de Archivos y se regula el sistema de Archivos de la Administración General del Estado y de sus Organismos Públicos y su régimen de acceso

Capítulo III: Sistema de Archivos de la Administración General del Estado y de sus organismos públicos

Sección 1: Disposiciones generales.

Art. 6. Definición.

Art. 7. Composición.

Art. 8. Clases de Archivos.

Art. 9. Archivos de oficina o de gestión.

Art. 10. Archivos generales o centrales de los Ministerios y de los organismos públicos dependientes de los mismos.

Art. 11. Archivo intermedio.

Art. 12. Archivos históricos.

Art. 13. Coordinación archivística.

Sección 2: Tratamiento archivístico.

Art. 14: Ciclo vital de los documentos.

Art. 15: Identificación, valoración y eliminación.

Sección 3: Disposiciones específicas sobre archivos históricos y patrimonio documental.

Art. 16. Conservación del patrimonio documental.

Art. 17. Enriquecimiento del patrimonio documental.

Art. 18. Medidas de fomento del patrimonio documental.

Art. 19. Difusión de los documentos de archivo y de otros recursos culturales o informativos del Sistema español de archivos.

Sección 4. Documentos electrónicos y preservación digital.

Art. 20: Condiciones para la recuperación y conservación del documento electrónico.

Art. 21: Aplicación de las tecnologías de la información y comunicaciones en la gestión y tratamiento de los documentos.

Ley 7/2011 de Andalucía – Records, Archives and Documentary Heritage

Andalucía was the first Spanish region to develop a law on documentary heritage and Archives System (Ley 3/1984). The law of 1984 was modified in 2011 (Ley 7/2011) to meet the needs at that time.

Title III is dedicated to records management, its concept, functions and application in the Andalucía Archival System and in the Public Administration of the Andalucía Regional Government. The law establishes two tools for managing the digital records of the Andalucía Administration: a General Register of Information Systems, and a homogeneous Information System of the Archives of the Andalucía Government.

Ley 7/2011, de 3 de noviembre, de Documentos, Archivos y Patrimonio Documental de Andalucía

Título III: La gestión documental.

Cap. I: Concepto y funciones de la gestión documental.

Art. 53: Concepto de gestión documental.

Art. 54: Funciones de la gestión documental.

Art. 55: Aplicación de la gestión documental en los archivos del sistema Archivístico de Andalucía.

Cap. II: La gestión documental en la Junta de Andalucía.

Art. 56: La gestión documental en la Junta de Andalucía.

Art. 57: Aplicación de la gestión documental en la Junta de Andalucía.

Art. 58: Archivo y custodia de documentos electrónicos de la Junta de

Andalucía.

Art. 59: Registro General de los Sistemas de Información de la Junta de

Andalucía.

Art. 60: El Sistema de Información de Archivos de la Junta de Andalucía.

Ley 10/2001 de Cataluña – Records and Archives

This is the only Spanish regional law that requires each public administration and entity to have a records management system, which guarantees the authenticity and integrity of records content. The law also mentions the archival phases: active, semi-active and inactive, and the transfer of records from offices to records centres and historical archives. It also indicates responsibilities for the organization, appraisal, preservation and access of records.

Ley 10/2001, de 13 de julio, de Archivos y Documentos (Comunidad Autónoma de Cataluña)

Título II: Los documentos.

Cap. I: Los documentos públicos.

Art. 7: Responsabilidades de los titulares de documentos públicos.

Art. 8: Gestión de los documentos públicos.

Art. 9: Evaluación de los documentos públicos.

Decreto 21/2012 de Euskadi – Electronic Administration

This decree dedicates a Title to the electronic register, where all digital records addressed to the Public Administration bodies of Euskadi are admitted. Electronic records, electronic administrative records, and their components (including metadata) are described, as well as electronic files and components, such as metadata, electronic index and electronic index signature. A common digital storage for the Euskadi Public Administration will be created, and a policy for digital records management which involves the entire records life cycle, from creation to destruction or permanent preservation will be approved and published. The policy will include guidelines for assigning responsibilities and will define the programmes, processes and control for records management and administration of the digital repositories.

Decreto 21/2012, de 21 de febrero, de Administración Electrónica (Administración Pública de la Comunidad Autónoma de Euskadi)

Título IV: Registro electrónico

Art. 21: Registro electrónico.

Art. 22: Documentos admisibles.

Art. 23: Resguardo acreditativo de la presentación.

Art. 24: Cómputo de plazos.

Art. 25: Convenios de interconexión de registros electrónicos.

Art. 26: Anotaciones de otras comunicaciones electrónicas.

Título IV: Las comunicaciones y las notificaciones electrónicas

Título VI: El documento electrónico y sus copias

Cap. I: Documento electrónico.

Art. 33: Documento electrónico.

Art. 34: Referencia temporal del documento electrónico administrativo.

Art. 35: Metadatos del documento electrónico

Art. 36: Reproducción del documento electrónico.

Cap. II: Expediente electrónico.

Art. 37: Expediente electrónico.

Art. 38: Componentes del expediente electrónico.

Art. 39: Intercambio de expedientes electrónicos.

Cap. III: Conservación y archivo de documentos electrónicos.

Art. 40: Archivo electrónico.

Art. 41: Conservación de documentos y expedientes electrónicos.

Art. 42: Políticas de gestión de documentos electrónicos.

Decreto 42/2014 de Canarias – Records and Archives Management

This decree regulates the management of the records life cycle of the Presidency of the Canarias Government. It gives indications on the classification and ordering of current records, and the management of files and records produced by administrative procedure and workflows. It describes the functions of the records centre, the transfer procedure, and the selection and disposal activities. Guidelines about access and consultation of records are given, as well as technical specifications for storage areas. In its final provisions, the decree establishes that a plan for digitization and electronic records management will be elaborated and approved.

Decreto 42/2014, de 19 de mayo, del Presidente, por el que se regula la gestión documental y la organización y el funcionamiento de los archivos en la Presidencia del Gobierno de Canarias

(BOC 101, de 27.5.2014; c.e. BOC 115, de 17.6.2014).

Art. 1. Objeto.

Art. 2. Ámbito de aplicación.

Art. 3. Servicios de gestión documental.

Art. 4. Identificación y valoración documental.

Art. 5. Archivos de oficina

Art. 6. Normas de gestión para la ordenación y racionalización del flujo documental.

Art. 7. Archivo Central.

Art. 8. Transferencia de documentos de archivo.

Art. 9: Procedimiento de transferencia de documentos de archivo.

Art. 10: Selección y expurgo de los documentos de archivo.

Art. 11. Acceso y consulta de los documentos de archivo.

Art. 12. Los depósitos de archivo.

Disposición adicional primera. *Plan de Digitalización y Gestión de Documentos Electrónicos.*

Disposición adicional segunda. *Plan de modernización y gestión documental.*

Ley 11/2007 - Electronic Access of Citizens to Public Services

The law 11/2007 on electronic access of citizens to public services regulates the registers, communications and electronic notifications of the citizens with the public administration, and among the administrations themselves. It establishes the conditions to recognize the validity of an electronic record: the public administration may produce valid records by electronic means if signed electronically. Digital records must be preserved in digital form, guaranteeing their integrity, authenticity, confidentiality, quality, protection and preservation. Digital files should be foliated with an electronic index to guarantee their integrity and retrieval. The law also gives provisions and criteria for the electronic management of administrative procedures, processes and services.

Ley 11/2007, de 22 de junio, de acceso electrónico de los ciudadanos a los Servicios Públicos.

Título II: Régimen jurídico de la administración electrónica.

Cap. III: De los registros, las comunicaciones y las notificaciones electrónicas

Art. 24: Registros electrónicos.

Art. 25: Creación y funcionamiento.

Art. 26: Cómputo de plazos.

Art. 27: Comunicaciones electrónicas.

