



European
Commission

INSAR
Information Summary on Archives

EUROPEAN
ARCHIVES
NEWS

SUPPLEMENT VII

Proceedings

of the DLM-Forum 2002

**@ccess and preservation
of electronic information:
best practices and solutions**



Barcelona, 6–8 May 2002

EUROPEAN
ARCHIVES NEWS

INSAR

- Secretariat-General of the
European Commission
- Editorial Committee
Supplement VII:
Peter BERNINGER
Frank BRADY
Hans HOFMANN
Jef SCHRAM
- For further information:
European Commission
Tel. (32-2) 29-50557
(32-2) 29-56721
Fax (32-2) 29-61095
E-mail: archis@cec.eu.int
Address: rue de la Loi 200
Office: JECL 3/35
B-1049 Brussels

Proceedings

of the

DLM-Forum 2002

**@ccess and preservation
of electronic information:
best practices and solutions**

Barcelona, 6–8 May 2002

A great deal of additional information on the European Union is available on the Internet.
It can be accessed through the Europa server (<http://europa.eu.int>).

Cataloguing data can be found at the end of this publication.

Luxembourg: Office for Official Publications of the European Communities, 2002

ISBN 92-894-4415-0

© European Communities, 2002
Reproduction is authorised provided the source is acknowledged.

Printed in Italy

PRINTED ON WHITE CHLORINE-FREE PAPER

Maria Guercio

Maria Guercio entered the National Archives in 1978 and worked for almost 10 years in the Soprintendenza archivistica of Rome, particularly in the area of business archives, municipal archives and the record-keeping system.

In 1987 she joined the Central Office of Archives and worked in the Research Department for descriptive standards. In 1992 she was the Director of the International Service for the Ministry for Cultural Heritage. In 1994 she worked in the Office for the Archival Automation and Electronic Records, then — in 1996 — as the person responsible for the international activities of the National Archives, with special reference to the European Union and the Council of Europe. Since 1996 she has been part of the Commission, working on the new Italian legislation for electronic records management.

Since 1988 she has been the Italian representative and since 1990, also the Secretary (and Chairman in 1995–1996) of the ICA Committee on Current Records. In 1996, she was a member of the ICA Commission for Programme Management. She taught courses on electronic record-keeping system at the University of Macerata (1993–99) and at the University of Rome (1995–98)

In 1998 she joined the University of Urbino as Associate Professor in archival science and electronic records and since 2001 she has been full professor at the same university. She is Director of the Urbino Institute for Archival and Librarian Science and the Chair of

Records classification and content management: old functions and new requirements in the legislations and standards for electronic record-keeping systems

Maria Guercio

Records management and content management: overlapping and convergence

A long introduction would be necessary to discuss the potential that technological innovation offers to those designing record-keeping systems, with reference to the tools improving and qualifying information (classification, metadata and content management (1)). Because of the time available for my presentation, I will simply comment on the duplicity and ambiguity of the topic I'm going to cover, on the potential supports to the decision-making process and also the risks of improper use of concepts and tools that was defined by experts as 'another casualty of consulting faddism, much as did business process reengineering (BPR) or total quality management (TQM), which, in many cases, did not deliver sustainable value to customers' (2). The main purpose of this contribution is participating in the debate on a possible prospective interaction and cooperation between information-science practitioners and record-keeping system practitioners with particular attention paid to the drawing up of national and international standards and guidelines.

The thrust towards a qualified content management by the various stakeholders in the computerisation process, software houses in particular, has a twofold meaning: on the one hand it is a significant opportunity for innovation and improvement of traditional functions not supported by old technologies, in this way the record systems (as deposits rich in information content fully and immediately re-available) are placed at the centre with a strategic role in the ongoing process of change; on the other hand it implies (typically present in a transition stage where information specialists are dominant and preservation specialists are marginalised) the risk of:

- losing the notions of record archives, record structures and relations (structure, context and legal function of documentary objects and their aggregations) in favour of an indistinct and disqualified 'information' dimension, leading to numerous attempts of codifying and identifying structured content by using 'automated, algorithmic and data driven techniques' (3);
- renouncing the complexity of stable and significant relations which are created, maintained and communicated between the decision-making process and its evidence in a traditional record-keeping system;
- perpetuating the marginality of a specialised professional role among the useful or even necessary investments to be carried out in the current management activities: traditionally this professional role was active at the end of the record producing chain, while in the digital environment it should be present at the phase of conception and the design of the records system itself.

In this context, with these potentials and limitations, new attention has been drawn on new tools and ways to handle records and on the active roles that archivists and record managers have during the production process of documentary sources. Caution and innovative intelligence must guide the record-keeping professions over this period of change, which is both exciting and contradictory, characterised by inter-professional contaminations and continuity of traditions. Paul Browning and Mike Lowndes state 'We are all hybrid now', in an interesting essay (4) on the integration of library management systems (LMS) and content management systems (CMS). A similar expression can be used in the archival community to describe the state of research on record management system (RMS). In order to obtain real progress however, with the aim of integration, it is necessary that borders are clearly set, complementarities granted and strengthened and confusion avoided. It is especially important that records systems are designed, developed and subsequently acknowledged as structured systems of contents, relations and metadata, functional to specific purposes targeted towards record production and management and not for a generic need for content retrieval.

