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Document Control

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A. Overview

This aim of this case study has been to analyze Terrassa City Council's Protocol Register. This record is a central instrument for some European administrations when it comes to centralizing the statements of intent expressed by citizens towards these administrations. In the Protocol Register, these declarations are registered on one medium or another and move from oral to written expression. In addition, with registration, an established, unchangeable date is determined, marking a point in time from which any legal actions or services the administration can offer the public are implemented. Diplomatic theory has raised the possibility that the Protocol Register should be the mainstay of any records management system of any private or public organization. In the case of Terrassa City Council, it has been impossible to confirm this possibility and, in any case, the current poor quality of the record has been confirmed, making its use as a central records management instrument hardly viable. This has led to the establishment of a plan to improve the quality of the Protocol Register to assess, at a subsequent stage, whether it should be conserved and how this conservation strategy should be implemented.

B. Statement of Methodology

To carry out the case study we have followed two phases. The first began in 2008 and was completed at the end of 2009. This included a theoretical review of the functions of the Protocol Register based on the existing legislation and bibliography in order to determine what this instrument ought to be used for. We saw that neither the legislation nor the bibliography were based on the actual operation of a Protocol Register and that they did not help us when it came to determining its diplomatic characteristics, for example, or its virtues or defects in the real world. However, the initial theoretical approach was useful to us for approaching the second phase with greater knowledge of the issue.

Based on the theoretical assumption that the Protocol Register could be the central instrument for any records management system, we began a second phase to check whether this was possible in the real world. To achieve this, at the beginning of 2010 a working team was established consisting of 10 Terrassa City Council workers who decided to analyze the tool, evaluate its virtues and failings, see its technological context and propose a set of measures to improve its functions and strengthen the measures to preserve the quality of its data. This team was formed by records managers, computer technicians and civil servants from the central register office. The conclusions were written down in a final report that was presented to the head of Terrassa City Council's technology, innovation and quality service and the main improvements proposed began to be put into practice. The principal conclusions we drew from the work done to provide a response to the InterPARES case study were as follows:

The Protocol Register as it was being used could not be the central instrument of Terrassa City Council's records management system.

The quality of the data being managed inside the Protocol Register's different records made it unadvisable to suggest a long-term preservation strategy if its general operation

was not improved in the first place.

The improvements proposed in the list of functional and technological requirements drawn up by the working group could be fully applied in a new Protocol Register computer application, but they could already be applied to a lesser degree with the current application.

The appraisal of the Protocol Register called into question whether it made sense to preserve it in the long term.

C. Description of Context

The full contextual analysis can be seen in the text of the same name. On this point we would simply indicate by way of summary the basic contexts in our case study:

Provenancial context:

Terrassa City Council's fundamental mission is to oversee the rights of the citizens of Terrassa and to act fairly in compliance with its duties. To achieve this, State and autonomous community legislation grant it the power to carry out a long list of functions which we have summarized in the contextual analysis. Detailing all of them exhaustively is a very long job, given the variety of the functions attributed to local councils. Putting these functions into practice generates direct services, documented services and documented legal actions. The Protocol Register is the gateway and distributor inside Terrassa City Council of citizens' needs, and the different departments carry out the various functions.

Juridical-administrative context:

Terrassa City Council's Protocol Register belongs to the legal context of local administrations in public law in Spain. The legal considerations affecting its existence and its functions come from the central administration of the Spanish State. Some functions granted to the government of the Catalan Autonomous Community by the Spanish State are directly financially coordinated between the local authority and the Autonomous Community administration.

The administrative context is described in full detail in the Public Administration Legal System and Common Administrative Procedure Act 30/1992, dated 26 November.

Procedural context:

The procedure for compiling a register entry is relatively simple and will be detailed below. The daily sum of all entries makes up a continuous register, which we call a Protocol Register.

Initiative: In the case of incoming documents, the initiative is taken by the citizens, who can declare their intent in person at the register offices. This can also be done by remote data transfer by accessing the so-called 'Electronic Headquarters'. In both cases, an instance is completed and the information from it is used to fill in the computer application form. Two steps can be carried out: either filling in an instance on paper, which is considered the first step in creating the file, or filling in the form directly in electronic format.

Inquiry: A civil servant from the Protocol Register appraises the statement of intent by

the citizen, analyses the documentation he or she has provided (if appropriate) and assesses the relevance of the whole presentation process.

Consultation: Once the necessary checks have been made, the entry form is completed with the relevant archival classification and the entry is sent to the manager or department with the powers to resolve it.

Deliberation: In fact, the final decision is not the responsibility of the Register Office civil servant. The recipient of the entry in the department assesses whether this statement of intent can actually be resolved by the administrative body. If it can, the file is registered, with the entry as its first record. If the recipient considers that he or she does not have the powers to develop the statement of intent or considers that the documentation presented are incomplete or detects any irregularity, he or she returns the entry to the Protocol Register. Of course, this 'return' is virtual; there is no physical movement. The Protocol Register central office is simply informed that the attribution is incorrect or that information is missing.

Deliberation control: If the 'return' is due to misattribution of the manager or competent department, the central office determines a new attribution. If the 'return' is due to a lack of documentation necessary to open a file, either the Protocol Register central office or the department itself requests the missing documentation from the applicant by telephone or e-mail. If the 'return' is because of the detection of an error on the form or any other error affecting the comprehension of the data collected, the Protocol Register central office takes on the task of amending or clarifying the data. This can be done either by speaking to the civil servant who has made the entry or, as a last resort, clarifying the information with the citizen who has declared their intent.

Execution: Once the entry has been accepted by the competent department and all possible errors, gaps or ambiguities have been corrected, the procedure of drawing up the entry can be considered to be finished. The documented legal action begins, resulting in a decision that will be notified to the citizen through a new entry in the Protocol Register, in this case an outgoing one.

Documentary context:

Terrassa City Council grants its archive service powers to plan, model and implement an integrated records management system, allowing the management and preservation of analog and electronic documentation. In terms of regulations, this context is described in the Regulations of the Terrassa Municipal Archive System. These regulations, approved in 2004, have not yet been fully deployed in 2012. The fonds of the creator—Terrassa City Council—preserves documentation dating from 1228 to 2012.

Technological context:

The Protocol Register is basically a database formed by a table of relations from an Oracle relational database. An external layer makes it possible to display the fields of a data compilation form. This layer was created with Uniface language in 1997 and is still current, although various improvements have been incorporated over the last few years. The Protocol Register forms part of a Protocol Register subsystem. This makes it the central application of a sum of other applications aimed at definitive transition to a fully electronic subsystem. This means that, as well as the Protocol Register, there is a web

application to manage remote data transfer relations with citizens called the Electronic Headquarters—an access portal to electronic administration determined by Spanish Act 11/2007. As well as the Headquarters, an application allowing the digitalization of incoming documents in analogue data format allows the introduction of specific metadata into these records and will capture documents already in digital format in the relevant entry. This application called Web Content Capture is also an Oracle program and it is currently being tested, while waiting for the Protocol Register offices to be provided with multi-functional machines making it possible to scan incoming documents. Ultimately, the Protocol Register subsystem is only the first step of a series of subsystems making up the so-called Paradís records management system. This is the structure necessary at intellectual level which, with the right systems architecture, will allow integrated processing of all documentation produced by Terrassa City Council, regardless of the medium used.

D. Narrative answers to the applicable set of questions for researcher

We refer you to a detailed reading of the different answers to the questionnaire of the same name.

E. Diplomatic analysis of records, if applicable

The diplomatic analysis of the Protocol Register can be fully consulted in the document of the same name in Appendix 4.

F. Findings, Recommendations and Products, if applicable

The Protocol Register, as established in Spanish and Catalan legislation and as it is currently being used, cannot carry out the task established in diplomatic theory of being the central instrument for monitoring an organization's incoming, outgoing and internal records. In any case, the recording task must be distributed between different registers so that this monitoring can be really effective.

The Protocol Register, understood as a computer application, can be considered as a unique one to be preserved. If this was the case, emulation would be the best solution to be able to preserve both the data from the different entries and the application functions. This measure, put forward more than once during the study, has always been rejected, not so much because it is erroneous but rather because it is probably an excessive solution given the characteristics of the Protocol Register. We consider that the most important things are the data making up the different records, the fact that the functions can be reproduced or improved in future applications and the fact that the archival bond is resolved with specific metadata. The capture of the classification code as metadata that did not exist before the study has allowed a substantial improvement in the rationalization of the different entries. Now the manager or department that will have to carry out the documented action is understood better and correctly interpreted more quickly, as well as being better integrated into the overall vision of the Paradís system. This is why we consider a priority to be the application of data preservation measures, which must come through migrating it to a new computer application.

If the most important thing is the data that allows a register entry to be configured, the

preservation measures must initially come through guaranteeing that such data is of a certain quality. Without quality data, clear errors often occur in the form of ambiguity, incomprehension and incorrect attributions, and the Protocol Register as a record will have to be considered as an imperfect record. Faced with this possibility, we wonder whether it makes sense to conserve an imperfect record in the long term. What value can it contribute in the future? What were the bureaucracies of the beginning of the 21st century doing wrong in drawing up their public documents?

We strongly consider that parallel work between the Protocol Register central office, civil servants with attestation powers and the Archive service is a priority to ensure quality processing of this record and its entries. This requires constant teamwork, a permanent review and audit of the terms under which entry classification is put into practice. This is a critical point, as it is necessary to agree archival terminology very much marked with the criteria of civil servants and citizens themselves, who do not always know precisely the terms and concepts that should be used at all times. This is resolved through training, but also with constant dialogue making it possible to find a common working vocabulary.

After carrying out the case study, the main conclusion is that the true preservation work cannot be carried out at a phase after entries cease to be administratively effective. In this sense, we consider it more important to apply improvements to the operation of the Protocol Register than to schedule full, long-term preservation. The use being made of the protocol registers we have in our custody at an inactive phase is very low. There is a reason for this. Very probably, despite the fact that it is a socially accepted and trusted instrument and that the legislation protects its stability, its data is not considered for information or historical purposes. It must be said that the nature of the entries is that they are brief, like old public notaries' records, but under no circumstances do they allow legal documents of a juridical nature, for example, to be drawn up at phases following the active or inactive phase. The importance of the Protocol Register is therefore at the active phase.

Appendix 1 – Case Study 03- Contextual Analysis: The Protocol Register of Terrassa City Council

TEST BED

Name

Terrassa City Council

Location

Catalonia (Spain), Province of Barcelona, El Vallès Occidental Region, City of Terrassa.