Art. 28: Práctica de la notificación por medios electrónicos.

Cap. IV: Documentos y archivos electrónicos.

Art. 29: Documento administrativo electrónico.

Art. 30: Copias electrónicas.

Art. 31: Archivo electrónico de documentos.

Art. 32: Expediente electrónico.

Título III: De la gestión electrónica de los procedimientos.

Cap. I: Disposiciones comunes.

Art. 33: Utilización de medios electrónicos.

Art. 34: Criterios para la gestión electrónica.

Cap. II: Utilización de medios electrónicos en la tramitación del procedimiento.

Art. 35: Iniciación del procedimiento por medios electrónicos..

Art. 36: Instrucción del procedimiento utilizando medios electrónicos.

Art. 37: Acceso de los interesados a la información sobre el estado de tramitación.

Art. 38: Terminación de los procedimientos por medios electrónicos.

Art. 39: Actuación administrativa automatizada.

Real Decreto 4/2010 - National Interoperability Framework

The Royal Decree 4/2010 develops provisions of Law 11/2007 to facilitate their application. The decree regulates the National Interoperability Framework for the Spanish e-Government services; in other words, the use of electronic means for the access of citizens to public services, including data and digital records.

Chapter IX defines obligations for the electronic signature certificate providers. Chapter X states that the public administration must adopt measures to guarantee the interoperability in relation to the retrieval and preservation of digital records along their life cycle. These measures include: definition of a records management policy; inclusion of a file electronic index; unique identification of records; a set of minimum obligatory metadata; classification; retention period; records access; long-term preservation; horizontal coordination between the records manager and the other services involved with archives; staff training; etc.

Security measures and the use of open standard formats for preservation are also indicated. In relation to the digitization of paper records, the following aspects are considered: use of standardized formats, resolution, integrity of the image and metadata.

Real Decreto 4/2010, de 8 de enero, por el que se regula el Esquema Nacional de Interoperabilidad en el ámbito de la Administración Electrónica

Capítulo IX: Firma electrónica y certificados.

Capítulo X: Recuperación y conservación del documento electrónico.

Art. 21: Condiciones para la recuperación y conservación de documentos.

Art. 22: Seguridad.

Art. 23: Formatos de los documentos.

Art. 24: Digitalización de documentos en soporte papel.

Interoperability technical rules

The Royal Decree 4/2010, which regulates the Spanish National Interoperability Framework, establishes that a series of technical rules will be developed to address specific interoperability aspects. The technical rules currently available are about: digital record; digital file; digitization of records; digital signature policy, a standards catalogue, data models, policy for digital records management, etc.

Resolution 28 June 2012 - Policy for Digital Records Management

By this resolution, the Secretary for State of Public Administrations approves the Interoperability Technical Rule on Policy for the management of digital records. This rule provides guidelines to define policies for records management in hybrid environments along the entire records life cycle. It gives indications of the policy content, actors involved, and processes.

Records management processes should, at least, include:

1. Records capture and assignation of minimum obligatory metadata. It is cross-referred to the Interoperability Technical Rule on Digital Records.
2. Registration, which may foresee the digitization of incoming paper mail. It is cross-referred to the Interoperability Technical Rule on Digitization of Records.
3. Classification, which includes criteria for creating files and aggregating records following the Interoperability Technical Rule on Digital Files. Classification should be based on the functional records classification scheme of the organization.
4. Description, including the elaboration of an institutional scheme of metadata.
5. Access, including an institutional policy on access and the traceability of access operations.
6. Appraisal, which will include evaluation and identification of retention periods, and final decisions of disposal authorities.
7. Retention, based on the records retention schedule.
8. Transfer, which will include responsibilities for records custody.
9. Disposal, which cross-refers to the Royal Decree 3/2010 on the Security Framework for e-Government.

In addition, the organization must elaborate and document the management procedures; train staff; make periodical audits of the adequacy of the records management policy and its application; and update the policy.

10048: Resolución 28 de junio de 2012, de la Secretaría de Estado de Administraciones Públicas, por la que se aprueba la Norma Técnica de Interoperabilidad de Política de gestión de documentos electrónicos

- I. Objeto
- II. Ámbito de aplicación.
- III. Contenido y contexto.
- IV. Actores involucrados.
- V. Programa de tratamiento de documentos electrónicos.
- VI. Procesos de gestión de documentos electrónicos.
- VII. Asignación de metadatos.
- VIII. Documentación.
- IX. Formación.

X. Supervisión y auditoría. XI. Actualización.

Conclusions

Records management has been incorporated in the Spanish legislation for the last 10-15 years. This presence and recognition goes hand in hand of the introduction of information and communication technologies (ICT) in the Public Administration internal activities and in its communications with citizens. In general, the Spanish legislation on records management provides very generic provisions. Nevertheless, more focused rules have been elaborated in recent years at State level (Resolution 28 June 2012 on Policy for the management of digital records), as well as regional level (Decree 42/2014 on records management and organization of the Archives in the Presidency of the Canarias Government) and provincial level (Global model for records management and digital file at the *Administración Foral de Guipúzcoa*).⁷³ It should also be mentioned that, in the framework of the Resolution 28 June 2012, a model for elaborating a digital records management policy was prepared by the Ministry of Finance and Public Administration in 2013. A second and more complete version has been published in 2016: “Política de gestión de documentos electrónicos – MINHAP.” The policy was awarded a prize at the VII Archives Congress of the Spanish Region of Castilla y León (25-27 May 2016). It was considered the best archival project, and was appreciated by being the first policy on electronic records management of the General State Administration. Although applicable to the MINHAP (Ministerio de Hacienda y Administración Pública – Ministry of Finance and Public Administration), the policy is viewed as a valid reference for any public entity.⁷⁴

Even if legislation on records management and electronic administration is in the process of further development, the implementation of electronic records management at the Public Administration level is being delayed, as a 2015 study by the E-Government Observatory enunciates.⁷⁵ This delay is due to several factors, such as limited human

⁷³ Decreto Foral 17/2011, de 14 de junio, por el que se regula el Modelo Global de Gestión Documental y Expediente Electrónico en el ámbito de la Administración Foral de Guipúzcoa. Available at: <http://www.boletinesoficiales.com/documentacion/legislacion/documento/DECRETO-FORAL-17-2011-14-junio-regula-Modelo-Global-Gestion-Documetal-Expediente-Electronico-ambito-Administracion,53,20110620,1/>. (Accessed: July 2016).

⁷⁴ Available at: <http://www.minhap.gob.es/Documentacion/Publico/SGT/POLITICA%20DE%20GESTION%20DE%20DOCUMENTOS%20MINHAP/politica%20de%20gestion%20de%20documentos%20electronicos%20MINHAP.pdf>. (Accessed: July 2016).

⁷⁵ *Seguimiento de la adecuación al Esquema Nacional de Interoperabilidad (ENI): Estado de situación a finales de 2014* (25 de febrero de 2015). An English version is also available from:

and economic resources, the need of creating interdisciplinary cooperation to manage digital records, the need of elaborating and approving policies that establish guidelines and technical instructions to be followed, the selection of management tools and their integration with existing ones, and the need of personnel training. Coordination and cooperation are also necessary at all levels: among institutions, provinces, regions and State bodies in order to adopt shared services and infrastructures that improve rationalization and efficiency.

In relation to digital preservation, regulations are scarce and developed in a very succinct way, without specific and detailed provisions on preservation strategies, processes, model/standards, or instruments to guarantee long-term preservation.

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Appendix 4. Terms and definitions

Interoperability

Italian term: Interoperabilità

Interoperability is the ability of organizations or systems to interact between them with the aim of sharing data, information and records. Interoperability occurs both at organizational level, for sharing tools and policies, and at technological level, for the development of an IT system that allows exchanging information through the adoption of a data exchange format and a shared communication protocol. The interoperability between two preservation systems is the ability to exchange metadata and records, and aims at transferring the archives custody. The exchange must guarantee the preservation of the authenticity of records in relation to their organizational and archival context.