(1) The term used in specialised texts is knowledge management, defined as a 'system and managerial approach to collecting, processing, and organising enterprise-specific knowledge assets for business functions and decisions'. Data mining and text mining are considered two sub-sectors, strictly linked to classification tools for record information and advanced research functions.

(2) Hsinchun Chen, *Knowledge management systems — a text mining perspective*, Tucson, The University of Arizona, 2001, p. 3.

(3) *Ibidem*, p. 4.

(4) 'Content management systems: Who needs them?', in *Ariadne issue*, 30 (20 December 2001), <http://www.ariadne.ac.uk/issue30/techwatch/intro.html>

The document and record-management facilities are included in CMS, but they are understood and described as low-level and limited-use facilities (imaging, filing, archiving). On the contrary in information science literature, the activities of record attribute definition based on specific typologies, preparation and use of classification plans, indexing and retrieval are erroneously considered only in terms of CMS facilities to be developed from scratch. Actually, even though not so frequently in the private sector, document management systems in digital environments often include — and they should do more in the future — the advanced use of classification and indexing systems, they are recently enhanced thanks to sophisticated IR tools (controlled dictionaries, thesauri, etc.).

The first aspects to clarify are the unique features of content-management systems and particularly the characteristics and specifications of their information-retrieval function which enables a real enhancement of the purposes of the — traditional or revised — classification systems envisaged in record management systems.

CMSs, more than being a technology or a specific product, identify a set of activities or, more recently a set of software products, aimed at organising the contents of an information system (not necessarily a documental system) in a digital environment to grant interoperability (in terms of retrieval and reuse of contents) between systems or heterogeneous parts of the same system. The favoured environment is the web and the specific objectives are:

- the development of conditions guaranteeing the reuse and integration of information from different origins;
- efficient information retrieval;
- maintenance of contents and structures of the information system;
- user-friendliness: content production, organisation and reuse must take place through automatic capture and preservation of all metadata indispensable for a correct management of the system over time.

CMSs were originally focused on the development of web interfaces. Today they are looked upon with growing interest as tools able to manage and qualify the whole information system of an organisation or a network of organisations. Their overlapping with electronic record management systems (ERMS) is an often unavoidable but not necessarily negative event, especially when it gives rise to (not to be taken for granted) guided and aware processes of mutual recognition, integration and convergence.

The first step in this direction implies the analysis and assessment of ERMS tools, in particular those tools constituting the functional requirements of a record system and which promoted the transition towards electronic management systems: univocal identification and systematic organisation of records according to functional classification and filing principles.

Some preliminary remarks are necessary here.

- Information systems and record systems are integrated resources. They are difficult to differentiate during the creation stage, but more and more differentiated during the following maintenance and preservation processes when they constitute the archival memory of the creator.
- The growing interaction (real coincidence from the time point of view) between record production and record communication (i.e. publication on the web, development of company's intranets and cooperative work) entails (without any further thrust within the professional community) the risk of a process resulting into undifferentiated and flattened products, loss of quality vis-à-vis the speed of communication bordering on immediateness.
- Content versioning, content integration and process workflow tools are indispensable but not sufficient requirements both for content management programmes and record management systems, especially in digital environments.
- Electronic record systems imply the adoption of all basic elements of a CMS ⁽⁵⁾, i.e. preparation of pre-defined approaches to record typologies ('template-based self-service authoring for

*the graduate courses for cultural heritage preservation. She has been the coordinator of the Italian Group within the InterPARES project for the preservation of electronic records and Research Director of the Italian partnership within the NARA-NPACI-Supercomputer Centre project for the preservation of archival persistent objects. She is also consultant for the archives for the Italian Authority for the Information Technologies in the public sector and the author of many articles and essays. These two projects have been funded by the National Archives, the National Council on Research and the Ministry for Universities (ITL 300 000 000 and ITL 200 000 000). She is Technical Director of the research project for the definition of a standard for electronic record-keeping systems at the High School of the Public Administration. She published many articles and books, particularly the *Manuale di archivistica informatica* (Roma, Carocci, 2001).*

⁽⁵⁾ *Ibidem*, p. 9.

(⁶) For quite some time now companies, which are centres of excellence in the sector of document management, have improved and developed traditional search facilities by using tools adopted by KM systems too.

- non-technical content providers'), 'roles-based security, workflow management (submit, review, approve, archive), integration with existing data/databases and user authentication systems, metadata management, flexible output — write once, publish many times'.
- The use of XML as the communication and sharing meta-language is now generally accepted, although remarkable investments are necessary to reconvert legacy contents and because of the lack of market tools to produce XML contents.
 - This impulse towards convergence of record resources leads to the need to carry out a twofold process. On the one hand the specialisation and improvement of traditional record management tools and on the other the development of software systems or programmes focused on content integration: 'e-portal, document-management, groupware, workflow, data warehousing, search engine, web-based training, and messaging e-mail' (⁶).
 - In the context of record management functions and activities, archival classification (if adequately developed) is an advanced tool closer to knowledge management than information management, because of the complex syntactic, semantic and functional analysis it requires.