Terrassa is a city situated 277 metres above sea level, its geographical coordinates being 41° 33' 40' N and 2° 0' 29' E.

The municipal area covers a total of 70.10 km², bordering on the municipalities of Matadepera and Vacarisses to the north, and to the east with Sabadell, to the south with Rubí and Sabadell and to the west with Viladecavalls, Ullastrell and Vacarisses.

The City of Terrassa has 213,897 inhabitants (1 January 2011), with a total of 392,625 in the entire metropolitan area. The Vallès Occidental Region has a population of 886,730. Therefore, the City of Terrassa's population constitutes 24% of that of the entire region.

Terrassa is situated 28 km from the city of Barcelona, 107 km from Girona, 109 km from Tarragona and 138 km from Lleida, the four capitals of the Autonomous Community of Catalonia.

Origins

The origins of the city of Terrassa date back to the end of the 12th century, when the Late Medieval town was built in the shelter of a former count's fortress. Starting in the 13th century, people spoke of the *Palau de Terrassa* (Palace of Terrassa), which over the years became simply known as the *Vila de Terrassa* (Town of Terrassa). The legal structure of the Late Medieval municipality consisted of different royal concessions and privileges, including allowing people to have and run a council of *prohoms* (prominent members of a town who assisted the judge or mayor) who governed the population. The legal status was consolidated by various agreements with the monarchy of the Crown of Aragon during the Late Middle Ages and the Early Modern Period. In general, the population was contained within the town centre. However, many people also lived in farmhouses scattered across the territory. The town's strength gradually increased with the passing of the years due to the power of the peasant farmers in its surrounding area. So, in the middle of the 19th century, the town started to become heavily industrialized with the rapid growth of the textile production sector. Outside the town, the well-to-do peasant farmers continued to rule over the land and produce agricultural

goods. In 1877, the town of Terrassa was given the title of *ciutat* (city), in recognition of the importance of the textile industry. The requirements of this industry favoured waves of migration, which led the Terrassa to grow from being a town of 5,000 inhabitants to a city of almost 40,000 at the end of the 1930s. The Spanish Civil War constituted a disaster for the city on both social and human levels, but not in terms of production. The war did not transform industry, but strengthened two of its main sectors: the textile and metallurgic sectors. The textile sector continued until the end of the 1980s and the metallurgic until the end of the 20th century. Terrassa became a real driving force in the east of the Iberian Peninsula and continued to grow thanks to the influx of migrants, most of whom came from Spain and Portugal. With the formation of democratic city councils, in 1979, a real centre of urban regeneration was created, taking on a large number of powers and functions. This growth was accompanied by a marked increase in the production of records—a result of the improved levels of organization that characterise a solid administration. All aspects of the city improved: the population grew, in particular due to waves of migration from Eastern European and Latin American countries; the basic local district services increased, for citizen groups and the population itself; the number of cultural dissemination and promotion centres increased; the manufacturing sectors changed, the influence of industry declining in favour of the services sector, etc. At the start of the 21st century, there was an uncontrolled productive boom in the property sector, which led the city to a situation of deep crisis by the beginning of the second decade of this century. At present, the city is in a serious economic impasse. With over 210,000 inhabitants and a city council with over 2,000 employees, the archives are at the very limit of their capacity, in terms of both their management and storage.

Legal status

Terrassa is a municipality of Late Medieval origin, which was legally granted city status by the Royal Decree of 29 March 1877. At present, the governance of the democratic municipality is regulated both by the Spanish Constitution of 1978 and the Statute of Autonomy of Catalonia of 2003.

Its functions are defined by the Organic Law 7/1985 regulating the framework of local government² and Legislative Decree 2/2003, of 28 April, approving the consolidated text of the Municipal and Local Government Act of Catalonia.³

The organizational level was defined by Royal Decree 2568/1986, of 28 November, approving the regulation of the organization, functioning and legal system of local corporations⁴ and Royal Legislative Decree 2/2004, of 5 March, approving the consolidated text of the Law Regulating Local Tax Authorities.⁵

The city's official Catalan name is Terrassa.

² <https://aoberta.terrassa.org/normativa/detallNormativa.jsp?id=01889> [Last accessed: 2012/02/10].

³ <https://aoberta.terrassa.org/normativa/detallNormativa.jsp?id=01886> [Last accessed: 2012/02/10].

⁴ <https://aoberta.terrassa.org/normativa/detallNormativa.jsp?id=01887> [Last accessed: 2012/02/10].

⁵ <https://aoberta.terrassa.org/normativa/detallNormativa.jsp?id=01569> [Last accessed: 2012/02/10].

Norms

The City Council has extensive legislation, which structures and describes how the functions conferred by State and Catalan legislation should be implemented. The Plenary Council, the mayor, the deputy mayors and the *Junta de Govern*, the local executive governing body, are the main decision-making and governing bodies. Terrassa City Council has an internal regulatory system, permitted by the regulatory legislation for bodies governed by public law. These regulations allow the functions pertaining to city councils to be organized and put into practice.

There are two main regulations, the Regulation determining the services provided by local corporations, approved by the Decree of 17 June 1955, with the modification of various articles in Royal Decree 2009/2009 of 23 December;⁶ and the Organic Regulation of Terrassa City Council, published in the *Official Gazette of the Province of Barcelona* No.194, of 14 August 1998, with the modifications of 28 September 2011.⁷ A comprehensive list of the regulations applied by Terrassa City Council can be consulted on their electronic portal.⁸

Funding

The municipal funding comes mainly from regular transfers by the Spanish State and the Government of Catalonia to the local entities. This money comes from the basic taxes paid by citizens on their income as well as on the purchase of goods and on professional activities. At the same time, the City Council itself generate its own funding through the management of its assets, through certain taxes administered by local bodies, and through the application of public taxes and fees for services rendered by the council, which finance some of its activities. Therefore, to a large extent the funding comes from the taxation of citizens, profit earned from the Council's equity and credit actions. All of this funding is used to carry out the functions designed to preserve citizens' rights and duties.

Resources (Physical)

The central headquarters of Terrassa City Council are located in a historic building, which has housed the council chambers, the mayor's office, the city councillors' offices and those of other constituent members since 1903. This building is located at Raval de Montserrat, 14-20, Terrassa, in the historic centre of the city. Next door to this building are the headquarters of the City Council's general services, which house the human resources, administration, income and taxation services, the protocol register, computer services, census and electoral procedures offices, municipal archives, etc.

Outside of this central core, scattered across the city, are various buildings that house the sector-based services of employment promotion, town planning, urban mobility, education, economic promotion, tourism, the municipal police, etc. In total, the Council has a holding of over 20 buildings in which almost 2,200 workers are employed.

⁶ <https://aoberta.terrassa.org/normativa/detallNormativa.jsp?id=01667> [Last accessed: 2012/02/10].

⁷ <https://aoberta.terrassa.org/normativa/detallNormativa.jsp?id=01444> [Last accessed: 2012/02/10].

⁸ <https://aoberta.terrassa.org/normativa/#252> [Last accessed: 2012/02/10].

The central office of the Protocol Register is located at the City Council headquarters, and across the city citizens have access to the register at the civic centres, where the *Oficines d'Atenció als Ciutadans* (OACs), citizen services offices, are located. The management of the Protocol Register service is also located at the City Council headquarters, as is that of the Municipal Archives, responsible for records management in the central archives, the administrative archives and electronic records. The Historical Archives are located a few minutes away from the headquarters, beneath the Town Planning offices at Carrer Pantà, 20.

Governance

Terrassa City Council is a municipal government administrative body, a public law corporation, with the following structure:

Basic municipal organization: the full municipal council comprises 27 councillors, the mayor, the deputy mayors and the local executive governing body.

Complementary municipal organization: delegate city councillors, information commissions, the special accounts information commission, the board of spokespersons and special survey or research commissions.

Organization for the direct management of services: autonomous municipal organizations, municipal public capital companies with participation in other bodies, investee companies and consortia, foundations, associations and other organizations.

Mandate

Every four years, after an electoral process, the party/parties elected democratically by the citizens draw(s) up the so-called 'mandate plan', which details the commitments made by the party/parties for their legislature.

The mandate plan is a strategic management tool, which consists of specifying and defining both the political action and the planning of projects for the entire mandate. Its aim is to ensure the governance progresses in a programmed, systematic manner, based on the prior selection of what the governing party/parties aim(s) to achieve and, therefore, their plans.

The plan is flexible and not closed to the incorporation of new actions, which may arise from the city's social and economic activities. This document allows citizens to assess and monitor annually the extent to which the plan is fulfilled and makes the elected party/parties accountable in subsequent electoral processes.

Philosophy

The philosophy adopted by all Spanish and Catalan local bodies is defined and argued precisely in points I and II of the introduction to Organic Law 7/1985 on the framework of local government.⁹

Mission

Terrassa City Council must respect the rights of the citizens who elected its leaders

⁹ <https://aoberta.terrassa.org/normativa/detallNormativa.jsp?id=01889> [Last accessed: 2012/02/10].

democratically through the electoral process. Similarly, it has to monitor comprehensively the fulfilment of the duties that each citizen has with regard to the other citizens they live alongside in society.

Policy

In order to accomplish the mission entrusted to them by the legislation and by the citizens' votes in an election, city councils must govern in accordance with the laws in force, based on the respect of constitutional agreements and inspired by the values of solidarity, equity and justice.

Functions

The municipal powers cover: public safety; the control of traffic and pedestrians on all public streets and highways; civil protection; prevention and extinction of fires; urban planning, management, execution and control; promotion and management of housing; parks and gardens; urban and rural public streets and highways; historical and artistic heritage; environmental protection; markets, slaughterhouses, fairs; defence of consumers' and users' rights; protection of public health; participation in the management of primary health care; cemeteries and funeral services; social services and the promotion of social rehabilitation; water supply, drains and sewage treatment; street lighting; street cleaning, waste collection and treatment; public transport: cultural, sporting and leisure activities and facilities; tourism; participation in education programming; citizen participation; self-organization; local identity and representation; environmental sustainability and territorial management; social cohesion; mobility infrastructures; connectivity; information and communication technology; energy supply; management of economic resources.

Recognition

There is no global recognition of a city council's activity. The fulfilment of its functions forms part of the framework of rights and duties that citizens must achieve within the context of a just and democratic socioeconomic coexistence.