L'interoperabilità è la capacità di una organizzazione di interagire con altre organizzazioni allo scopo di condividere dati, informazioni e documenti. L'interoperabilità avviene a livello sia organizzativo, per la condivisione di strumenti e policy, sia a livello tecnologico per la realizzazione di un sistema informatico che consenta lo scambio di informazioni attraverso l'adozione di un medesimo formato di interscambio dei dati e di un protocollo di comunicazione condiviso. L'interoperabilità tra due sistemi di conservazione è la capacità di scambio di metadati e documenti, finalizzato al trasferimento della custodia degli archivi. Lo scambio deve avvenire garantendo la preservazione della autenticità dei documenti in relazione al loro contesto organizzativo e archivistico.

Reference

Reference	Definition
ISO/IEC 2382-01, <i>Information Technology Vocabulary, Fundamental Terms</i>	The capability to communicate, execute programs, or transfer data among various functional units in a manner that requires the user to have little or no knowledge of the unique characteristics of those units (http://jtc1sc36.org/doc/36N0646.pdf)
UN/CEFACT BRS:2008 – <i>Record exchange standard (APARSEN)</i>	A transfer as a whole is the business activity involved in transferring custody from one system to another. This may involve the transfer of physical custody or legal custody. Transfer includes tasks ranging from the extremely high level (e.g. agreement at the ministerial level as to access provisions), to the extremely low level (e.g. physical relocation of the records). This specification only covers some of the tasks involved in carrying out a transfer of digital records. (UN/CEFACT BRS:2008 – Record exchange standard)
EU – European Commission Directorate – General for Informatics	Interoperability is the ability of disparate and diverse organisations to interact towards mutually beneficial and agreed common goals, involving the sharing of information and knowledge between the organisations, through the business processes they support, by means of the exchange of data between their respective ICT systems (http://ec.europa.eu/isa)

DL.org - Consortium - Digital Library Interoperability, Best Practices and Modelling Foundations	Interoperability is a complex, multi-layered and context-specific concept, encompassing different levels along a multi-dimensional spectrum ranging from organisational to technological aspects (http://www.dlorg.eu/index.php/outcomes/interoperability-2)
INTERPARES (IP2) - Glossary	The ability of one application/system to communicate or work with another. [General Dictionaries] (http://www.interpares.org/ip2/display_file.cfm?doc=ip2_dictionary.pdf&CFID=4691685&CFTOKEN=25915577)
ICAR (Interoperabilità e Cooperazione Applicativa fra le Regioni) – CISIS (Centro Interregionale per i Sistemi informatici, geografici e statistici)	Capacità di una applicazione di sfruttare le funzioni di un'altra applicazione; si dice che A e B interoperano se A è in grado di utilizzare le funzioni di B e viceversa (http://www.progettoicar.it/ViewCategory.aspx?catid=b0537e201d634177ab7a6d300b3fa10e)
DPCM 31 dicembre 2013 - Regole tecniche per il protocollo informatico – Glossario/Definizioni	Capacità di un sistema informatico di interagire con altri sistemi informatici analoghi sulla base di requisiti minimi condivisi

Manual for Digital Preservation

Italian term: Manuale di conservazione

The Manual for Digital Preservation (or Digital Preservation Handbook) provides a range of practical tools and organizational and technological rules, as well as policies and strategies for digital preservation. It details the organization, the people involved, and their roles and responsibilities. The manual explains the operating model, the preservation process, the technological architecture and infrastructure, the security measures and any other information used for management and validation of the preservation system over time.

Il Manuale di Conservazione fornisce le regole organizzative e tecnologiche del processo di conservazione digitale, esplicitando le policy e le strategie perseguite. Esso illustra dettagliatamente l'organizzazione, i soggetti coinvolti e i ruoli svolti dagli stessi, il modello di funzionamento, la descrizione del processo, la descrizione delle architetture e delle infrastrutture utilizzate, le misure di sicurezza adottate e ogni altra informazione utile alla gestione e alla verifica del funzionamento, nel tempo, del sistema di conservazione.

Reference

<i>Reference</i>	<i>Definition</i>
DPCM 3 dicembre 2013 - Regole tecniche in materia di sistema di conservazione – Glossario/Definizioni	<i>Manuale di conservazione</i> Strumento che descrive il sistema di conservazione dei documenti informatici ai sensi dell'articolo 9 delle regole <u>tecniche del sistema di conservazione</u>

	http://www.agid.gov.it/sites/default/files/leggi_decreti_direttive/dpcm_3-12-2013_protocollo.pdf
DPCM 3 dicembre 2013 - <i>Regole tecniche in materia di sistema di conservazione</i>	<p><u>Art. 8</u></p> <p>1. Il manuale di conservazione illustra dettagliatamente l'organizzazione, i soggetti coinvolti e i ruoli svolti dagli stessi, il modello di funzionamento, la descrizione del processo, la descrizione delle architetture e delle infrastrutture utilizzate, le misure di sicurezza adottate e ogni altra informazione utile alla gestione e alla verifica del funzionamento, nel tempo, del sistema di conservazione.</p> <p>2. Il manuale di conservazione è un documento informatico che riporta, almeno:</p> <ul style="list-style-type: none"> a) i dati dei soggetti che nel tempo hanno assunto la responsabilità del sistema di conservazione, descrivendo in modo puntuale, in caso di delega, i soggetti, le funzioni e gli ambiti oggetto della delega stessa; b) la struttura organizzativa comprensiva delle funzioni, delle responsabilità e degli obblighi dei diversi soggetti che intervengono nel processo di conservazione; c) la descrizione delle tipologie degli oggetti sottoposti a conservazione, comprensiva dell'indicazione dei formati gestiti, dei metadati da associare alle diverse tipologie di documenti e delle eventuali eccezioni; d) la descrizione delle modalità di presa in carico di uno o più pacchetti di versamento, comprensiva della predisposizione del rapporto di versamento; e) la descrizione del processo di conservazione e del trattamento dei pacchetti di archiviazione; f) la modalità di svolgimento del processo di esibizione e di esportazione dal sistema di conservazione con la produzione del pacchetto di distribuzione; g) la descrizione del sistema di conservazione, comprensivo di tutte le componenti tecnologiche, fisiche e logiche, opportunamente documentate e delle procedure di gestione e di evoluzione delle medesime; h) la descrizione delle procedure di monitoraggio della funzionalità del sistema di conservazione e delle verifiche sull'integrità degli archivi con l'evidenza delle soluzioni adottate in caso di anomalie; i) la descrizione delle procedure per la produzione di duplicati o copie; j) i tempi entro i quali le diverse tipologie di documenti devono essere scartate ovvero trasferite in conservazione, ove, nel caso delle pubbliche amministrazioni, non già presenti nel manuale di gestione; k) le modalità con cui viene richiesta la presenza di un pubblico ufficiale, indicando anche quali sono i casi per i quali è previsto il suo intervento; l) le normative in vigore nei luoghi dove sono conservati i documenti <p>http://www.agid.gov.it/sites/default/files/leggi_decreti_direttive/dpcm_3-12-2013_protocollo.pdf</p>
ISO 16363 - Space data and information transfer system - Audit and certification of	https://www.iso.org/obp/ui/#iso:std:iso:16363:ed-1:v1:en

trustworthy digital repositories	
DPC (Digital Preservation Coalition) – Digital Preservation Handbook	The Handbook provides an internationally authoritative and practical guide to the subject of managing digital resources over time and the issues in sustaining access to them. It will be of interest to all those involved in the creation and management of digital materials. ... This Handbook aims to identify good practice in creating, managing and preserving digital materials and also to provide a range of practical tools to help with that process. By providing a strategic overview of the key issues, discussion and guidance on strategies and activities, and pointers to key projects and reports, the Handbook aims to provide guidance for institutions and individuals and a range of tools to help them identify and take appropriate actions. (http://handbook.dpconline.org/)
PREMIS - Data Dictionary for Preservation Metadata	<i>Business rules</i> The working group made no attempt to describe the business rules of a repository, although certainly this metadata is essential for preservation within the repository. Business rules codify the application of preservation strategies and document repository policies, services, charges, and roles. Retention periods, disposition, risk assessment, permanence ratings, schedules for media refreshment, and so on are pertinent to objects but are not actual properties of Objects. A single exception was made for the level of preservation treatment to be accorded an object (<i>preservationLevel</i>) because this was felt to be critical information for any preservation repository. A more thorough treatment of business rules could be added to the data model by defining a Rules entity similar to Rights, although this is not included in the current revision. (http://www.loc.gov/standards/premis/v3/index.html)

Manual for Records Management Procedures

Italian term: Manuale di gestione

The Manual for Records Management Procedures is an organizational handbook that describes the rules, tools and actions for a proper records management. It guides the staff of an organization in their daily operations, as it includes rules on records creation, capture, classification, filing, appraisal and preservation (both in paper and in digital form).