The challenges of ICT and the roles of standards and guidelines: from machine-readable records to machine-understandable records

The most demanding challenges are still unanswered. This is due to the delay of archivists, the neglect of administrators and the carelessness of ICT experts for the traditions and tools of record-keeping. The development of standards for the electronic record-keeping is certainly able to support the evolution of information systems in the direction set by e-government programmes. However technical and technological solutions must be based on the identification of qualified and defined responsibilities and dedicated centres able to face the complexity of an ever more demanding and rapid communication.

The paperless office, based on the immediate application of information technologies proved to be an unattainable dream. It did not take into account the intrinsic properties — now and in the future still insurmountable — of paper production, the lack of computer skills of employees and inadequacy of technologies that only recently appeared to provide mature solutions in terms of imaging, workflow, computerised circulation, etc. Today an office-with-less-paper is possible and desirable (and perhaps indispensable). Especially an office with a higher quality and rationality in the organisation and use of record information made available by the use of state-of-the-art information technologies to supplement the work of educated and skilled human resources.

The development of the Internet and the increasing creation of web-oriented information and services have drawn attention, aroused energies, attracted investments on the need to have significant, non-redundant, easy to identify and use digital contents (documents and reference structures) in an automatic mode too. This is the case for example of the maintenance and preservation of record materials generated in newsgroups and related e-mail systems and of the advanced management of information-rich reports and memoranda that can be a valuable resource if organised by text-mining methods. Solutions are not always consistent with the archival nature of the materials, nor are the archivists or record managers adequately involved in computerisation processes, neither are they able to provide consultancy vis-à-vis the complexity of the question. Yet this is one of the most significant problems to be solved.

In many contexts and sectors the non-sufficient or absent quality of available contents is one of the most important reasons why the market for electronic document management systems (EDMS) and electronic record management systems (ERMS) is backward compared to other sectors of ICT, and this is also why record-keeping functions find it difficult to draw the attention of public and private top managers. This extant culture gap is linked on the one hand to a misunderstanding of the contribution that new technologies can offer to the full development of record information systems to the creator, on the other hand to the insufficient supply of integrated technological and organisational solutions by different technical stakeholders (archivists and information-scientists). The hope to skip some stages thanks to the use of more mature technologies able to replace the daily work of rationally and systematically ordering the information produced or received by organisations is just a delusion. This is proved by the limited results obtained by projects to develop self-organised, self-updated, self-explanatory information systems, specifically in

the web environment. They can be useful as initial filters for the maintenance of large quantities of information but are inadequate to meet the original and still essential needs of collection and typical use of record systems.

The improved performance and availability of telematic networks can be translated into a real wealth of content or rather knowledge, if new application products and their implementation consider the typical problems of recorded information (identification of documents and their structures, i.e., semantically and functionally relevant essential elements, recognition/reconstruction of stable and rational relations, administrative record flow management, primary and secondary responsibility management, indexing and functional retrieval). There is no new thing under the sun. However some technological solutions are new and promising and so is also the awareness — found in some national laws and in the guidelines of the European Union — of the need to define minimal functional requirements on the basis of acquired knowledge and experiences.

The development of XML and DTD formats for the maintenance of document typologies, maintenance of metadata and their automatic use, appears to be an innovation that is going to play a strategic role in interoperability over time and space. The obligation of exchanging record information by means of XML formats and the use of shared profiles is for example envisaged by the Italian legislation setting the minimal requirements for electronic management of documents (dpr 445/2000 and dpcm, 31 October 2000). The Australian legislators together with the professional communities have worked with determination to develop a real theory for archival metadata and to draw up record management standards. In February 2001 the European Union funded a study that is going to be very useful in guiding the computerisation projects of record systems.

Some operational questions have therefore found answers in terms of management and technological solutions, in fact it is generally recognised that:

- record systems must always be organised in compliance with minimal functional requirements;
- record-keeping systems must be consistent with the nature of the objects they keep and must enhance the potential for their integrated use, for example by organising metadata (?) in a system of structured information and using the potentials of the web to guarantee both the production and keeping of indispensable hierarchical administrative or documental relations and the new hypertextual links (8);
- when there are no controls, rules and procedures to produce record resources, and this is frequently the case in public organisations too, methods and tools must be developed for subsequent automatic retrieval of the metadata necessary for the keeping, maintenance and retrieval of the necessary information. This can be done through a theory on archival metadata to be developed on the basis of the work already carried out by some international projects (9). The theory should promote the identification of the nature and structure of record systems and their attributes, describe their functional maintenance, define methods and procedures for the preservation both of record contents and metadata for their critical interpretation over time and space.