No prizes or recognitions have been obtained for the use or characteristics of the Protocol Register.

ACTIVITIES RESULTING IN THE CREATION OF THE RELEVANT RECORDS

Administrative and Managerial Framework

General description

Terrassa City Council has a series of organic structures. They can be simplified and listed in the following manner: government bodies, management areas, services, departments and administrative units. All the management is carried out in the first three

structures. The last two structures implement activities derived from the functions attributed legally to the corporation. These organic structures are subject to changes made after each electoral process, as well as to possible specific changes during the four-year mandate of the democratically elected government.

Type of activity

Compiling a comprehensive list of the activities carried out by Terrassa City Council is a difficult task. Due to the very nature of the organization, a city council is the organizational structure closest to Spanish and Catalan municipalities when it comes to fulfilling their duties and defending and upholding their rights. The activities carried out by the Council derive from the long list of functions described in the 'Functions' section.

Documents resulting from activities

Control over all the documents produced by Terrassa City Council is exercised through the Corporate Classification Scheme, which the Archives service approved in 2009.¹⁰ In it the documentation produced as a result of the organization's activities is organized into 20 groups of records series, each corresponding to the main functions that produce documentation within the City Council: government action; administrative and legal organization; economic management and finances; personnel management; public health; public works and town planning; trade, consumption and tourism; social services; education; culture, participation and sports; environment; information and communication management; municipal assets; youth; citizen safety and protection; promotion and development of the city; population and elections; protocol and external affairs; promotion of housing.

The various groups of series are split into different subgroups of series, which are associated directly with groups of activities aimed at solving specific aspects of the functions. There are now over 130 subgroups and this number may increase. We understand that the Classification Scheme is a living instrument, which can be modified at any time, when necessary. However, there is a tacit agreement to keep it as stable as possible, in order to prevent it from becoming distorted. The over 130 subgroups of series or activities are further split into over 500 records series, some of which have required an even larger specification and have generated almost 120 subseries. Therefore, the control structure for these documents has only four levels of management.

The comprehensive list of records series that Terrassa City Council has produced and continues to produce is detailed in this instrument.

Law 30/1992, of 26 November, on the legal system of public administrations and common administrative procedure, defines the precise abstract model of administrative procedure, which allows for documents to be created. This law also determines the characteristics of the use of these administrative records, which form the Protocol

¹⁰ *Quadre de Classificació Corporatiu de l'Ajuntament de Terrassa* [Terrassa City Council Corporate Classification Scheme]. Approved by Agreement 3001 of the *Junta de Govern* on 16 January 2009. This can be consulted in full on the following website: <http://arxiuunicipal.terrassa.cat/qclassificacio.php> [Last accessed: 2012/02/10].

Register, the object of our study.¹¹

Existence of a records management program

The documentation produced by Terrassa City Council is managed and stored inside a records management system called PARADÍS. This system was designed between 2007 and 2009, and launched in 2010.¹² The Paradís system is in turn included in the City Council's PROGRAMA 180º, a project for modernization and adaptation to electronic administration.

We define the Paradís system as a set of policies, rules, applications and management tools, which regulate and control the production of documents within Terrassa City Council, and allow for their use, management and preservation. The difference between a system and a set of measures is the all-embracing and comprehensive orientation of the former and the requirement for any initiative undertaken to be carried out in line with the guidelines of the defined system and not in a random, independent manner.

The Paradís system aims to cover any record-making environment, irrespective of the medium used. However, it is true that most measures being applied mainly involve electronic records. It is understood that work processes will change substantially with the incorporation of new technology, and that this will have a direct impact on the production of paper documents. A complete end of the use of paper is still simply a utopia, but a progressive reduction in the use of paper may be a reasonable objective.

The system was designed following the provisions of ISO 15489-I (point 8.4: Design and Implementation Methodology) and II, with regard to its crosscutting and comprehensive perception. The records management is based on the requirements of MoReq 1 and 2. In any case, compliance with these rules and requirements is not comprehensive nor does it aim to be. The system was designed by Terrassa City Council and is adapted to suit its own particular requirements.

All in all, the Paradís system is an *Electronic Documents and Records Management System* (EDRMS) in which the management of the production and life cycle of records is regulated as soon as they are created. The definition of this system responds to the need to be able to produce and use trusted records in order to offer equally trusted high-quality services and administrative procedures.

The Paradís system aims to preserve the essential properties of the records it produces. With the solidity and cohesion of the different subsystems that it comprises, we have the ideal framework for the preservation of trustworthy, authentic, comprehensive, usable and accessible records. Preserving these properties will facilitate the use of records, giving rise to administrative procedures that are entirely reliable.

This system is based on a series of subsystems and classification and management tools, which create a controlled, secure, record production structure. In this initial search for security, we find the basis for a reliable system. If the system is reliable, the

¹¹ http://noticias.juridicas.com/base_datos/Admin/I30-1992.html [Last accessed: 2012/02/10].

¹² Details of the origins, objectives, functions and instruments of the PARADÍS system can be consulted on the following website: http://arxiuunicipal.terrassa.cat/docs/recursos/Proyecto_paradis_cast.pdf [Last accessed: 2012/02/10].

documentation it produces will presumably also be reliable.

With regard to the authenticity of the records produced, the system itself is designed for the use of advanced electronic signatures. It will not be the only element. Any other kind of validation of the documentation will be accepted, since it is assumed that the long-term preservation of these signatures may be more of a disadvantage than an advantage. In order to solve this issue, a tailor-made metadata schema has been incorporated, which allows for the description of all the elements that lay down the foundations for the record's comprehension and credibility. Our metadata schema uses the so-called *Descripció Autenticant* [Authenticating Description], in other words a description of the contents, the context and the structure of the record units aimed at verifying their authenticity in the short, medium and long term. Of all the elements, the so-called 'corroboration' metadatum stands out. The latter allows for the description of any kind of validation or verification of a document without having to apply additional technological complexity. The corroboration metadatum, in itself, does not protect the integrity of electronic records, but it does allow for the assignation of this information to all types of document, whether they need to be signed or not. In this respect, both the integrity of the document and its identify can be verified through these control strategies.

The measures that guarantee usability and accessibility in the short and medium term, are those defined in the operational subsystems. In theory, and in accordance with the current laws, the subsystems must also be capable of guaranteeing the usability of any electronic record that comes from outside our own systems. Records from the internal subsystems are presumed to be usable. With regard to the long-term properties, no specific measures have been planned for keeping the systems active or guaranteeing their usability when they are no longer used but still contain data. In principle, the contents would be migrated, but it will no doubt be necessary to plan for a way of keeping data in old systems. The problem has been defined but no solutions have been provided.

Keeping these properties leads to an increase in the value and the quality of the documentation produced by Terrassa City Council. For this reason, their protection is absolutely necessary.

Individuals responsible for records maintenance

The Municipal Archives service is organically included as part of the Governance Area, in the Technology, Innovation and Quality Service. The person in charge of the service is the head archivist, who holds a higher diploma in archival science and records management. The head archivist is in charge of the director of the Historical Archives, the head of records management and the head of photographic records management. The director of the Historical Archives and the head of the records management are high-level technicians and the head of photographic records management is a medium-level technician.

Below these managers, the service has a specific high-level technician specialized in archival science for the documentation related to public works and town planning, as well as a high-level technician specialized in archival science (working part-time due to having taken early retirement), two administrators, two assistant archival administrators and an auxiliary. In total, the team working in Terrassa City Council's Municipal Archives service consists of 10 employees.

With the exception of the public works and town planning department, there are no specific archivists in the central departmental archives, and it is the head archivist who determines whether it is necessary to carry out any archival actions and is responsible for judging the urgency of the latter. The head of each department contacts the head archivist when they need to use the service. The head archivist is also responsible for maintaining the different management archives, where current or active documentation is kept.

This is the situation with regard the management of traditional records. With regard to the management of electronic records, the head archivist and the person in charge of records management work together with the department of IT systems in relation to the preservation of databases, and with the department of IT development on the introduction of records management programs and other specific solutions. The director of the Historical Archives is in charge of the assessment, analysis and taking of measures related to long-term digital preservation, and in charge of the definition of Digital Archives, which is still at the design stage.

Existence of maintenance strategies

The Archives service has large deposits where it keeps almost 10 km of documentation dating from the 10th century (in reality, the oldest document is a fragment of liturgical codex from the 9th century, and the first dated document is from 958 AD) to the present day. Terrassa City Council's collection is the most voluminous, with almost 4 km of documentation. The rest of the collection is divided up into the nobility administration fonds, the notarial fonds, the legal fonds, the institutional fonds, the Government of Catalonia's administrative fonds, the associations and entities fonds, the commercial and business fonds, the heritage fonds, the personal fonds and various other collections. At the end of 2011, the Municipal Archives held almost 200 record groups in its deposits. There is currently a lack of space and a new facility is to be opened with the potential for storing 21 km of documentation.

Terrassa Municipal Archives work in coordination with the Vallès Occidental Regional Archives, the latter belonging to the Government of Catalonia, and which in 1982 signed an agreement with Terrassa City Council to guarantee joint action in the preservation, conservation and dissemination of the documentary heritage of the City of Terrassa and the Vallès Occidental Region.

All the electronic records are conserved and managed by the IT systems department. There are different production environments: corporate network units, sector-based IT applications, IT applications by subjects or functions, a BPM system and an ECM system, which includes solutions in EDMS and ERMS. As we say, these all make up an EDRMS. Excluded from this system is the management based on hard discs or optical discs, although they too exist. In all cases, attempts are made to find online, nearline or offline solutions, avoiding digital documentation outside of the EDRMS.

All digital documentation is controlled by periodical, daily, weekly or monthly back-up procedures, depending on the type and volume of the records. The Archives service is allowed to vote on these measures and acts as a consultant, but is not an executor. It is exclusively in charge of the control and management of paper documentation.

Legal Requirements and Constraints

The functions of the Archives service are regulated by Law 10/2001, of 13 July, on archives and records.¹³ This describes the obligations and responsibilities the archives and records management services in detail.

A more general law such as Law 9/1993, of 30 September, on the Catalan cultural heritage¹⁴, defines the moral and legal obligations regarding the documentary heritage, both with regard to its optimal conservation and its long-term preservation. The law aims to avoid the arbitrary, incorrect, negligent or fraudulent treatment of the documentary heritage, in order to protect it from any illicit commercial exploitation.