Il Manuale di Gestione è lo strumento organizzativo che descrive le regole, gli strumenti e le azioni per una corretta gestione documentale. Esso detta le regole organizzative e archivistiche per la gestione del protocollo informatico, dei flussi documentali e degli archivi; individua per ogni azione o processo i rispettivi livelli di responsabilità, esecuzione e controllo.

Reference

Reference	Definition
<p>DPCM 31 ottobre 2000 - <i>Regole tecniche per il protocollo informatico</i></p>	<p>Art. 5</p> <p>1. Il manuale di gestione descrive il sistema di gestione e di conservazione dei documenti e fornisce le istruzioni per il corretto funzionamento del servizio.</p> <p>2. Nel manuale di gestione sono riportati, in particolare:</p> <p>a) la pianificazione, le modalità e le misure di cui all'art. 3, comma 1, lettera d), del presente decreto;</p> <p>b) il piano di sicurezza dei documenti informatici di cui all'art. 4, comma 4, del presente decreto;</p> <p>c) le modalità di utilizzo di strumenti informatici per lo scambio di documenti all'interno ed all'esterno dell'area organizzativa omogenea;</p> <p>d) la descrizione del flusso di lavorazione dei documenti ricevuti, spediti o interni, incluse le regole di registrazione per i documenti pervenuti secondo particolari modalità di trasmissione, tra i quali, in particolare, documenti informatici di fatto pervenuti per canali diversi da quelli previsti dall'art. 15 del presente decreto, nonché fax, raccomandata, assicurata;</p> <p>e) l'indicazione delle regole di smistamento ed assegnazione dei documenti ricevuti con la specifica dei criteri per l'ulteriore eventuale inoltro dei documenti verso aree organizzative omogenee della stessa amministrazione e/o verso altre amministrazioni;</p> <p>f) l'indicazione delle unità organizzative responsabili delle attività di registrazione di protocollo, di organizzazione e tenuta dei documenti all'interno dell'area organizzativa omogenea;</p> <p>g) l'elenco dei documenti esclusi dalla registrazione di protocollo, ai sensi dell'art. 4, comma 5, del decreto del Presidente della Repubblica n. 428/1998;</p> <p>h) l'elenco dei documenti soggetti a registrazione particolare e le relative modalità di trattamento;</p> <p>i) il sistema di classificazione, con l'indicazione delle modalità di aggiornamento, integrato con le informazioni relative ai tempi, ai criteri e alle regole di selezione e conservazione, anche con riferimento all'uso di supporti sostitutivi;</p> <p>l) le modalità di produzione e di conservazione delle registrazioni di protocollo informatico ed in particolare l'indicazione delle soluzioni tecnologiche ed organizzative adottate per garantire la non modificabilità della registrazione di protocollo, la contemporaneità della stessa con l'operazione di segnatura ai sensi dell'art. 6 del decreto del Presidente della Repubblica n. 428/1998, nonché le modalità di registrazione delle informazioni annullate o modificate nell'ambito di ogni sessione di attività di registrazione;</p> <p>m) la descrizione funzionale ed operativa del sistema di protocollo informatico con particolare riferimento alle modalità di utilizzo;</p> <p>n) i criteri e le modalità per il rilascio delle abilitazioni di accesso interno ed esterno alle informazioni documentali;</p> <p>o) le modalità di utilizzo del registro di emergenza ai sensi dell'art. 14 del</p>

	<p>decreto del Presidente della Repubblica n. 428/1998, inclusa la funzione di recupero dei dati protocollati manualmente.</p> <p>3. Il manuale di gestione è reso pubblico dalle pubbliche amministrazioni di cui al decreto n. 29/1993 secondo le modalità previste dai singoli ordinamenti. Esso può altresì essere reso accessibile al pubblico per via telematica ovvero su supporto informatico o cartaceo.</p> <p>(http://www.gazzettaufficiale.it/eli/id/2014/03/12/14A02099/sg)</p>
DPCM 31 dicembre 2013 - <i>Regole tecniche per il protocollo informatico – Glossario/Definizioni</i>	Strumento che descrive il sistema di gestione informatica dei documenti di cui all'articolo 5 delle regole tecniche del protocollo informatico ai sensi delle regole tecniche per il protocollo informatico D.P.C.M. 31 ottobre 2000 e successive modificazioni e integrazioni

Policy

Italian term: Policy (Politiche/Orientamento/Strategie, Principi)

A statement of principles and strategic decisions concerning the directions by which long-term policy goals are pursued; they affect the setting of records systems and archives, and their management, both organizational and technical.

Principi e decisioni strategiche che riguardano linee politiche tramite le quali si perseguono obiettivi politici di lungo periodo; essi riguardano l'impostazione dei sistemi di gestione documentale e degli archivi e sul loro governo, sia organizzativo che tecnico.

Reference

<i>Reference</i>	<i>Definition</i>
INTERPARES (IP2) – <i>Glossary/Dictionary</i>	A formal statement of direction or guidance as to how an organization will carry out its mandate, functions or activities, motivated by determined interests or programs [Archives]

Responsibility

Italian term: Responsabilità

Responsibility refers to the authority to make decisions according to the role of responsible of the records management system assigned within an organization. It is closely linked to professional reliability and capacity to exercise control over the entire system on which the person responsible can evaluate and prescribe rules.

Con il termine Responsabilità si intende la capacità di assumersi delle decisioni secondo il ruolo di responsabile del sistema di gestione documentale assegnato all'interno di una organizzazione. La Responsabilità è strettamente connessa all'affidabilità professionale e alla possibilità di

esercitare un controllo sull'intero sistema sul quale il responsabile può esprimere valutazioni e imporre regole.