These promising yet preliminary developments imply an advanced analysis of the archival functional requirements necessary to manage archival digital resources and their continual revision in the light of technological innovations, which is much needed for standardisation purposes too.

Content management in an electronic record subsystem: the innovative role of archival classification

Such a complex analysis on wide-ranging issues and objectives risks producing more or less exhaustive lists of minimal conditions and requirements, which are of no real use. At this transition stage of confusion and uncertainty, attention should be focused on the inclusion of any type of facilities and functions.

The proper creation and maintenance of record resources in digital environments minimising the risks of loss and manipulation and guaranteeing their enjoyment by the users, require a real organisational strategy based on some essential functions translated into a structured set of metadata.

(7) The archival community is discussing with attention the issue of metadata and recognises (always) the necessary and unquestionable role of structured and semi-structured information for the existence of archival systems. However it is necessary to remember — as recently stressed by Margaret Hedstrom — that 'Metadata are expensive to create, capture and manage and organizations are unlikely to adopt metadata frameworks unless direct benefits can be demonstrated', 'Record-keeping metadata. Presenting the results of a working meeting', *Archival science*, 2001, 1, p. 247.

(8) From this point of view, indications are provided by the MoReq study on database technologies adequate to support the management of highly structured information, which however is only a small portion of the record production of an organisation. Today organisations tend to produce mainly e-mail messages and their attachments, spreadsheets, digitised images of paper documents, electronic microfilms, sound records, etc. Sector studies have now proved that if the software is able to recognise the contents of a document, file or archives and if these contents can be identified and maintained with a consistent and systematic approach, many activities can be carried out automatically with a quality exceeding that of the manual work of skilled professional operators.

(9) Compare the results of the project conducted by the Australian Government, Australian Government Locator Service (http://www.naa.gov.au/record-keeping/gov_online/agls/summary.html) and the indications provided by the European Moreq project, 'Model requirements for the management of electronic records' (<http://www.ispo.cec.be/ida>). Also remarkable is the proposal of ISO standards reference model for an open archival information system (OASIS) for the protection of airspace archives and data systems with the aim of providing methodological guidelines to the permanent or long-term preservation of digital information starting from the functional maintenance of necessary metadata.

⁽¹⁰⁾ In Canada, Australia, Italy, Germany, countries of northern Europe, for example, innovative experiences have been launched in this sector. However it is difficult or at least complex to verify and discuss the outcome of these experiences to lay the foundations for the definition of international standards. Even the most important international conferences neglect these issues as shown by the recent European Conference in Florence or the presentations at the Congress of the International Archives Council held at Seville.

⁽¹¹⁾ Since documentary products are tools for the preservation of memory, from ancient times on the problem of rationally organising, with method, these products has been dealt with. However it is it is mainly in modern times, with the growth of complex administrative and documentary systems, that renewed attention and more sophisticated tools have been devoted to the issue. 'The arrangement of things and notions is needed ... both to find, and preserve and convey' wrote F. Bacon at a time of great development of human knowledge when logical systems to preserve memory were needed in all sectors. F. Bacon, *Scritti* (a cura di Paolo Rossi), Turin, Utet, 1975, p. 262. It is certain that memory preservation is possible only through an organising process, although only recently information scientists appear to have acquired this awareness.

⁽¹²⁾ Regarding Italy, see for example, the results of the census carried out by the Central Office for Archival Heritage by Anai on the production, management and preservation systems of electronic documents. The census, conducted on a sample of 16 organisations, showed the lack of control on electronic production of documents and the high level of dispersion. cf. M. Guercio, *La conservazione a lungo termine di documenti elettronici: la partecipazione italiana al progetto InterPARES*, in 'Archivi per la storia', 2001, 1–2, pp. 283–306. Similar remarks can be found — regarding the Australian community — in the essay by Adrian Cunningham, 'Six degrees of separation: Australian metadata initiatives and their relationships with international standards', *Archival science*, 2001, 1, pp. 271–283.

In particular the following elements are of paramount importance and require investments during the design stage or in case of retrospective retrieval:

- univocal and certain identification of records (registry system);
- formal maintenance of the relating information content (identification and management of document typologies and profiles through the management of metadata frameworks);
- organisation/sorting of record materials by managing context and relation information (classification and file system metadata).

Under these circumstances the classification system widely, although not always properly, developed for paper systems is a very important tool. Often information scientists, and archivists too, have underestimated its role either believing that the basic search functions of electronic systems would suffice or, as many archivists did, ignoring the need for innovation of traditional tools in a stage of enormous technological progress. Only in the last few years people have become aware of the need to develop advanced classification and filing systems in an electronic environment too. These systems must organise records according to the nature and function of each document and according to the institutional mandate of the creating organisations. However this awareness is present only in some archival traditions ⁽¹⁰⁾. The solutions proposed by ICT, even though appealing, cannot deceive expert archivists ⁽¹¹⁾ as to the risks of fragmentation and dispersion they introduce in the mass management of record products as all sector studies, case studies and surveys at international and national level have pointed out ⁽¹²⁾.