The selection, sorting and elimination of records is regulated by Decree 117/1990, of 3 May, on the assessment and sorting of Public Administration documentation,¹⁵ by Decree 76/1996, of 5 March, regulating the general management system for administrative documentation and the organization of the archives of the Autonomous Government of Catalonia¹⁶ and Decree 13/2008, of 22 January, on the access to, assessment and sorting of records.¹⁷ The function of these laws is to control any indiscriminate or illegal elimination of public documentation, and indirectly to provide a measure of the amount of preservable documentation within organizations. Moreover, it makes it obligatory for any decision regarding the elimination of records to be studied by the Archives service and for the final decision to be made by the National Commission for Documentation Assessment, Sorting, Access and Elimination.

Normative Requirements and Constraints

Terrassa Municipal Archives' powers with regard to records management are supported by consistent legislation, which allows them to act and make decisions. There are three basic texts: the *Reglament del Sistema Arxivístic Municipal* [Regulations governing the Municipal Archival System], the *Ordenança Municipal per al Govern i l'Administració Electrònica* [Bylaw for Electronic Governance and Administration] and the *Manual de Gestió Documental* [Records Management Handbook].

The *Reglament del Sistema Arxivístic Municipal* [Regulations governing the Municipal Archival System]¹⁸ defines the functions and responsibilities of the Municipal Archives with regard to records management and also for the preservation and conservation of the documentary heritage. It defines a legal framework, which covers all kinds of documentation, irrespective of the medium used. For this reason, the text does not require specific measures with regard to the management of electronic records. This gap is filled by the next text.

The *Ordenança Municipal per al Govern i l'Administració Electrònica* [Bylaw for

¹³ <http://www.arxivers.com/recursos/recull-de-legislacio/detail/18.html> [Last accessed: 2012/02/10].

¹⁴ <http://www.arxivers.com/recursos/recull-de-legislacio/detail/5.html> [Last accessed: 2012/02/10].

¹⁵ <http://www.arxivers.com/recursos/recull-de-legislacio/detail/25.html> [Last accessed: 2012/02/10].

¹⁶ <http://www.arxivers.com/recursos/recull-de-legislacio/detail/21.html> [Last accessed: 2012/02/10].

¹⁷ <http://www.arxivers.com/recursos/recull-de-legislacio/detail/49.html> [Last accessed: 2012/02/10].

¹⁸ Terrassa Municipal Archival System Regulations, approved by the Full Council on 26 February 2004. BOP, no.171, of 17 July 2004, 23p. <http://arxiuunicipal.terrassa.cat/docs/recursos> [Last accessed: 2012/02/10].

Electronic Governance and Administration]¹⁹ circumscribes the powers and responsibility for the management of electronic records to the Municipal Archives service. It obliges the City Council to standardise electronic relations with citizens and guarantee the protection of their duties and rights. Any initiative linked to records management should not compromise the provisions of the Regulation, thus the Archives service also has a major role to play in the area of electronic records. The bylaw introduced prior to Law 11/2007, of 22 June, on citizens' electronic access to public services²⁰, and Royal Decree 1671/2009 developing this law,²¹ is currently being revised in order to bring it into line with this legislation. The Municipal Archives have taken advantage of this situation to define the powers in more detail in the new text.

The third legal instrument is the *Manual de Gestió Documental* [Records Management Handbook].²² This contains instructions for the production, naming and use of electronic records, and also best practices for the use of e-mail. The distribution of the handbook goes hand in hand with the training provided to corporate network units. By the end of 2009, a total of 400 employees had already been trained, and in 2010 training was provided to 400 more, the total making up 60% of the employees at Terrassa City Council. During 2011, the introduction of the Records Management IT program slowed down the dissemination of this handbook.

Thus, the Regulation describes our service, the Bylaw deals with the electronic administration and the Handbook allows us to inform employees about how to improve their services, how to reorganise their work and how to recover information as efficiently as possible, irrespective of the IT applications used.

In addition to the legislation directly derived from or promoted by the Municipal Archives, there are two instruments still in force, which regulate the access to and security of electronic environments and the responsible use of office computer and ICT equipment at Terrassa City Council. The first is the *Document de Seguretat en matèria de dades de caràcter personal* [Personal Data Security Document],²³ and the second the *Normes d'ús dels equips informàtics i telemàtics* [Rules for the use of IT and Office Computer Equipment].²⁴ These two instruments were not based on archival principles and, therefore, do not cover the preservation requirements. This is why they are now being revised, and there are plans for the creation of new preservation and records management criteria.

A final resolution, approved in July 2009,²⁵ allows the Municipal Archives access in

¹⁹ Bylaw for Electronic Governance and Administration. BOP, no. 2, of 2 January 2007, 40p. <http://aoberta.terrassa.cat/documents> [Last accessed: 2012/02/10].

²⁰ http://www.boe.es/aeboe/consultas/bases_datos/doc.php?id=BOE-A-2007-12352 [Last accessed: 2012/02/10].

²¹ <http://www.boe.es/boe/dias/2009/11/18/pdfs/BOE-A-2009-18358.pdf> [Last accessed: 2012/02/10].

²² *Manual de Gestió Documental versió 2.0* [Records Management Handbook version 2.0], approved by Agreement 3001 of the Local Government Council of 16 January 2009, 46p. <http://arxiu municipal.terrassa.cat/docs/recursos/Manual GD Terrassa vf.pdf> [Last accessed: 2012/02/10].

²³ *Document de Seguretat de Dades* [Data Safety Document]. Approved by Decree from the Mayor's Office, no. 7167, of 25 July 2002, 53 p.

²⁴ *Normes d'ús de les eines informàtiques i telemàtiques de l'Ajuntament de Terrassa* [Terrassa City Council's Rules for the use of IT and Office Computer Tools]. Approved by Resolution, no. 13355, of 30 November 2004, 13 p.

²⁵ Resolution, no. 9589, of 23 September 2009.

order to read and write on all the City Council's existing network units in order to improve documentary classification, selectively edit documentation, move records, etc.

This legislation provides justification and accountability for any action carried out in the systems and within the framework of the promotion and introduction of the Paradís system.

Scientific requirements and constraints

All the scientific knowledge applied in the definition and introduction of the Paradís system comes from the long Catalan archival tradition, especially that of the study and analysis of records management systems, which began to be promoted in the 1990s in the first master's degrees in Archival Science offered by the Autonomous University of Barcelona (UAB). Recently, with the incorporation of the School of Archival Science and Records Management of the UAB (ESAGED) into the Catalan education and scientific panorama, the knowledge disseminated on the management of electronic records has improved the understanding and application of practical measures in this sector. Since 2004, ESAGED has also offered a postgraduate degree in Electronic Records Management, based to a large extent on the Paradís system. Finally, the InterPARES project has also allowed for a comprehensive study and analysis of the essential properties of the records produced by Terrassa City Council, and the InterPARES 3 Project has allowed for a complex assessment of all the systems and the completion of this case study. In this respect, both the contextual analysis method and the knowledge generated by this project have been quality requirements.

Artistic requirements and constraints

The nature of the system described in this context study means that this point is not applicable.

Ethical requirements and constraints

Terrassa City Council Municipal Archives service follows the *Codi Deontològic dels Archivists catalans* [Catalan Archivists Code of Practice] drawn up in 1996 by the Archivists-Records Managers Association of Catalonia. This code is in line with the ICA Code of Ethics, approved by the 13th Session of the General Assembly of the International Council on Archives, held in Beijing (China) on 6 September 1996, and has been adapted to bring it into line with the archival and social requirements of Catalonia.²⁶

It is also based on ethical as well as legal principles—a commitment to the protection of personal data and preserved documentation. This protection is derived from the provisions contained in Organic Law 15/1999, of 13 December, regulating the protection of personal data.²⁷ In parallel with the protection of personal data, facilitating public access to preserved documentation is a legal, ethical and democratic obligation based on Article 105 of the Spanish Constitution of 1978. This Article has not been subject to

²⁶ <http://www.arxivars.com/publicacions/colmleccio-textos.html> [Last accessed: 2012/02/10].

²⁷ <http://www.boe.es/boe/dias/1999/12/14/pdfs/A43088-43099.pdf> [Last accessed: 2012/02/10].

any legislative development to bring it into line with the requirements of a modern democratic society in either Spain or Catalonia, and this is an urgent need that the various governments in power since 1978 have not addressed satisfactorily. The desire for an Organic Law on access as well as a much-needed law on administrative transparency forms a backdrop to the actions carried out by the Archives service, since they are the gateway for accessing a great deal of documentation produced by organizations. The professionals in this service have to solve many of the doubts and incongruities of the current system.

In the case of any doubt, however, the Terrassa City Council Archives service favours the democratic right to access instead of any impediment based on subjective criteria.

Technological Requirements and Constraints

Despite the fact that the Paradís system can deal with any entity, be it analog or digital, it was really designed to solve digital problems. The system manages a series of interconnected subsystems, which allow for documentary production and also the exchange and usability of records. This control of all the subsystems also guarantees reliability and trust in all the digital entities within them.

The Paradís system is made up of the following subsystems: Protocol Register subsystem; Business Process Management (BPM) subsystem; Records Management subsystem; Physical Archives Management; Digital Archives subsystem.

With the control and management of the five subsystems, we guarantee comprehensive control of Terrassa City Council's documentary production. In no way does this exclude the possibility of incorporating additional subsystems if they are considered appropriate. We shall now analyse each of these subsystems, explaining their status before the system was defined, their current status, and how they will develop in the future.

Protocol Register subsystem: the current Protocol Register application has been active for over seven years now. In light of new legislation, and within the framework of the introduction of the electronic administration, changes have been made to adapt it to meet the new requirements. In the face of the latter, a thorough revision was carried out, which allowed for an assessment of the current functionalities, as well as an analysis to find out whether this application is sufficient for addressing all the needs determined by the legislation, and above all to see whether it can be used to apply records management measures for cases when citizens express their wishes to the administration. The steps followed will be described in detail in the specific study of this record.

Business Process Management subsystem: the current Business Process Management subsystem is also being revised. It is made up of a series of applications produced by the City Council's own development department. The additional maintenance and development tasks have turned the current subsystem into a set of applications with serious operational problems. This set of applications was named Corporate Applications and is used in a controlled environment. The different

applications have allowed for the electronic management of various files. We are not speaking about electronic files here, but rather the electronic management of files. In theory, the subsystem would allow for the use of electronic signatures, and also the uploading of electronic records. However, electronic signatures have not been introduced actively in all procedures, and the uploading of documents is not carried out systematically as an indispensable condition for finalizing a procedure. Thus, automated procedures can never be dealt with totally electronically.