Reference

<i>Reference</i>	<i>Definition</i>
INTERPARES (IP2) - <i>Glossary</i>	<p><i>Competence</i> A sphere of functional responsibility entrusted to a physical or juridical person [General Dictionaries]</p> <p><i>Accountability</i> The obligation to answer for actions for which one is responsible [General Dictionaries] (http://www.interpares.org/ip2/display_file.cfm?doc=ip2_dictionary.pdf&CFID=4691685&CFTOKEN=25915577)</p>
DPR 445/2000 – Testo unico delle disposizioni legislative e regolamentari in materia <i>di documentazione amministrativa</i>	<p><i>Articolo 61 (R)</i> <i>Servizio per la gestione informatica dei documenti dei flussi documentali e degli archivi</i></p> <p>1. Ciascuna amministrazione istituisce un servizio per la tenuta del protocollo informatico, della gestione dei flussi documentali e degli archivi in ciascuna delle grandi aree organizzative omogenee individuate ai sensi dell'articolo 50. Il servizio e' posto alle dirette dipendenze della stessa area organizzativa omogenea.</p> <p>2. Al servizio e' preposto un dirigente ovvero un funzionario, comunque in possesso di idonei requisiti professionali o di professionalita' tecnico archivistica acquisita a seguito di processi di formazione definiti secondo le procedure prescritte dalla disciplina vigente.</p> <p>3. Il servizio svolge i seguenti compiti:</p> <p>a) attribuisce il livello di autorizzazione per l'accesso alle funzioni della procedura, distinguendo tra abilitazioni alla consultazione e abilitazioni all'inserimento e alla modifica delle informazioni;</p> <p>b) garantisce che le operazioni di registrazione e di segnatura di protocollo si svolgano nel rispetto delle disposizioni del presente testo unico;</p> <p>c) garantisce la corretta produzione e la conservazione del registro giornaliero di protocollo di cui all'articolo 53;</p> <p>d) cura che le funzionalita' del sistema in caso di guasti o anomalie siano ripristinate entro ventiquattro ore dal blocco delle attivita' e, comunque, nel piu' breve tempo possibile;</p> <p>e) conserva le copie di cui agli articoli 62 e 63, in luoghi sicuri differenti;</p> <p>f) garantisce il buon funzionamento degli strumenti e dell'organizzazione delle attivita' di registrazione di protocollo, di gestione dei documenti e dei flussi documentali, incluse le funzionalita' di accesso di cui agli articoli 59 e 60 e le attivita' di gestione degli archivi di cui agli articoli 67, 68 e 69;</p> <p>g) autorizza le operazioni di annullamento di cui all'articolo 54;</p> <p>h) vigila sull'osservanza delle disposizioni del presente testo unico da parte del personale autorizzato e degli incaricati.</p> <p>(http://www.parlamento.it/parlam/leggi/deleghe/00443dla.htm)</p>
DPCM 31 dicembre 2013 - <i>Regole tecniche</i>	<i>Responsabile della gestione documentale o responsabile del servizio per la tenuta del protocollo informatico, della gestione dei flussi</i>

<i>per il protocollo informatico – Glossario/Definizioni</i>	<i>documentali e degli archivi</i> Dirigente o funzionario, comunque in possesso di idonei requisiti professionali o di professionalità tecnico archivistica, preposto al servizio per la tenuta del protocollo informatico, della gestione dei flussi documentali e degli archivi, ai sensi dell'articolo 61 del D.P.R. 28 dicembre 2000, n. 445, che produce il pacchetto di versamento ed effettua il trasferimento del suo contenuto nel sistema di conservazione. (http://www.gazzettaufficiale.it/eli/id/2014/03/12/14A02099/sg)
	<i>Coordinatore della Gestione Documentale</i> Responsabile della definizione di criteri uniformi di classificazione ed archiviazione nonché di comunicazione interna tra le AOO ai sensi di quanto disposto dall'articolo 50 comma 4 del DPR 445/2000 nei casi di amministrazioni che abbiano istituito più Aree Organizzative Omogenee (http://www.gazzettaufficiale.it/eli/id/2014/03/12/14A02099/sg)
	<i>Responsabile della conservazione</i> Soggetto responsabile dell'insieme delle attività elencate nell'articolo 8, comma 1 delle regole tecniche del sistema di conservazione

Appendix 5. QUESTIONNAIRE



SURVEY ON RECORDKEEPING AND DIGITAL PRESERVATION POLICIES

This survey (developed for InterPARES Trust) explores the presence and the role of policies for recordkeeping and digital preservation in the organizations as part of a more general analysis of the legislation and the standards in the sector. The web-based survey is sent to the InterPARES researchers and to a group of private and public organizations in Europe with the aim of collecting information able to support a study dedicated to assess policies for recordkeeping and digital preservation and their mutual relations. The survey should take about 10-15 minutes of your time. Your responses will be kept confidential. The information you provide will be used only for statistical purposes supporting the objective of this research project.

*Required

1. IDENTIFICATION

1.1 Please specify the name of your organization *

1.2 Where is your organization based (please specify the country)? *

1.3 Select the profile that best matches your archival role: *

- Recordkeeper
- Digital preserver

1.4 How many staff members does the archives have? What are their positions and responsibilities? *

1.5 Who are the primary or exclusive users of the archives? *

- in-house staff
- records creator
- external collaborators
- students/scholars
- general public

1.6 What is the size of the digital archive? *

- < 500 GB
- 500 GB - 1 TB

- 1 TB - 10 TB
- 10 TB - 100 TB
- 100 TB - 1 EB
- > 1 EB

1.7 How many digital records does the archives manage each year? *

- < 100.000
- 100.000 - 1.000.000
- 1.000.000 - 10.000.000
- > 10.000.000

2. GOVERNANCE

2.1 Are there formal rules for defining, establishing and approving the record policies? *

- Yes
- No

2.1.1 If the answer to question 2.1 was "YES", which governance structures are in place allowing for the records policies within organizations to be implemented? (i.e. general manager, technical committee, archival service, ...)

2.1.2 If the answer to question 2.1 was "NOT", please specify how record/archives policies are defined

3. POLICY

3.1 What is the purpose of the policy? *

- records creation
- records keeping
- preservation
- documentary workflows
- access
- other

3.2 Are your policy available on the web? Please provide the link *

3.3 Which type of organization/group/people does the policy apply to? *
(i.e. research institute level, national/international level, specific community, ...)

3.4 What collaborative efforts (either internal, among units of the organization, or external, in collaboration with other organizations or teams of experts) are made to design and establish a policy *

3.5 Is the policy interoperable i.e. transferable/applicable to other organizations in any way?

- Yes
- No

3.6 Which standards have been used for the production of the policy? *

- ISO 14721 (OAIS model)
- ISO 15386 (Dublin Core)
- ISO 15489 (Records management)
- ISO 16363 (Audit and certification of trustworthy digital repositories)
- ISO 23081 (Metadata for records management)
- ISO 27001 (Security)
- ISO 30300 (Management systems for records)
- UNI 11386 (SInCRO - Italian standard for interoperability and preservation)
- Other

3.6.1 In case you answered "other" on question 3.5 please specify:

3.7 When was the policy approved? By whom? *

3.8 Are there specific policies for records published on the website or social networks (facebook, twitter, linkedin, etc.)? *

- Yes
- No

3.8.1. In case you answered "YES" on question 3.8 do they include:

- dedicated responsibility
- registration system
- specific workflow
- persistent identifiers
- other

3.8.2. Please feel free to provide more details

4. RECORDS PRESERVATION

4.1 What kind of records is preserved? *

- textual
- images
- audio
- video
- datasets
- dynamic databases
- linked data
- email messages
- application/program
- metadata
- websites
- social media
- other

4.1.1. In case you answered "other" on question 4.1, please specify

4.2 Are the records preserved according to a retention plan? *

- Yes
- No

4.2.1 Please specify the prevalent retention period of the records preserved in the repository *

- short term (up to 10 years)
- medium term (10 - 20 years)

- long term (more than 20 years)

4.3 Are there specific requirements and/or restrictions given in regards to the preservation activities? *

- electronic formats
- persistent identifiers
- metadata
- access
- other
- none

4.3.1 If there are specific requirements and/or restrictions, please provide more information

4.4 What is the relationship between the archives and the records creator(s)? * (i.e. are they collaborating in defining the requirements for the preservation, in increasing the documentation at the submission phase?)

5. RESPONSIBILITY AND POLICY ADHERENCE

5.1 Who is responsible for implementing a records/archives policy according to their specific nature? * (records creation, keeping or preservation)

5.2 Are there responsibilities assigned in the policy? If yes, which kind of professional profiles are in place? *

5.3 Are there any policy updating mechanisms in place? *

5.4 What are the procedures for ensuring that all the concerned parties are aware of, comprehend and apply the records/archives policy? Who checks if involved parties follow the guidelines/policy? What happens if they don't follow the policy? *

5.5 Who is responsible for records management and preservation? *

5.6 Are there any existing legal requirements for the policy, e.g. on a national layer? *

- legislation on the records creation
- legislation on the records preservation
- legislation on privacy/access
- none

5.7 Is the policy connected and integrated with a risk assessment document? *

- Yes
- No

5.8 To what extent do existing policies, procedures, and standards currently control or influence records creation, maintenance, preservation or use?