It is because of this substantial failure that new expressions have emerged: knowledge or content management or, more recently, data mining, with a more specific reference to the development of record structures and profiles. Classification, indexing, archival description are all integral and advanced parts according to my opinion. Through them the old and contradictory needs of the record management process can be met in a new and enhanced way. For example the need to limit the number of copies of documents and at the same time, make documents immediately available to a growing number of users able to search for them and reuse them in different contexts.

As already mentioned the advocates of information processes targeted to content management find difficulties with the present systems because of the growing need for:

- flexibility;
- easy, rapid and efficient retrieval for increasing quantities of information;
- high-level of control on access.

They believe that the development of high-quality software programmes to manage content is going to be a no longer deferrable requirement for a correct storage of information and records, for search, access and publication functions, integrated use of complex and ever changing materials with reference both to contents and also context relations, new media and formats. Controlling different versions, managing modifications, creating new documents in hybrid and interactive systems are further needs requiring more organisational efforts on the part of record creators.

These are well known issues to the archivists, although up to now they have been managing records substantially stable for shape and content (the reclassification of documents and files is a limited phenomenon in the paper world also because of the organisational effort it implies) and with limited movements and reuse. After all, it is this non-easy access, use and reuse of the traditional archival system that transformed it, over the decades, in a poorly appealing and insignificant obligation for companies and public administrations; a very expensive commitment, which is no longer matched by a clear and immediate advantage for creators, who even in the public sector are characterised by short-term approaches. On the other hand, technological developments have placed information needs and, consequently, the archival function, at the centre of the information and organisational systems of organisations once again, but only if adequate tools and skills are available. To check if document recording and their classification/filing are requirements able to meet these new needs, a compare and contrast analysis should be carried out between what a renewed archival tradition can offer and what the market of technological innovation can supply.

The facilities and services of content management systems used in record systems require an advanced processing of the attributes/metadata needed to:

- manage workflow systems targeted to content enhancement;
- post compound documents on the net;
- develop search facilities and improve outcome in terms of quality and speed;
- share activities;
- protect records from losses and manipulations.

In particular the objectives of content management programmes regard:

- univocal identification and appropriate metadata management;
- control of versions, intended as a tool to maintain and control record creation processes over time as well as the analysis, revision, approval and signing stages;
- search and retrieval, both in terms of content and identifying attributes and structure, by using sophisticated information retrieval modes (by specific terms; synonyms, contextual use of terms in order to exclude useless searches or indexes);
- control accesses by parts of documents or record typologies, if correctly identified;
- manage storing stages (online, near-line, offline).

In summary, these are the traditional functions of record management and, in particular, those functions that are carried out thanks to record profiling and record classification/filing activities appropriately redesigned for an advanced digital environment.

Classification/filing systems developed and improved in digital environments can therefore be the basic framework for converging and advanced CMS and RMS, naturally focused on record systems ⁽¹³⁾. 'Classification is, in fact, an instrument for organising records developed in the modern era to support the record-keeping function of administrative apparatuses that are ever more complex and articulated'. Classification means the recognition, identification and functional arrangement of records according to logical and consistent criteria within distinct functional archival units (files and series).

More specifically, a classification system strictly interrelated — this is a basic requirement — with the filing system enables:

- the determination, on the basis of predefined and qualified criteria, of those records which are part of the archival fonds and their connections to their specific administrative/record-keeping contexts;
- the identification and maintenance of the archival relations which are established among records in the exercise of his/her functions by the creator;
- the retrieval of records according to functional criteria as expressed from the archival units of arrangement;
- simple enhancement and preservation functions;
- the definition of dynamic methods of record management enabling periodic updating;
- the reconstruction of the historical evolution of the records system over time as a snapshot of the different articulations that the system underwent.

Since classification is systematic (all records are classified), logical and functional, the digital environment offers new potentials to increase the quality of both organisational and retrieving systems:

- more rapid retrieval of information from records (especially if supported by indexes or other retrieval tools);

⁽¹³⁾ For an analysis of archival functional requirements and, in particular, for classification and filing see Guercio, M., 'Principles, methods and instruments for the creation, preservation and use of archival records in the digital environment', *The American archivist* 64 (Autumn–Winter 2002), 2, pp. 238–269.

(¹⁴) The results of the first stage of the project (guidelines for the electronic management of records, classification models for administrative functions, draft manual of procedures for record management) are published on the site of Scuola Superiore (www.sspa.it)

- diversification and specialisation for record types, which are richer in information (for example, through the creation of rule-based records repositories of decisions, minutes, memoranda, general reports, etc.);
- pre-establishment of filing procedures, insofar as it remains possible and appropriate to provide a predefined, but still somewhat flexible, framework through which specific types of appropriate record arrangements can be organised for the structure of a highly articulated institution enjoying considerable autonomy;
- efficient integration with various administrative procedures (e.g. control of workflow, management of the assignment of tasks, statistical functions, etc.).