At present, files managed electronically are not encoded following the classification scheme. Therefore, there is no uniformity in the attribution of some of these files to records series. Due to this malfunction, The Municipal Archives service is carrying out a study in which files and records series are associated under the same encoding, whilst various electronic procedures that were allocated the file's name without being the file itself, are standardized. This analysis will allow us to begin to introduce a new Business Process Management (BPM) system, acquired recently, which will replace the current corporate applications. Thus, the main objectives of introducing this system are:

- To classify files generated in the new BPM system under the corporate classification scheme.
- To carry out a catalogue of procedures, which allows each records series to be associated with its process or procedure and for the way in which it is carried out, verified and audited to be recorded.
- To help simplify administrative procedures and reduce the number of processes currently carried out in Corporate Applications for controlled procedures.
- To allow for the generation of electronic files with electronic signatures, and all documents to be generated entirely in an electronic format.
- To update the Oracle database in order to continue with the old subsystem currently in use, whilst the data and documents are migrated to the new BPM system.

Due to the need for a progressive standardization of the work processes in controlled procedures, this subsystem will be one of those that will develop most over the next few years. Current legislation requires the gradual simplification of work processes, and this can only occur if the latter are reviewed and completely redesigned.

Records Management subsystem: the new Records Management subsystem aims to replace the current organization of shared network units. The latter will be structured using Microsoft Windows Explorer and be used by departments, administrative units or specialized user groups when required. This was also the working environment chosen for the introduction of the *Records Management Handbook*. This training process is very important because it allows us to introduce users to the new subsystem, which is being developed with the help of the commercial product, the Oracle Universal Content Management (UCM) platform, also acquired in 2010. This product is an ECM (Enterprise Content Management) suite designed to improve management, guarantee the preservation and enhance the usability of information produced by an organization. In reality, the product aims to be an EDMS (Electronic Records management system) designed for managing office computer documents as well as managing digital records of all kinds, allowing for indexing and categorizing processes, and the configuration of a production environment that substantially improves on traditional network units. The aim is to improve information exchanges and searches, to optimise the production and use

of different versions, and to optimise resources by applying retention and elimination policies.

We stress the fact that for the product to work to its full potential, it needs to be fully parameterized, and not simply operate with its default settings. Along these lines, the Municipal Archives service has decided to introduce the classification scheme in the UCM and to define any use based on records management corporate criteria. Outside of this context, no one should use the records management system.

The pilot scheme for the records management system is being run by the Municipal Archives and the Census Department. It is being used in the Municipal Archives service because it is essential that those in charge of training the other users have first-hand knowledge of how the product works. It is being used in the Census Department due to the high volume of information products they manage each year and because, at the same time, this department has a direct influence on citizens through the Customer Service and the Protocol Register services. In the initial phase, the UCM product will allow us to define production up to the compound documentary unit level. The definition of the individual documentary units it contains has been left to one side pending a second phase. It should be borne in mind that the context in which the records management system is being used is that of documentation that is not structured into network units, where the concept of file or dossier is reduced to the creative, random use of Microsoft Windows folders or directories. Therefore, additional phases need to be considered in order for the real needs of each service, department or unit to be defined.

As mentioned earlier, we have the classification scheme for the instruments that will allow us to classify unstructured records. We shall also incorporate the retention, availability and elimination schedule as well as the security and access scheme. These metadata will be incorporated into the descriptive profiles of each documentary unit. For the design of these profiles, metadata vocabulary specific to the Paradis system will also be introduced. Version 1.0 of these instruments is already available. Due to their flexible nature, they will continue to be modified and developed as their effective introduction into all the services becomes possible.

The UCM product initially contained a Records Management (RM) service, which allowed for the introduction of specific measures and rules relating to the records produced. However, it was considered to be insufficient for the application of rules that allow for a comprehensive control of the life cycles. Moreover, since the UCM product only manages digital entities and not physical items, this excluded the possibility of managing hybrid files or entities. This Universal Records Management (URM) product was therefore acquired, as it is designed for the comprehensive management of documentation in other non-electronic media.

Physical Archives subsystem: managing hybrid production is, without a doubt, one of the greatest difficulties faced in environments in which electronic signatures have not yet been fully introduced, and where priority continues to be given to documentation signed on paper. This reality will no doubt continue for some time. Therefore, it is important to find a solution. In this respect, the acquisition of the URM was absolutely essential. The product is being introduced in the Municipal Archives with the following three objectives:

- The computerization of records management, a priority that will produce real

improvements in our services.

- The establishment of a precise relation between the various components in different media, which make up electronic files, so that the rules for retention and elimination can be applied globally and not just to paper documentation. This point no doubt has an impact on the optimization of computer storage resources.

- To act as a test bed. Management and preservation policies can be applied initially in URM and, once their usefulness and functionality has been proven, they can be introduced with a guarantee of success with UCM without causing problems in active production environments.

Digital Archives subsystem: this subsystem is at the design phase, since there has never been anything like this in Terrassa. The solution proposed by the iARXIU system seems to be the model for finding ideas and the most suitable method.²⁸ We say finding, because we believe that in relatively large institutions and organizations, the responsibility for the long-term preservation of documentation cannot be avoided. The only steps that have been taken are the preparation of the new architecture for the incorporation of the Digital Archives subsystem, when necessary and appropriate. For the meantime, the back-up subsystem is the only existing method for long-term preservation at Terrassa City Council. A collaboration agreement has been signed with the Catalan Certification Agency (CatCert) for the use of the iARXIU system in test bed environments. The first thing to be confirmed was that Terrassa City Council's current production subsystems are not yet able to transfer the production of electronic files to iARXIU. So, it is all limited to the transfer of individual documentary units. This factor meant that a slow development policy had to be established in a tailor-made subsystem. On the one hand, an unnecessary short-term investment was avoided and, on the other, it led to a more detailed definition of our requirements and needs.

DIGITAL ENTITIES UNDER STUDY

General description of the activity

In the Protocol Register subsystem we have described as one of the parts of the Paradís system, we will find the document that is the object of this case study. We shall not analyse the subsystem completely because it is still incomplete. The design of the Paradís system anticipates the existence of a Protocol Register subsystem, which will allow for the complete management of incoming and outgoing documentation in both analog and digital formats. We are currently in the middle of a digital transition process. In other words, the possibility of digitizing documentation in the Protocol Register offices is being studied, and this could perhaps be classified and managed by the instrument itself and also be derived into other internal subsystems. Moreover, the Protocol Register subsystem also includes its relation with the so-called 'Electronic Portal', in other words, a web portal contemplated in Law 11/2007 giving citizens access to electronic administration. This portal is an IT application on its own. However, despite connecting with the Protocol Register, it is currently autonomous. So, for these reasons

²⁸ <http://www.iarxiu.eacat.cat/> [Last accessed: 2012/02/10].

we decided to deal with one part of the Protocol Register system and not the entire subsystem, since it is currently under construction.

The Protocol Register of incoming and outgoing records is the record that is the object of this case study. This record has been produced since 1997 as an IT application, so it must be considered a digital entity. The Protocol Register relates consecutively a series of registry entries, revealing the wishes expressed by citizens, in our case with regard to Terrassa City Council. To each of these entries a series of documents can be added, which are useful for carrying out the desired legal action. This means that the Protocol Register records also produces and manages other records. For this reason, and for the purposes of this study, we shall consider the following records to be the object of our case study: (i) the entire Protocol Register is a record; (ii) each unique and individual registry entry can be considered a record; (iii) the documents associated with a registry entry are also records.

The main functions of the Protocol Register are: (i) to leave written proof and evidence of one or more citizens' wishes with regard to a public administration, so that the latter can carry out a legal action for the citizen(s); (ii) to ensure that the expression of the citizen's wishes has a starting point and to give it a definite date in order to determine a time when the legal action started, through a procedure, for a similarly determined period of time; (iii) to start the procedure that has to satisfy this expression of wishes through a documented legal action and/or the provision of a service; (iv) to be a public record and, therefore, to enjoy credibility within the legal system to which the public administration belongs.

The importance of the Register within the records management system can be described in the following manner: (i) it is the gateway to administrative procedures, and not started *ex officio*, but rather it is carried out at the request of a citizen; (ii) it starts the circulation of documents and files within the record creation system; (iii) it can designate categories and classify certain records and/or additions to records at the start of their administrative life cycle.

Type of activities

The Protocol Register is the gateway to a legal relationship with the administration. In this respect, it is the sieve that allows different manifestations of citizens' wishes to be distributed within the organization. This is the main activity that it carried out once every registry entry has been satisfactorily written, classified and completed. Many activities that start up are based on a City Council register, but this is not the case of all the activities that can and should be carried out. This is why this study is doubtful of the Protocol Register's capacity, with the legal powers it possesses, to be able to control all records generated within organizations.

Similarly, the Protocol Register is the portal for resolution notifications that the administration sends to citizens. The reliability of both incoming and outgoing records is based on accurate, reliable dates. This element is essential, even to the detriment of the precise, complete writing of the notification itself, as long as this imperfect writing does not affect basic data such as the date or the data identifying the applicant, for example.

Documents resulting from activities

As we mentioned earlier, the records resulting from the registration activities are: (i) the entire Protocol Register; (ii) each of the registry entries that it contains; (iii) any records associated with a registry entry.

The first two documentary entities are digital, basically data that are represented through a form with preset fields. As for the third group of entities, they are generally office computer records or image records, in other words data represented in a data format that either enter in digital format or are presented in analog format and are digitized.

The first two form a group of data supported by an IT application and a database where each line comprises one entry. This entry can be invoked. In this case, the data are represented on screen in the same form as the one they were initially compiled in. This representation can be considered as the original one for this entry, but there is a serious problem with its usage if it needs to be used for legal purposes. If a record needs to be used for any legal purpose, an authentic copy in a format such as .PDF, or else a paper copy can be produced. For this reason, we consider that the line corresponds to an entry as an *in fieri* record, or potential record, since it is represented in a format other than the original one, which can really permit the production of evidentiary documents, for example.

As for records produced by citizens, once digitized, they are added to another field on the line corresponding to the appropriate entry in the same database. This database acts as a repository.