5.9 Who is responsible for auditing the implementation of the records/archives policy? *

6. OTHER INFORMATION

6.1 Please, feel free to give any other information which may be of relevance

6.2 Can you please provide more information on your policies?
(i.e. if available, the website where they are published)

Appendix 6. QUESTIONNAIRE REPLIES

	1	2	3	4	5	6	7	8	9	10
2.1.1 If the answer to question 2.1 was "YES", which governance structures are in place allowing for the records policies within organizations to be implemented?	The definition of rules (still under definition) is assigned to a working group. The final responsibility is of the director general of the University	Councilors of Culture and New Technologies are politically accountable; and Co-ordinator and Digital Archivist are technically accountable, according to our policy on digital records.	NATIONAL ARCHIVE IS THE RESPONSIBLE OF ESTABLISHING ARCHIVAL AND RECORDS MANAGEMENT POLICIES ALL OVER THE STATE.	The City Clerk has responsibility to establish information management, including archival, policies.	Records policies are designed and produced by the archivist. Policies related to records management are made in collaboration with IT staff, specially those aspects regarding technological platforms for the records management system.	A wide range of such structures effect us, including internal and external authorities.	Archival service.	Manager and Archivist Coordinator	The Records Management Department (RMD) is in charge of the definition, to proposal the approval and the implementation. SGDAP (RMD included) depends directly on the Mayor.	The University system has established general records schedules for all campuses. Campus records managers apply the schedules and develop campus level schedules if needed. The Wisconsin Historical Society gives guidance also as the main archival body for the state.
2.1.2 If the answer to question 2.1 was "NOT", please specify how record/archives policies are defined										
3.1 What is the purpose of the policy?	records creation, records keeping, workflows	records creation, records keeping, preservation, documentary workflows, access	records creation, records keeping, preservation, access	preservation, access	records keeping, preservation, access	records creation, records keeping, preservation, documentary workflows, access, other	records creation, records keeping, preservation, documentary workflows	preservation	records creation, records keeping, preservation, documentary workflows, access	records creation, records keeping, preservation, access
3.2 Are your policy available on the web? Please provide the link	not yet but the national legislation obliges the public administrations to make available the policy in the form of a manual of records procedures on the institutional area of the website	https://seguro.ca.rtagena.es/sede/electronica/docs/politica_gestion_documentos_el_electronicos.pdf	YES. find at: www.archivogener al.gov.co	Yes. http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=06db757ae6b31410VgnVCM10000071d60f89RCRD	No.	No.	Yes, it is. http://www.consob.it/main/amm_trasparenze/disposizioni/Manuale_di_gestione_v1.2.pdf	http://parer.ibr.regione.emilia-romagna.it/documentazione/manuale_di_conser vazione	General e-Administration Policy: https://seu.girona.cat/export/sites/default/dades/ordenances/_descarrega/ordenaca_adm_electr onica.pdf	https://www.wisconsin.edu/general-counsel/general-schedules-and-records-management-services/
3.3 Which type of organization/group/people does the policy apply to?	the e-government environment is involved	All municipality employees at all levels	All the public institutions (more than 11.000) without exceptions.	Municipal government.	Policies on records management and preservation are addressed to in-house staff. The access policy is addressed to anyone willing to consult ICCROM records.	all workers	National level	Specific community (Public Administrations and Health Care Centers)	All staff of the City Council.	University of Wisconsin System

	1	2	3	4	5	6	7	8	9	10
3.4 What collaborative efforts (either internal, among units of the organization, or external, in collaboration with other organizations or teams of experts) are made to design and establish a policy	the working group for the policy includes: the records management of the university, the director of the administrative services and the ICT service director. An expert (professor of RM at the University) is involved as consultant	Policy was defined in collaboration with our New Technologies Department	We work together the IT Ministry, Public Function Department, Transparency Secretariat of Presidency, and institutions of state control. We be part of international projects about Records Management (CIA Latin American Branch) and Eurosocial.	Archives policies are established in collaboration with - other units of the organization responsible for records management and information standards; - corporate information and technology staff for infrastructure; - other archival organizations, e.g., the Canadian Rules for Archival Description.	Units of the organization can be involved in designing policies, as well as external advice may be requested.	requirements come in, we create policy - they approve or not - we adapt.	Internal units.	Among units of the organization, in collaboration with other external team of experts, and Soprintendenza Archivistica di Emilia-Romagna	Mainly the IT Department, with the collaboration of General Secretary's Office of the City Council.	We have a System level records council that writes schedules cooperatively.
3.5 Is the policy interoperable i.e. transferable/appliable to other organizations in any way?	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No
3.6 Which standards have been used for the production of the policy?	ISO 14721 (OAIS model), ISO 15489 (Records management), ISO 16363 (Audit and certification of trustworthy digital repositories), ISO 23081 (Metadata for records management), ISO 27001 (Security), UNI 11386 (SInCRO - Italian standard for interoperability and preservation)	ISO 14721 (OAIS model), ISO 15489 (Records management), ISO 16363 (Audit and certification of trustworthy digital repositories), ISO 23081 (Metadata for records management), ISO 30300 (Management systems for records), Other	ISO 14721 (OAIS model), ISO 15489 (Records management), ISO 16363 (Audit and certification of trustworthy digital repositories), ISO 23081 (Metadata for records management), ISO 27001 (Security), ISO 30300 (Management systems for records)	Other	ISO 14721 (OAIS model), ISO 15489 (Records management), Other	Other	ISO 14721 (OAIS model), ISO 15489 (Records management), ISO 23081 (Metadata for records management), ISO 27001 (Security), ISO 30300 (Management systems for records), UNI 11386 (SInCRO - Italian standard for interoperability and preservation)	ISO 14721 (OAIS model), ISO 15386 (Dublin Core), ISO 15489 (Records management), ISO 16363 (Audit and certification of trustworthy digital repositories), ISO 23081 (Metadata for records management), UNI 11386 (SInCRO - Italian standard for interoperability and preservation)	ISO 15489 (Records management) Other:	Other
3.6.1 In case you answered "other" on question 3.5 please specify:		ISO 26122, Spanish Interoperability Technical Standards (NTIs), UNE 139803:2012. Requisitos de Accesibilidad para contenidos en la web.	Colombia has adopted many other Standards. Find at: www.archivogenera.gov.co	None.	InterPARES recommendations and outcomes.	Government required policies	ETSI TS 101 533-1 (Electronic Signature and Infrastructures ESI; Data Preservation Systems Security; Part 1: Requirements for Implementation and Management) ETSI TS 101 533-2 (Technical report, Electronic Signatures and Infrastructures ESI; Information Preservation Systems Security; Part 2: Guidelines for Assessors) ICA - ISAD (G): General International Standard Archival Description LTO4 (standard open; è tecnologia di storage di dati su nastro) SAML (Security Assertion Markup Language) SQL (Structured Query Language)	Spanish Technical Interoperability Standard for E-Document Management Policies http://administracionelectronica.gob.es/pae_Home/doc/mentos/Estrategias/pae_Interoperabilidad_Inic_ement_Policies_Interoperability_Standard_NIF_Spain/e-Document%20Management%20Policies%20Interoperability%20Standard%20NIF%20Spain.pdf	We adhere to state law, federal retention requirements, and professional organization standards for retention of records related to accredited programs (i.e. American Speech and Hearing Association)	