Consistent principles for advanced classification plans guarantee centralised system control, therefore homogeneity, quality of input information and search results, but also flexibility of solutions. A classification system based on standard principles, themselves founded on the analysis of business procedure activities and supported by advanced content management facilities, is a quality instrument. This tool can be shared both for the structure of classes (principle of matching, type of relations and number of the classes) and the concrete identification of the approach to common functions concerning administrative functions.

With the aim of developing integrated models for archival classification a research project was launched at the Scuola Superiore per la Pubblica Amministrazione (www.sspa.it). This project involved several branches of the Italian Public Administration (Ministry of Finance, Ministry of Treasury, Ministry of Foreign Affairs, Ministry for Cultural Heritage, Information Science Authority of the Public Administration, Customs Services) (¹⁴).

The novelty of the project is to be found both in the nature of the classification headings and in the structure of the approach: classes are targeted to the identification of functions and activities more than subjects; functions are in turn grouped in two large categories relating to administrative functions and institutional functions respectively. Items relating to the first category are those concerning functions common to all public administration services, and partially private sector organisations (human resource management, financial resource management, instrumental resource management, direction and coordination, etc). The study is not limited to the identification of heading denominations, but their description is included so that the classification plan is transformed into a guide for operators and internal and external users of the record system (see attached model).

Today more than in the past, the development of shared models requires an updated control system of the record system. These shared models imply flexibility and uniformity simultaneously and an ongoing updating process. Therefore in addition to advanced tools, the system must include a set of procedures and rules both internal and external to the public administration 'that regulate and describe, in a uniform and controlled manner, the modalities of external access and of internal use of the plan, assembling them in a single instrument, a manual for record-keeping procedures established within each creator'. The existence of a defined and qualified set of rules is a prerequisite that was only recently recognised as essential to govern the system since it can guarantee transparency and control. The Italian legislator, for example, made it compulsory for those public administrations introducing electronic record-keeping systems (dpcm 31 October 2000) providing a list of the essential components too.

The quality of procedures, of the classification plan, the quality of available metadata and their processing depend on the quantity and quality of investment on archives and ITC that each creator is able to make. Undoubtedly, in order to make progress, in compliance with minimal requirements established by the Moreq study, classification systems should provide more functions. They should not be limited to a simple hierarchy of functional headings but should indicate the typology and the nature of files created under each heading, describe briefly the meaning and the content of each last level class, define the principles of retention and preservation and the levels of access, etc. The more the control of the records creation is done in a flexible and controlled way, the more qualified, useful, developed are the results, both for internal and external users. Moreover, during their recording stage documents are to be managed in a univocal, systematic and consistent manner and document typologies should be identified already at the design stage of the record management system.

It is necessary to remember that there are very few classification systems which satisfy these requirements and have the appropriate characteristics, either because of the negligence of agencies in dealing with the problems of organising their archival fonds, or because of the distractions, noted several times, of archivists who are busy in other, more rewarding areas. The primary reason, however, is the difficulty of the work of data gathering, analysis and definition that a good system requires and the lack of methodology in this area. These are exactly the negligence and oversights that CMSs aim at solving. They can only be solved in continuity with the methods and tools used for centuries by archivists and recently introduced in national regulations, international standards, in guidelines approved to enhance the quality of electronic record-keeping systems.

Clasificación de documentos y gestión de contenidos: funciones antiguas y nuevos requisitos en las legislaciones y normas para el sistema electrónico de mantenimiento de archivos

Maria Guercio

La clasificación de los documentos es una actividad tradicional, comúnmente utilizada en el trabajo de archivo para garantizar la organización funcional de los archivos a efectos de su control legal, de una recuperación eficaz y de una evaluación sistemática. Las nuevas tecnologías constituyen un reto en este ámbito, porque ofrecen herramientas potentes para mejorar la calidad de la clasificación y para añadir nuevas funcionalidades, pero también porque parecen proporcionar distintas soluciones a la creación y al mantenimiento del contexto de los archivos mediante técnicas de indización y herramientas de recuperación de datos. La gestión de conocimientos o la gestión de contenidos son los nuevos términos que suelen proponerse en vez de la terminología común de archivos, y también como alternativa a las herramientas tradicionales. La funcionalidad y el significado de estas actividades (clasificación y gestión de contenidos) requieren un análisis tanto a nivel teórico como práctico y un esfuerzo de comparación para verificar cómo pueden combinarse para definir una estrategia eficaz para organizar los archivos y mantener su contenido, su estructura y su contexto.