Existence of maintenance strategies

The entire Protocol Register is supported by a database. Spanish legislation does not contemplate the taking of steps to stabilise this Register as Italian legislation does. Since antiquity, the latter stipulates the opening of the Register on 1 January and its closing on 31 December. In Spain and Catalonia, this obligation does not exist, so electronic registers based on the provisions of Law 30/1992 exist in computer applications without any data having been extracted. For this reason, it is far too common to find administrations that have not taken steps to carry out really consistent preservation. At the end of the day, it is a Register that continues to be in a permanently active phase.

As we described in the diplomatic study of the Protocol Register, the only step that was taken to try to stabilise its contents was the creation of a document in .PDF format annually, with part of the information contained in each of the entries, and using a automated procedure as an electronic file, which ends with an electronic acknowledgement generated by the organization's secretary. This measure was implemented from 2006 to 2010 and proved totally imperfect and incomplete. Therefore, it is no longer carried out. In the end, the procedure did not involve any data extraction or elimination; so today other steps can be taken without any data having been lost.

The long-term preservation option that is being calibrated is the migration of data to a new application in order to ensure they continue to be available at all times. It was considered that data extraction in order to configure a preservation application or an

emulation of the application in a nearline or offline environment is, for the moment, unnecessary. One element that must be taken into account when speaking about the long-term preservation of a record is whether we know for sure that it is a record that will be used in the future. Therefore, the question is: what use is made of the Protocol Register when the information has exceeded the administrative validity period of four to five years? The reply is that it is not used very often. The experience with consultations of entries in the Protocol Register in paper format kept up to 1994 indicates that in two years—from 2009 to 2011—only two consultations were made. It is true that the most up-to-date data in the Protocol Register may be consulted more frequently. However, it does not constitute a critical record that justifies complex solutions.

The measures adopted have been aimed at improving the current application with the intention of migrating to a new application when one is found on the market that is considered suitable. The creation of a new application by the IT development department was not considered, so as to avoid any links to the existence of the people who designed it and have this type of product. In the studied carried out, it was seen that there was a need to document the production of new applications or applications purchased, precisely in order to ensure that they will continue to function, even in the absence of the persons who created them or know how they work.

Legal Requirements and Constraints

The Protocol Register seen as an instrument that has to manage the access on a specific date to documents within an administration is regulated by the following legislation:

The Spanish Constitution, Article 105.²⁹

The Catalan Statute of Autonomy, Article 159.³⁰

Royal Decree 2568/1986 approving the regulation of the organization, functioning and legal system of local corporations, Article 151.

Law 30/1992, on the legal system of public administrations and common administrative procedure, Articles 38 to 45.

Decree 360/1994, of 15 December, on the registration of incoming and outgoing records of the Government of Catalonia, Articles 3, 4, 5, 6.1 and 6.2.

Law 11/2007 on citizen's electronic access to public services, Articles 24 and 25.

Decree 56/2009 on the promotion and development of electronic measures in the Government of Catalonia, Article 36.³¹

This is the legislation currently in force and that must be complied with, allowing for the management of the Protocol Register in both analog and digital formats. Since Law 11/2007, the obligation of making the electronic Protocol Register more reliable has increased, in parallel with the exploration for new functions for this tool. Nevertheless, it is a documentary tool that is not regulated very strictly or in a very detailed manner, and has general terminology that is often confusing. This has meant that at a local level

²⁹ http://noticias.juridicas.com/base_datos/Admin/constitucion.html [Last accessed: 2012/02/10].

³⁰ <http://www.gencat.cat/generalitat/cat/estatut/> [Last accessed: 2012/02/10].

³¹ <http://www.gencat.cat/diari/5360/09096051.htm> [Last accessed: 2012/02/10].

regulations and operating instructions for each Protocol Register have begun to proliferate.

In the case of Terrassa, due to the need to adapt the Register to the new legislation and, naturally, thanks to the boost given by the Archives services in the study of the InterPARES case, various legal products were created in 2010.

Normative Requirements and Constraints

Terrassa City Council's adaptation to new legislation led to the approval on 26 July 2010 of the *Instrucció de serveis per a la gestió i funcionament del Registre d'Entrada i Sortida de Documents* [*Instruction on Services for the Management and Operation of the Register of Incoming and Outgoing Records*]. This has been the internal regulation for applications since then and was the result of research carried out by a team of ten people, made up of archivists, records officers, lawyers, IT technicians and registry civil servants.

This is an internal regulation, which has been taught to all workers authorized to work with the Protocol Register. More specifically, various training sessions carried out at the end of 2010 allowed this instruction to be disseminated to almost 600 City Council employees.

Scientific requirements and constraints

Protected by Catalan archival science, little research has been carried out on the Protocol Register as a record. In fact, even the archival legislation has left out a fundamental element: considering the Protocol Register a permanent conservation record. Our InterPARES case study in 2008 led to various training initiatives and scientific research articles published in *Lligall*, the technical journal of the Archivists-Records Managers Association of Catalonia.³²

Artistic requirements and constraints

The nature of the documents in the case study means that this point is not applicable.

³² We would like to highlight the article by Joan DOMINGO BASORA. 'Els registres generals d'entrada i sortida de documents de les administracions públiques amb relació a la gestió documental' [Protocol registers for incoming and outgoing records in public administrations with regard to records management] *Lligall*-30, 2009, p.16-51, and the article by Karen MUNTÉ VAN ENKHUIZEN. 'Auditoria del Registre General d'entrades i sortides de documents de l'Ajuntament de Santa Perpètua de Mogoda' [Auditing of the Protocol Register of incoming and outgoing records at Sant Perpètua de Mogoda City Council]. *Lligall*-34, 2012 (in press). This second work is a summary of the work for a master's degree carried out by Karen Munté and supervised by the author of this text. Some of the most relevant conclusions include the impossibility of considering the same preservation strategy in the case of a federated Protocol Register of various administrations. In other words, the impossibility of one administration registering entries for a small city council or vice versa. If the two administrations do not take similar steps, there is an obvious risk of entries being lost in one of the two Registers, which could for example be detrimental for the administration responsible for the legal action to be carried out.

Ethical requirements and constraints

Despite the fact that the various civil servants in the Protocol Register have always been willing to do their job correctly and comply with the legislation, the result of this—at least as far as the Protocol Register is concerned—was not ideal up to the time of our study. Firstly, problems were found with the quality of the data, random, creative classifications, lack of data, etc. Nevertheless, people could contest this lack of quality saying that the function carried out as well as possible and the City Council always used to give a satisfactory response to citizens' demands.

This reality and the lack of concretion in the manner of describing the incoming and outgoing records meant that the Archives service tried to contribute their criteria to improve the quality of the Protocol Register in order to: (i) avoid entries being described using arbitrary criteria; (ii) avoid continuing with the 'we've always done it this way and it sort of works' culture; (iii) modernise the management and writing of the Protocol Register in order to adapt it to the requirements of the current legislation for promoting the electronic administration; (iv) provide specific measures to improve the quality of entries, to promote a homogenous classification strategy, to prepare the Register by an organized (and more than possible in the near future) digitization of the incoming records and offer adequate training to all employees.

The improvements have been seen in various aspects but above all in a greater commitment by civil servants in the Register offices to creating a high-quality product that leads to a more efficient management, in the saving of response time to citizen requests and to a raising of the awareness about the work they do. Bearing in mind that they are the representatives of the administration with notarial capacity for separating the original, authentic documentation in the incoming phase, the improvements have been essential.³³ The ethical commitment required for a more just, democratic and transparent administration has thus been improved thanks to the project initiated by the Archives service.

Technological Requirements and Constraints

The computer application that supports the Protocol Register's functions is a tool designed in 1997 using the Uniface programming language. It is an application designed by a group of IT development technicians, which has evolved over the years in order to incorporate the improvements called for by its use and by changes in the legislation. Since the current interface is the same as the one designed in 1997, it can be considered 'unfriendly' despite being functional for basic requirements. The application was not changed greatly between 2003 and 2007, and is now frankly outdated since it has not been adapted to recent technological changes.

The computer application uses the data contained in an Oracle relational database. This consists of a table plus the multiple tables created inside this large database. Disadvantage: it all depends on a single database. Advantage: the tables can be connected to other tables and the data can be linked up.

³³ On this notarial capacity we recommend the reading of the Diplomatic Analysis of the Protocol Register as a record in which this aspect has been developed in greater depth.

At present, the advantage of having the data in the same table structure is considered positive and this is why the Oracle database was updated to a newer, higher version. This conversion was not motivated by the requirements of the Protocol Register but rather by the needs of the other applications used within the architecture of the City Council's systems. However, both the interface and the functionalities offered by programming with Uniface can be considered obsolete.

In the light of the needs presented by the legislation on electronic administration, in 2010 a series of technical improvements at a technological level were planned in order to adopt one of the two solutions being considered: (i) to continue with the same application but adding new, improved features; (ii) to opt for a new commercial computer application. The management of the Technology, Innovation and Quality service decided to continue with the same application with small functional changes and to explore, in more detail and taking more time, to see whether there is a commercial solution that can respond to all the requirements presented. Today, in 2012, we still have solution (i) and the work carried out to see what is available on the market has not yet produced any positive results.

All the data produced by the application are displayed in a table of relations in Oracle format. The application allows for the inclusion of associated records in both image and text formats, but above all .PDF and .DOC, as contemplated by current legislation. Other formats are admissible if the documentation they contain requires it, for example in the case of AutoCAD or georeference formats. The record remains intact within the table of relations until it is called up by the relevant management application.

The report produced by the working group on the functional and technological requirements, resulting from what the InterPARES case study project proposed in 2010, can be consulted in detail in Appendix 1 of this contextual analysis.

Appendix 2: Functional and technical requirements of an electronic Protocol Register for Terrassa City Council.

FUNCTIONAL REQUIREMENTS:	ORIGIN	REQUIREMENT	COMPULSORY	OPTIONAL	CURRENT APPLICATION	FUTURE APPLICATION	DEFINITIVE DEFINITION OF THE REQUIREMENT
REQUIRED FORM							
Entry number.	Law 30/1992 (Art. 38.3)	Single identifier in each entry.	Yes	No	Yes	Yes	Number that indicates the order of the incoming / outgoing record without requiring it to be correlative. The incoming / outgoing records must be identified univocally with a unique reference.
Date, time and place of presentation.	Law 30/1992 (Art. 38.3)	To recognise precisely the date, time and place the documentation is presented, which is required by the Protocol Register, but which does not involve its registration yet. In the case of documentation sent by post, the date of presentation is the date it is presented at the Post Office.	Yes	No	Yes	Yes	Date (DD/MM/YYYY), time (HH/MM/SS) and place of presentation of the documentation that has to be registered. Clearly define the channels that will need this information in the form.
Date, time and place of registration.	Law 30/1992 (Art. 38.3) and RD 4/10 (Art. 15.2) National Interoperability Scheme	To recognise precisely the date and time when the registry entry is made.	Yes	No	Possible	Yes	Date (DD/MM/YYYY) and time (HH/MM/SS) when the registry entry is made. This information must be synchronized with the Royal Institute and Observatory of the Spanish Navy official time.