	1	2	3	4	5	6	7	8	9	10
3.7 When was the policy approved? By whom?	still under definition: the director general and the Senate will be in charge for the formal approval	January 2015, approved by the City Council	The policies approved by Ministry of Culture and Boards of Directors of National Archives of Colombia, which is led by its General Director.	Policies are approved at various times. Approval is dependent on the nature of the policy. Examples: - the Archives Acquisition Policy was approved by City Council in 1999; - the Wireless Internet Access Policy was approved by the City Archivist.	The records management and preservation policies are still in a drafting phase. The access policy is under the process of approval.	2009 or so. Government.	June, 2014. Board approving by proposal of archival service.	October 2014 by the Manager December 2014 by AGID (Agenzia Italia Digitale)	General e-Administration Policy: 2011-04-18 by the General Assembly of Girona City Council Digital Records Policy (under revision): 2007-04-09 by Committee Government Operational Policies on specific decision records: 2013 and 2014 by Committee Government	UWS Board of Regents 2008
3.8 Are there specific policies for records published on the website or social networks (facebook, twitter, ...)?	No	No	Yes	No	Yes	No	Yes	Yes	No	Yes
3.8.1. In case you answered "YES" on question 3.8 do they include:			dedicated responsibility, registration system				dedicated responsibility, registration system	specific workflow, other		
3.8.2. Please feel free to provide more details							The specific policies include a unique register number of archive log for records published on website.	Guidelines for the creation and the metadata description of different kind of records (http://parer.ibc.regione.emilia-romagna.it/documentazione/documentazione)		
4.1 What kind of records is preserved?	textual, images, datasets, email messages, metadata, websites	textual, images, audio, video, datasets, dynamic databases, metadata	textual, images, audio, video, datasets, email messages	textual, images, audio, video, datasets, metadata, websites	textual, images, audio, video, datasets, dynamic databases, email messages, application/program, metadata, websites, social media, other	textual, images, datasets, email messages, application/program, other	textual, images, datasets, email messages, application/program, metadata	textual, images, audio, video, datasets, email messages, metadata	textual, images, audio, video, datasets, metadata, websites	textual, images, audio, video, datasets, email messages
4.1.1. In case you answered "other" on question 4.1, please specify			Currently we are working on metadata, websites and social media preservation.		Drawings / plans	All relevant content			Websites are preserved by National Library of Catalonia, by agreement with the City Council.	
4.2 Are the records preserved according to a retention plan?	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
4.2.1 Please specify the prevalent retention period of the records preserved in the repository	long term (more than 20 years)	long term (more than 20 years)	long term (more than 20 years)	short term (up to 10 years)	long term (more than 20 years)	long term (more than 20 years)	long term (more than 20 years)	long term (more than 20 years)	short term (up to 10 years)	long term (more than 20 years)
4.3 Are there specific requirements and/or restrictions given in regards to the preservation activities?	electronic formats, metadata, access	electronic formats, persistent identifiers, metadata, access	electronic formats, persistent identifiers, metadata, access, other	electronic formats, metadata, access	none	access, other	electronic formats, metadata, access	electronic formats, metadata, access	electronic formats, metadata, access	other

	1	2	3	4	5	6	7	8	9	10
4.3.1 If there are specific requirements and/or restrictions, please provide more information	the Italian legislation in this area is very detailed (recently approved in 2013)	Standardized formats, preservation planning, including watchers to automatically check sets of rules to detect problems, security and access restrictions with a high level of granularity, use of the national metadata schema for recordkeeping. Particularly, conformance with the National Framework of Security and the National Framework for Interoperability, as well as Interoperability Technical Standards	Colombian Government has approved recently regulations about digital preservations besides to adopt ISO standards.	The metadata standard established by the Canadian Rules for Archival Description is required. Formats are set for digital images. I do not know the specific requirements and/or restrictions for online access to unusual digital content, e.g., large files, large images (photos, drawings, maps).	Preservation actions still need to be implemented.	Numerous and voluminous requirements.	Not cryptography system for the document. Principal metadata must be defined.	the Italian legislation about recordkeeping and digital preservation is very detailed since 2000 and recently updated (2013 - 2015)	The electronic formats accepted by the City Council, the metadata for preserving and managing records and the level of restriction to their access and interaction are defined by the RMD in collaboration with the IT Department.	The State has strict rules on personally-identifiable information
4.4 What is the relationship between the archives and the records creator(s)?	the director of the archival sector is involved in the policy but the cooperation is not very active, at the moment	Since the New Technologies Department has the control over all the creation systems in the city, we only have relationships with this Department	We provide to them regulations, guidelines, standards, training, and we monitor and supervise its practicals and compliance regulations. We also can punish with fines to all publics institutions if they don't comply with our regulations.	Indirect. Archives staff generally work through the retention schedules and records management staff (in the case of government records) and with donors directly (who are sometimes also creators) for private records.	In general, records creators are consulted and involved in records management issues. They are less involved in preservation aspects.	creators are responsible - organization as a whole is responsible.	Strong collaboration in defining the requirements and records creation rules for the preservation.	Defining the requirements of record submission and increasing the documentation, coordination of the whole process.	RMD defines the policies, but records creator give the information needed for a better knowledge of the functions, transactions and records, and also of the specific legal regulations.	We play catch-up most of the time due to staff limitations.
5.1 Who is responsible for implementing a records/archives policy according to their specific nature?	the director general of the University with the support of the director of the RM service	Counsilors of Culture and New Technologies: responsible for implementation of the policy in all the departments. Head of each department: responsible for implementation in his/her department All the employees: responsible according to their duties Archives and New Technologies Department: responsible for systems design, creation, keeping and preservation	The policies must be implemented by archival institutions, archivists and record managers, and also all staff.	I don't understand the question.	The archivist, in collaboration with the records creator.	all workers	Records creation and keeping.	Archivist coordinator	The Records Management Department and the IT Department.	University archivist

	1	2	3	4	5	6	7	8	9	10
5.2 Are there responsibilities assigned in the policy? If yes, which kind of professional profiles are in place?	yes: a professional should be in place, even if - at the moment - the person in charge has not a formal qualification (but a strong experience in the field)	Yes. See above	first to highest management level, secondly to all staff and finally to archivists and records managers.	Some policies have specific responsibilities assigned. Published policies are directed to members of the general public and as such do not generally make reference to professional profiles.	The policy for records management assigns responsibilities to: All Personnel, Office/Department/ Programme Head, Records Centre and Historical Archives staff, Governance.	all workers - plus special positions identified by government.	Yes, there are. IT and records management profiles.	Yes, the Policy defines and assigns a specific responsibility in charge of a qualified archivist with a strong experience in the field	The responsibilities are defined on the departments, not for a specific professional profile. However, the Catalan Law of Archives and Records Management obliges that the administrator of a RMS (or ERMS) must be an archivist/records manager.	Archivist is required to hold MLS
5.3 Are there any policy updating mechanisms in place?	yes: each 2 years the policy has to be revised	Yes. It will be periodically reviewed	Yes, thought the advice councils of archives (37) distribute in several regions of the country. In addition, there are Committees conformed by experts, who are in-charge of analyzing best practices comes from developed countries and ISO; there are mechanisms for interested persons to participate in then update our standards (transparency) through the website.	Yes. The policy development framework is established by Toronto's Municipal Code, chapter 217 [http://www.toronto.ca/legdocs/municipal-code/1184_217.pdf].	Not exactly. The draft policies recommend to be updated every 2-4 years.	Yes	Yes, there are. In general it depends on updating system and records management.	No, the policy is subject of periodical revision in case of necessity	General e-Administration Policy no.	Sunset law for schedules
5.4 What are the procedures for ensuring that all the concerned parties are aware of, comprehend and apply the records/archives policy? Who checks if the parties follow the guidelines/policy? What happens if they don't follow the policy?	a training initiative will be developed; the archival Agency (Soprintendenza archivistica per il Lazio) is formally in charge to verify the compliance of the policy from a general point of view. Within the obligation to follow the policy will be verified by the central administration and the staff in charge of the RKS	There is not a disciplinary procedure. Simply, if records do not accomplish the rules defined by the Archives, this does not accept them.	National Archives of Colombia monitor and supervise public institutions archival practices to verify compliance regulations and punish with fines to all public institutions if they don't comply with our regulations. We have a department in charge of this responsibility.	Responsibilities for comprehending and applying records/archives policies are set out in the Information Management Accountability Policy [http://www1.toronto.ca/City%20Officers/Corporate%20Information%20Management%20Services/Files/pdf/IMAP%20Version%201.pdf].	Policies are distributed as Administrative Circulars to all staff. The office that has originated the policy should verify if it is followed by parties. No penalties apply in case the policy is not followed.	Lots of questions in one. Training, periodic awareness, the people are asked to ask questions - scenario-based training with verification. Every one is checked by periodic processes - audits - testing - etc.	The Manual with formal approval and internal distribution and training. Samples control for applying policy, without other actions.	Specific practical activities for checking the following of the policy	Communication with each head of department is very important, mainly for approved decisions. However, training the staff is absolutely indispensable.	None, we'd like to create some
				Implementing information management policies is a responsibility shared by the City Clerk's Office with heads of business divisions and the Chief Information		Don't follow policy you are fired and/or arrested.			The City Council has a unique RMS, so to do audits is not complex. The RMS is at the same time the platform to manage administrative workflows. So, it is not possible to get an approval in a process if the policy is not followed. Another very effective control is the acceptance or not transfers o disposal of records.	