Una cuestión básica, por ejemplo, se refiere a la validez de la clasificación de los archivos para garantizar una acumulación ordenada y coherente de documentos con fines de investigación y conservación, pero sobre todo para soportar las funciones ejercidas por los organismos de la administración pública y las empresas. A lo largo del desarrollo de los sistemas electrónicos de mantenimiento de archivos y normas multinacionales, nacionales u organizativas, había y hay una larga discusión, en especial sobre los medios de mantener el sistema de archivos continuamente actualizado y de vincularlo efectivamente al proceso administrativo del cual constituye residuo y testimonio. El presente documento se centrará en los principales aspectos de este debate e intentará definir otras estrategias mediante el análisis de:

- los principios tradicionales de la función de clasificación para crear, tener acceso y mantener los archivos;
- los recientes progresos en el enfoque teórico y la función de los elementos de clasificación como metadatos de archivo en el medio digital (para asegurar la fiabilidad y la autenticidad);
- la función de la clasificación en las normas y directrices existentes (ISO, MoReq) y en las legislaciones nacionales (específicamente en las normas italianas sobre sistemas electrónicos de mantenimiento de archivos).

Se prestará una atención específica a los proyectos y a los experimentos realizados en estos últimos años para desarrollar sistemas de clasificación comunes, basados en el análisis de las

funciones y desarrollados con procesos avanzados de digitalización: por ejemplo, el acerto proyecto (cuyos resultados se resumirán) promovido por la Scuola superiore della pubblica amministrazione y desarrollado por un grupo de ministerios italianos y administraciones centrales (Ministerio de Hacienda, Ministerio del Patrimonio Cultural, Ministerio del Tesoro, Ministerio de Justicia, Ministerio de Asuntos Exteriores y Autoridad para la Tecnología de la Información) con el objetivo de definir un sistema de clasificación común para las funciones administrativas y transformar el sistema de clasificación, al mismo tiempo, en una herramienta de interoperabilidad y una herramienta para facilitar el acceso de los ciudadanos y mejorar la transparencia.

Por último, a través de ejemplos y experimentos concretos, el documento se centrará en nuevas aplicaciones y desarrollos de las funciones de clasificación con relación a:

- tesauros y herramientas de indización electrónica;
- organización lógica y estructural de términos de clasificación relacionados con el control de los procedimientos empresariales.

Klassifikation von Archivgut und Content Management: herkömmliche Verfahren und neue Anforderungen in den Rechtsvorschriften und Normen für die Verwaltung von elektronischen Archiven

Maria Guercio

Die Klassifikation von Archivgut ist eine traditionelle Tätigkeit, die gewöhnlich in der Archivkunde ausgeübt wird, um die funktionale Organisation der Archive im Hinblick auf eine rechtliche Kontrolle der Archive, eine effiziente Auffindung und eine systematische Beurteilung zu gewährleisten. Die neuen Techniken sind eine Herausforderung in diesem Bereich, da sie wertvolle Instrumente sind, um die Klassifikationsqualität zu erhöhen und neue Funktionen bereitzustellen, jedoch auch, weil sie verschiedene Lösungsansätze für die Schaffung und Beibehaltung des Archivkontexts in Form von Indexierungstechniken und Hilfsmitteln zur Auffindung von Informationen bieten. Wissensmanagement oder Content Management sind neue Begriffe, die die geläufige Archivterminologie und auch die herkömmlichen Hilfsmittel ergänzen. Die Funktionalität und die Bedeutung dieser Tätigkeiten (Klassifikation und Content Management) erfordern neben einer theoretischen und praktischen Analyse eine vergleichende Prüfung, wie sie für die Festlegung einer wirksamen Strategie zur Organisation von Archiven und zur Beibehaltung ihrer Inhalte, Strukturen und Kontexte kombiniert werden können.

Ein zentrales Thema ist beispielsweise die Tauglichkeit der Archivklassifikation für die Gewährleistung einer geordneten und kohärenten Sammlung von Archivgut zum Zwecke der Forschung und der Erhaltung, jedoch vor allem zur Unterstützung der Arbeit staatlicher Stellen und von Unternehmen. Die Entwicklung von Systemen zur Verwaltung von elektronischen Archiven sowie von multinationalen, nationalen oder organisatorischen Vorschriften wurde und wird begleitet von einer eingehenden Diskussion, die sich vor allem darauf konzentriert, mit welchen Mitteln man das Archivsystem kontinuierlich aktualisieren kann, und wie man es wirksam in den Verwaltungsprozess einbeziehen kann, dessen Überlebensfähigkeit und Nachweis es gleichermaßen ist. Der Vortrag konzentriert sich auf die wich-

tigsten Aspekte dieser Debatte und versucht, weitere Strategien festzulegen, indem er folgende Punkte analysiert:

- die traditionellen Grundsätze der Klassifikationsfunktion im Hinblick auf den Prozess der Einrichtung, des Zugangs und der Konservierung des Archivs,
- die jüngsten Entwicklungen im theoretischen Ansatz und die Rolle von Klassifikationselementen wie Archiv-Metadaten im digitalen Umfeld (zur Gewährleistung der Verlässlichkeit und der Authentizität),
- die Funktionen der Klassifikation innerhalb der bestehenden Normen und Leitlinien (ISO, Moreq) sowie innerhalb der nationalen Gesetzgebungen (insbesondere in den italienischen Vorschriften für Systeme zur Verwaltung von elektronischen Archiven).