Brief description of the content.	Law 30/1992 (Art. 38.3)	Clearly define the object of the registry entry. Either in registry terms or a complete description.	Yes	No	Yes	Yes	Adjusted description based on the subject of the correctly chosen register, and automated description whenever possible based on the selection of the registry subject.
Identification of the natural person or legal entity concerned.	Law 30/1992 (Art. 38.3)	Identification of the natural person or legal entity concerned, or of his justified representative, presenting the documentation.	Yes	No	Yes	Yes	First name, surname(s), NIF/CIF of the natural person or legal entity concerned, or of his representative, presenting the documentation. If it is an on-site or telephone registry entry, and not a communiqué, the application should link the entry with the citizens' file or record their details in this file if they are not already on it.
Identification of the natural person or legal entity receiving the documentation or communiqué.	Law 30/1992 (Art. 38.3)	Recognise at all times the administrative body to which the documentation or communiqué provided to the register is addressed to. Clear definition of the managers with the powers to carry out the administrative action.	Yes	No	Yes	Yes	Identification of the administrative body that has to manage the relevant action and will have to receive the documentation.
Controlled description of the incoming records.	Working group	Detailed definition of each of the documents presented. The registry entry, by definition, gives a brief description of the legal action or the service requested. However, it does not detail the documentation provided to justify why it is required. A precise list is needed, mentioning the documentation provided.	Yes	No	Possible	Yes	Subform or field in the form of itself, which allows details of the documentation provided to be entered, using controlled vocabulary that describes the record at an individual documentary unit level (document).

Classification code for the records series activated.	Working group	Classify each registry entry univocally in order to facilitate the selection of the managers who are to address each of the expressions of wishes, and thus in order to be able to work with these entries (if applicable) from the records management system.	Yes	No	Possible	Yes	Classify univocally each of the registry entries carried out according to Terrassa City Council's Corporate Classification Scheme.
Transmission mode.	Proposal by Luciana Duranti (1997)	Recognise at all times which are the incoming and outgoing record channels for the documentation provided or the communiqués sent. It is not necessary to include the e-mails because the office computer channel constitutes the Electronic Portal.	Yes	No	Yes	Yes	Complete list of the possible documentation or communiqué presentation channels permitted by law.
Data of the presenter.	Working group	Have enough fields to allow for the identification of the person providing the documentation when they are not its owner or the person with powers to present it.	No	Yes	No	Yes	Name, surname and DNI (identity card number) of the person presenting the documentation.
Common Electronic Register form proposal.	See 'Sheet 3'	Respect the fields in the form proposed in the Common Electronic Register model.	Yes	No	No	Yes	Do not forget the fields proposed in the 'Common Electronic Register'.
CLASSIFICATION OF THE ENTRIES							
Linking of the records series of the registry entry to the Classification Scheme. Classification of the electronic records in accordance with a plan adapted to the functions of Public Administration.	Working group and Art. 21 National Interoperability Scheme	Associate the Municipal Documentation Classification Scheme to the defined registry subjects.	Yes	No	Possible	Yes	
Improvement in the selection of the subject in order to avoid data input errors. Hierarchical level presentation. Semantic searches in similar cases.	Working group	It must be possible to automate most of the data entered. To have a combination of databases that allows the form to be filled in easily. To avoid possible ambiguities, errors or gaps in the data entered.	No	Yes	No	Yes	Link the tables of registry terms with those in the Classification Scheme, establishing automatisms.

Consistency of data entered.									
Self-tuition system to avoid errors when inputting subjects in the registry entry through the knowledge obtained from the changes to the subject by the Destination Service.	Working group			No	Yes		No	Possible	Register of errors and their corrections, which allow them to be corrected automatically when they reappear.
Creation of an electronic document for each entry.	Proposal by Garofalo-Giuvia (Italy)			Yes	No		No	Yes	Automatic creation of an electronic receipt for each entry that is sent as a proof of registry to the applicant's e-mail address. It is assumed that the office computer channel is used for the applicants.
DIGITIZATION AND ATTESTED COPIES OF THE DOCUMENTATION PROVIDED									
Electronic certification of electronic documentation received.	Law 11/2007			Yes	No		No	Yes	To be able to electronically certify incoming documentation for registration, generating authentic copies of these records for administrative use.
Electronic Stamp on electronic documentation sent and received.	Law 11/2007			Yes	No		No	Yes	To associate electronic signatures to electronic or digitized records.

The presentation receipt must contain the hash values of documents provided in the Incoming Entry Register.	Working group	To have a cryptographic method in order to guarantee the originality and authenticity of the document presented whilst it is being processed.	Yes	No	No	Yes	The list of documents included in the procedure must contain a cryptographic method that ensures the originality of the record (calculation of the hash values of the documents presented). This is necessary both for records digitized on site and for records sent via the electronic portal.
Digitization of records in paper medium.	Article 35.2 of Law 11/2007	To have the equipment required for the organized, effective and rapid digitization of incoming paper documentation, which needs to be managed fully electronically.	Yes	No	No	Yes	The Protocol Register application must be able to capture digitized records from a multifunction team and add them to the relevant registry entry.
Association of metadata in the process of digitizing paper records.	Art. 24 National Interoperability Scheme v 15/07/09	The assigning of metadata that facilitate the management of incoming electronic records.	Yes	No	No	Yes	Allocation of metadata to digitized records and incoming electronic documents in order to improve their management in electronic environments (especially the BPM and records management system).
AUTHENTICITY AND RELIABILITY CONTROL							

Validation of the representative in office computer procedures	Common Electronic Register	Validation of the representative when the IT systems for checking and validating are operative through: 'The authorized representation system regulated by Article 23 of Law 11/2007', 'Its accreditation by the authorization register regulated in Article 15 of the aforementioned Royal Decree'.	No	Yes (when the IT systems are operational for the verification)	No	Yes (when the IT systems are operational for the verification)	Validation of the representative via office computer.
Integration with Lightweight Directory Access Protocol (LDAP).	Working group	To identify automatically the manager authorized to carry out the corresponding administrative action. The LDAP can allow for the allocation of permits.	Yes	No	No	Yes	To ensure that LDAP is not just a passive agent, and when it is asked for a permit for someone in order to allow them to use an application, it is not necessary to ask permission from the application. Therefore, the LDAP must provide the permit.
Single Sign-On (SSO).	Working group	To avoid a user having to ask for authentication each time they change system.	Yes	No	No	Yes	To use a single action of user authentication to permit a user to access to various systems.
Control over the capacity for modifying registry entries.	Working group	To avoid the modification of a registry entry once it has been made. Modification is only permitted, justified appropriately through a specific procedure.	Yes	No	Yes	Yes	To avoid the modification of a registry entry. Management of an electronic procedure, associated with the relevant registry entry, which leaves evidence of the modification when it is appropriate and legally permissible to do so.

Formats of electronic records and images in accordance with the National Interoperability Scheme	Law 11/2007	To accept the formats of electronic records and images permitted in the National Interoperability Scheme. And to adapt to their modifications.	Yes	No	No	Yes	To have the correct visual display units for reading the text and audiovisual formats permitted by the National Interoperability Scheme properly. The capacity to incorporate the suitable visual display units gradually.
The providing of complementary electronic records after carrying out the procedure referring to the no. of the register. Logical link between related registry entries.	Order PRE/3523/2009 Common Electronic Register	To be able to provide documentation related to procedure that has already begun.	Yes	No	No	Yes	To be able to provide documentation related to a procedure and a registry entry generated by the reception, linked to an existing registry record.
The electronic record will be conserved in the format it was created in, sent or received, and preferably in a format that corresponds to a standard OpenDocument format, which preserves the integrity of the contents of the record, the electronic signature and the associated metadata over time.	Art. 23 National Interoperability Scheme v 15/07/09	To conserve the electronic records received in their original format as long as it is a format accepted by the National Interoperability Scheme, irrespective of the typology of the format (open, proprietary, etc.).	Yes	No	No	Yes	Conservation of the original format of the electronic records received.
To avoid the risk of obsolescence of the format of the electronic records through standardized procedures for authentic copies of documents.	Art. 23 National Interoperability Scheme v 15/07/09	To avoid the obsolescence of the electronic record formats that have been received by the Incoming Record Register.	Yes	No	No	Yes	To leave evidence in the incoming record register of the precise list of the documents provided and of the formats in which they were presented, irrespective of the use that may be made of them and the policy used in the BPM and/or the records management system.