	1	2	3	4	5	6	7	8	9	10
5.5 Who is responsible for records management and preservation?	the responsible for the specific service	Archives and New Technologies Department	The Division of Heritage Documentary who is supported by IT Division.	Implementing information management policies is a responsibility shared by the City Clerk's Office with heads of business divisions and the Chief Information Officer (Information and Technology Division).	The archivist.	every creator and those with repositories.	Administration and IT Officer.	Management and archivist coordinator	RMD with the collaboration of IT Department.	University Archives
5.6 Are there any existing legal requirements for the policy, e.g. on a national layer?	legislation on the records creation, legislation on the records preservation, legislation on privacy/access	legislation on the records creation, legislation on the records preservation, legislation on privacy/access	legislation on the records creation, legislation on the records preservation, legislation on privacy/access	legislation on the records preservation, legislation on privacy/access	none	legislation on the records creation, legislation on the records preservation, legislation on privacy/access	legislation on the records creation, legislation on the records preservation	legislation on the records creation, legislation on the records preservation, legislation on privacy/access	legislation on the records creation, legislation on the records preservation, legislation on privacy/access	legislation on the records preservation, legislation on privacy/access
5.7 Is the policy connected and integrated with a risk assessment document?	No	No	Yes	No	No	Yes	No	Yes	No	No
5.8 To what extent do existing policies, procedures, and standards currently control or influence records creation, maintenance, preservation or use?	they should be very important specifically with reference to the digitization processes	Policy has been designed with this aim, although it is too recent to know results	To all publics institutions, private organizations, and in any cases officials and citizens.	Difficult to answer this question. For example, most digital records are created using applications from the Microsoft Office Suite, however there is no standard that requires records to be created in such formats. An approach to assessing implementation at the level of business division is in development.	The implementation of policies is going slowly.	The policies identify them, procedures carry them out, standards guide implementation.	A good extent.	The policies and procedures have an impact on the all of activities of City Council. It is not possible to create records out of the RMS, thus, creation and maintenance is reasonably under control.	We try to adhere to our schedules, but don't have the staff to do much training.	
5.9 Who is responsible for auditing the implementation of the records/archives policy?	The Soprintendenza archivistica per il Lazio (Ministry of cultural heritage)	Councilors of Culture and New Technologies. They delegate in Archives	National Archives of Colombian has the exclusive function of monitoring compliance with the legislation through the Subdirectorate of National Archives, along with the Regional Councils Archives (37 established)	There is no specific audit responsibility established. As noted above, implementation of appropriate policies is a responsibility shared by the City Clerk's Office with heads of business divisions and the Chief Information Officer (Information and Technology Division).	The archivist. No external body is responsible for this.	Internal and external audits are done periodically by policy-identified parties..	Archival service.	Management and archivist Coordinator	Records Management Department.	No one

1	2	3	4	5	6	7	8	9	10
6.1 Please, feel free to give any other information which may be of relevance	We have just issued our policy. We do not have enough data yet, but we will be glad to provide more information when available.	We publish technical guidelines to facilitate the implementation of the policy, which is available on the website in digital format. We work with national standardization body to standardize international standards for records and document management. The Direction of E-governmet is following our regulations to apply them into maturity model of Colombian electronic government policies.	Note that the Archives program is separate from the Records Management program at the City of Toronto. Where possible, the preceding responses refer to the Archives program specifically. Where that was not possible, a broader context has been used to respond.			It is relevance for defining an efficient preservation policy, the applying of a records continuum approach in the entire life cycle of archives and records. However this applying has success if it is implemented by a project management approach in order to cobine several disciplines of records management.		We start to have some problems with the use of some external platforms used in collaboration with other Public Administrations. Normally, these platforms are maintained by the superior level of Public Administration according their competences.	In these cases the local administration is a bit "unprotected", because not always the policies have the same objectives, and worst, they have not been published.

Appendix 7. MATURITY MODEL

DATA				
Survey on Recordkeeping and Digital Preservation Policies - Responses 2015				
#	Organization	Country	Score	Maturity level
1	Sapienza University of Rome	Italy	5,7	4
2	Ayuntamiento de Cartagena	Spain	6,0	4
3	City of Toronto	Canada	5,5	4
4	NATIONAL ARCHIVES OF COLOMBIA (ARCHOVO GENERAL DE LA NACION)	Colombia	6,9	4
5	ICCROM	Italy	4,8	3
6	FCA	USA	5,4	3
7	CONSOB Commissione Nazionale per le Società e la Borsa	Italy	6,5	4
8	Regione Emilia - Romagna; IBC ParER - Polo Archivistico Regione Emilia Romagna	Italy	6,3	4
9	City Council of Girona	Spain	6,3	4
10	University of Wisconsin-Whitewater	USA	5,0	3
STATISTIC DATA				
64% => High maturity level (level 4 and 5): Excellent and Consolidated organization.				
36% => Good maturity level (level 3): Standardized organization.				
The survey can represent a statistic sample (80-20 rule) for a group of 50-60 international organizations, with a geographical distribution between UE (64%) and America (36%).				
In particular: Italy (37%), Spain (27%), North America (27%), South America (9%).				
READING DATA				
These organizations can be considered stakeholders for this survey on recordkeeping and digital preservation policies. This is due to the fact that organizations without written policies on these topics tend not to respond to the survey questions.				

METODOLOGY						
Recordkeeping and Digital Preservation Policies Maturity Model (Tab.1)				Saaty semantic scale (Tab.2)		
	Level	from	to	Small description	Scale	Small description
	1	0	1,8	INITIAL	1	NEUTRAL
	2	1,81	3,6	SYSTEMATIC	3	WEAK
	3	3,61	5,4	STANDARDIZED	5	ESSENTIAL
	4	5,41	7,2	CONSOLIDATED	7	STRONG
	5	7,21	9	EXCELLENT	9	FULL
					2,4,6,8	Intermediate values
<p>The Saaty semantic scale (Tab. 2) is used for defining the evaluation of responses and survey questions. For simplifying the intermediate values of scale are unused. These values are combined with each other to identify the Score of Organization.</p> <p>The score is compared with the range of Maturity model (Tab. 1) to define the maturity level of Organization. <i>Range interval = scale nr. / level nr. = 9 / 5 = 1,80.</i></p>						