Besondere Aufmerksamkeit gilt Projekten und Versuchen der vergangenen Jahre zur Entwicklung gemeinsamer Aktenpläne auf der Grundlage von Funktionsanalysen und im Rahmen moderner Digitalisierungsprozesse: beispielsweise dem erfolgreichen Projekt (dessen Ergebnisse zusammengefasst werden), das von der Scuola superiore della pubblica amministrazione gefördert und von einer Gruppe italienischer Ministerien und zentraler Verwaltungen (Finanzministerium, Ministerium für das kulturelle Erbe, Schatzamt, Justizministerium, Außenministerium, Amt für Informationstechnologien) entwickelt wurde, um einen gemeinsamen Aktenplan für administrative Aufgaben festzulegen und den Aktenplan gleichzeitig zu einem Instrument der Interoperabilität sowie zur Erleichterung des Zugangs der Bürger und zur Erhöhung der Transparenz zu entwickeln.

Schließlich konzentriert sich der Vortrag – anhand von Beispielen und konkreten Versuchen – auf neue Nutzungsmöglichkeiten und Entwicklungen der Klassifikationsfunktionen im Zusammenhang mit

- elektronischen Indexierungsinstrumenten und Thesauren,
- der logischen und strukturellen Gliederung von Klassifikationsbegriffen in Bezug auf die Überwachung von Geschäftsvorgängen.

Classement des documents et gestion des contenus: l'intégration de fonctions traditionnelles et d'exigences nouvelles dans les dispositions législatives et les normes applicables aux systèmes d'archivage électronique

Maria Guercio

Le classement de documents est une activité que l'archivistique exerce de longue date pour garantir une organisation fonctionnelle à des fins de contrôle juridique, de recherche efficace et d'évaluation systématique. Les nouvelles technologies constituent un véritable défi dans ce domaine, dans la mesure où elles offrent non seulement des outils extrêmement performants pour accroître la qualité du classement et le doter de fonctionnalités supplémentaires, mais également des solutions alternatives à la création et à la maintenance du contexte archivistique par les méthodes d'indexation et les outils de recherche d'information classiques. Des concepts tels que la gestion des connaissances ou la gestion du contenu viennent désormais enrichir, outre la terminologie, l'éventail des instruments traditionnels. La fonctionnalité et la portée de

ces activités (classement et gestion du contenu) exigent une analyse à la fois théorique et pratique, ainsi qu'un travail de comparaison destiné à déterminer la manière de les conjuguer pour parvenir à une stratégie optimale en termes d'organisation des documents et de sauvegarde de leur contenu, de leur structure et de leur contexte.

Ainsi, par exemple, l'un des aspects essentiels concerne la capacité d'un classement d'assurer un rassemblement méthodique et cohérent des documents à des fins de recherche et de conservation, mais surtout d'étayer les fonctions exercées par les entreprises et les agences publiques. La mise au point de systèmes d'archivage électronique, de même que l'élaboration de règles multinationales, nationales ou organisationnelles ont suscité, et continuent de susciter, un vaste débat portant, notamment, sur les moyens permettant d'assurer une mise à jour permanente du système et son lien efficace avec le processus administratif, dont il constitue à la fois le reliquat et la preuve. L'exposé se concentrera sur les principaux aspects de ce débat, et tentera de dégager des stratégies ultérieures en analysant:

- les principes traditionnels de la fonction de classement dans le processus de création, d'accès et de maintenance des documents;
- les récentes évolutions au niveau de l'approche théorique et le rôle d'éléments de classement tels que les métadonnées pour la gestion des archives dans l'environnement numérique (garantie de fiabilité et d'authenticité);
- la fonction du classement dans les normes et les lignes directrices (ISO, MoReq) et dans les législations nationales (et plus précisément dans les règles italiennes régissant les systèmes d'archivage électroniques).

Une attention toute particulière sera accordée aux projets et aux expériences menés ces dernières années pour développer des systèmes de classement communs, basés sur une analyse des fonctions et mis au point grâce à des procédés avancés de numérisation: on peut citer, à cet égard, la réussite d'un projet (dont une synthèse des résultats sera proposée) dont la promotion revient à la Scuola superiore della pubblica amministrazione et le développement à une série de ministères et de services centraux italiens (ministère des finances, ministère du patrimoine culturel, ministère du Trésor, ministère de la justice, ministère des affaires étrangères, Agence pour les technologies de l'information). Il avait pour but de définir un système commun de classement qui, tout en assumant les fonctions administratives requises, puisse servir d'instrument d'interopérabilité et d'outil destiné à faciliter l'accès des citoyens et à améliorer la transparence.

L'exposé illustrera pour terminer, à l'aide d'exemples et d'expériences concrètes, les nouvelles applications et évolutions des fonctions de classement en liaison avec:

- les thésaurus et outils d'indexation électroniques,
- l'organisation logique et structurelle des éléments de classement liés au contrôle des procédures d'entreprise.