Audit trail: auditing of the actions carried out within the system.	Essential properties of the Electronic Protocol Register (EPR)	Auditing of all the actions carried out within the Protocol Register system, as well as the people who carry them out. In order to be accountable at all times for errors, inappropriate use or fraud.	Yes	No	No	Yes	Control of any action carried out in the Protocol Register. It is necessary to know the day and the time when an action is carried out and the person/people involved. To conserve the logs of each movement for a defined period of time.
Control of access to the Protocol Register application.	Essential properties of the Electronic Protocol Register (EPR).	To control the people who interact with the Protocol Register.	Yes	No	Yes	Yes	Control of access to the people who have to use the Protocol Register application.
Time stamp module (protocol RFC 3161).	Essential properties of the Electronic Protocol Register (EPR).	The use of a time stamp authority to guarantee the existence of data at a specific time and date.	Yes	No	No	Yes	Time stamp applicable to incoming electronic records.
TECHNICAL REQUIREMENTS							
SMS alert message.	Common Electronic Register	To communicate with the concerned party via SMS regarding incoming/outgoing entries, by way of a receipt.	No	Yes	No	Yes	To set up the communication option with the contact person via SMS.
Synchronization of the official time for electronic public services.	Royal Decree 4/10 (Art. 15.2) National Interoperability Scheme	To synchronise the date and the time with the body that defines the legislation currently in force.	Yes	No	No	Yes	Date (DD/MM/YYYY) and time (HH/MM/SS) when the registry entry was made. This information must be synchronized with the Royal Institute and Observatory of the Spanish Navy official

									time.
Office computer transmission and receipt of registry entries, written messages, communiqués and documents.	Law 11/2007	Office computer transmission of a document that represents the complete information for a registry entry between the relevant administrations (with which an agreement has been signed).	Yes	No	No	No	Yes	Yes	Possibility of the safe transmission and receipt of data or a record with the complete information for a registry entry, signed electronically, to or by an administration that is authorized for this subject and must be informed.
Association of minimum compulsory and complementary metadata through the life cycle of the records provided and incorporation into the corporate metadata schema.	Art. 21 National Interoperability Scheme	To facilitate the increase of metadata on the documentary profile of electronic or digitized records that are entered into the management systems (BPM and/or records management system), in order to be able to manage their life cycle and apply suitable records management measures.	Yes	No	No	No	Yes	Yes	To produce electronic or digitized records with a metadata profile in XML, which can be extended at any time.
Connection with any of the corporation's internal applications. Service bus.	Working group	To allow the transmission of information on registry entries and documents entered into BPM and records management systems.	Yes	No	No	No	Yes	Yes	To link the registry entry and associated documents with the BPM and/or records management system through web services.
Connection to the SARA (public administration) network.	Art. 13 National Interoperability Scheme and Art. 43 Law 11/2007	To facilitate the interconnecting of Public Administrations.	Yes	No	No	No	Yes	Yes	Connection to the SARA network whenever necessary.
ACCESSIBILITY AND USABILITY									

Access by citizens for viewing the documents they have provided through the Protocol Register in order to carry out an administrative action.	Art. 21 National Interoperability Scheme	Complete and immediate access to documents provided through online consultation methods, which allow for all the details of record contents to be viewed, recovered, copied, downloaded online in the original formats and printed on paper. This system will allow consultation during the entire period in which the electronic signature, the time stamp and the metadata associated with the record are conserved.	Yes	No	No	Yes	To allow remote access to the documents provided (whether they were digitized or provided in electronic format). The user must be able to recover the records through authentic copies. This system will allow consultation during the entire period in which the associated electronic signature, the time stamp and the metadata associated with the records are conserved.
Level AA web accessibility.	W3C	To guarantee the accessibility level required in the European Union.	Yes	No	No	Yes	Level AA web accessibility.
To integrate advanced register search systems.	Working group	To have different ways of recovering the information required.	Yes	No	No	Yes	Specific search engines especially for form fields: 'brief description', 'list of documents provided'. Also the possibility of searching within the documents provided. In the other form fields, the search engines can be less complex.
Permanent updating of the National Interoperability Scheme criteria.	Art. 29 National Interoperability Scheme	Permanent updating of the National Interoperability Scheme criteria.	Yes	No	No	Yes	To have an application that is sufficiently flexible to allow it to adapt at any time to any new requirements defined in the National Interoperability Scheme.
LONG-TERM PRESERVATION							
Integration with iARXIU.	Working group	The possibility of integrating the Protocol Register application or the relations table that	No	Yes	No	Yes	To be able to encapsulate the database associated

		it is made up of (irrespective of the application) into the long-term preservation requirements of the iARXIU system or any other safe repository system.						with the Protocol Register application with the appropriate compilation of the METS and PREMIS long-term preservation metadata (as well as our own metadata).
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Appendix 3 –Case Study 03- The Protocol Register of Terrassa City Council: Records Research Questions

Research Questions

1. *Which activities generate these digital records?*

The Protocol Register activates legal actions which are documented inside the organization, making it possible to offer services and/or documented services to the citizens who have requested them. It is the gateway to the administration to a series of statements of intent from citizens that should be met. In itself, the Protocol Register performs a single juridical action—documenting this statement of intent on an established date in order to activate a particular activity. The established date makes it possible to determine a point in time when a process or procedure begins that may end up producing records during another particular period. It locates that statement of intent in space and time and registers it so it appears in a record, the Protocol Register, which is a public document.

2. *For what purpose(s) are these digital records created?*

The Protocol Register, considered as a single record, is intended to register all statements of intent made by citizens via this channel of access to the administration.

Each entry is aimed at satisfying a service or beginning a documented legal action.

Additional documentation provided by some citizens is used to provide juridical, legal or informative support for their statement of intent. This documentation can be presented as a legal document, evidence or an instrumental document and its status of transmission can be original, authentic copy or copy authenticated by the register office civil servants. Under the Spanish legal system, such an authenticated copy is known as *compulsa*.

3. *Who are the intended users of these digital records?*

All three types of record, the Protocol Register, each individual entry in it and the documentation associated with them are produced in the interest of citizens and are useful to them because they guarantee them certain rights. At internal level, city council civil servants use all three types to verify, firstly, the legitimacy of the application and the validity of the associated documents presented and then to carry out the procedure that will document the legal action. At the same time, the function of registering outgoing records should allow citizens and civil servants to verify the established date of their actions.

4. *What are the key formal elements, attributes, and behaviour (if any) of these digital records?*

Essentially, the three types of document are managed by a computer application. It offers an interface with a form containing all the fields required by the legislation and/or added by the council itself so that entries can be made with the minimum of necessary information and the organization can begin an internal action.³⁴ The study carried out has confirmed that, regardless of how each administration might arrange the fields it considers necessary for a true description of the statement of intent, there is a minimum they must necessarily include.

This intellectual form of minimums is circumscribed in the following fields:

- Unmistakable registration number for each entry/exit.
- Date, time and place of registration.³⁵
- Purpose or reason of the entry/extraction.
- Full identification of the sender of the document received (or his/her legal representative), also for the addressee in the case of the outgoing record.

Other information that can be extracted from the statement of intent will be used to improve knowledge of it but is not strictly necessary.

The study has proposed a series of fields not provided for in Spanish or Catalan legislation in order to improve such knowledge. They are the following:

- Indication of the person or office responsible, with the powers to carry out the administrative procedure. It would be very useful if the identification number of the file started was also available at the time the entry was made.
- Detailed description of the documents presented to justify the statement of intent. This task would allow each of them to be identified at simple documentary unit level and would improve the digitalization task, as it would prevent mass or nondescript digitalization.
- Classification of each newly produced entry according to the corporate classification scheme.
- Description of the incoming channel: face-to-face, telephone, remote data transfer, deferred, etc.

This computer application is used within the current working group space. We have said in the contextual analysis that the aim is to link this Protocol Register, an instrument included within the Protocol Register subsystem, with the file management subsystem or BPM. This link, which at intellectual level is absolutely admissible, currently faces difficulties in terms of a precise technological link. The main difficulty is that the BPM uses a much more modern technology than the Protocol Register.

³⁴ The detail of the attributes compiled in each entry can be consulted in Appendix 1 of the contextual analysis.

³⁵ At Terrassa City Council the unmistakable number of each record includes the date and time of registration in its coding.

5. *What metadata is manually added to the records by their author and their creator? What metadata is automatically generated and attached to the record?*

On this matter, a distinction must be made between the attributes making up the form for each register entry, which we might understand as the content metadata, and the contextual and structural metadata that could be captured in each record.

In this sense, the project has worked only on the content metadata and has not gone on to detail the contextual and structural metadata that might be required. For the latter need we refer to the use of Terrassa City Council's metadata diagram in its 1.0 version being applied within the records management subsystem. However, this diagram is not yet public because its alignment with different standard diagrams existing at local, national and international level is being checked, such as the one proposed by ISO 23081-1.

Focusing on the content metadata, we should say that each entry has the same form. The data is included once the citizen's statement of intent has been manually presented. This is done by the civil servant from the Register office. Concerning contextual metadata, the ones allowing the unit to be identified within the management system are essentially the classification code and the entry's unmistakable identification number. The former is manual and at the discretion of the civil servant (previously trained in this area of knowledge) and the latter is automatic. Another important piece of metadata is the one indicating the 'manager'; that is, the person who will have the power to continue the citizen's request inside the system. This metadata is also manual.

One of the routes for improvement suggested would mean that, when the classification code is entered, the application should be capable of linking it to the manager of the department that has to implement the request or even allocate the task to the person who has least to do in the competent department, using an automatic task distributor. This process is awaiting evaluation when the current Register is migrated to a new application. As of March 2012, no date has been set for this migration.

6. *In what formats do the digital records exist (e.g., Word or Excel files, .TIFF images, .wav files, etc.)?*

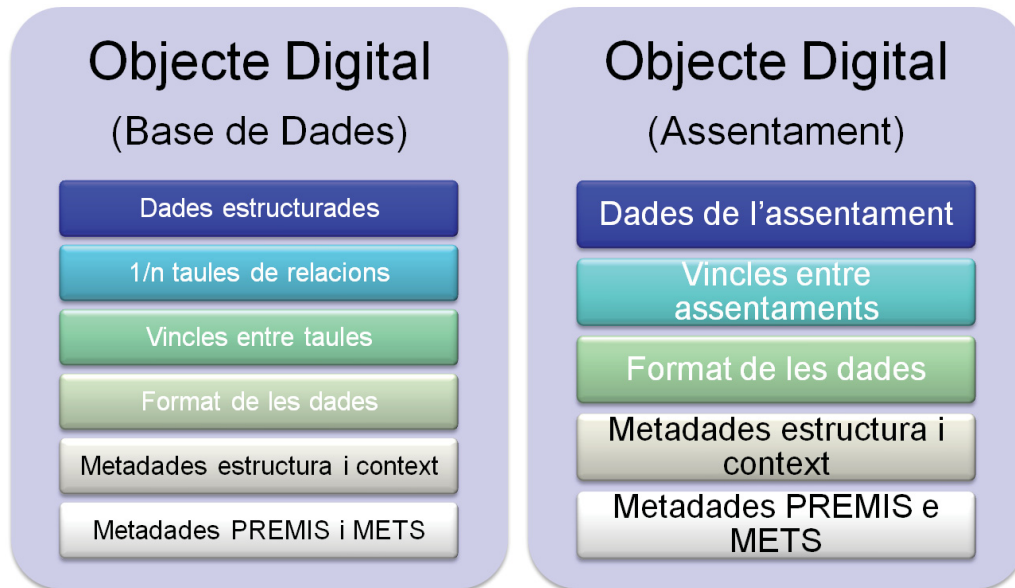
The Protocol Register is basically a database. Its data format is Oracle's proprietary one. As of 31 December 2010, the database consisted of almost 250,000 entries. Each of them can be considered an *in fieri* or potential record that could, at any time, be called on to produce a document to be presented in legal proceedings, sent to another administration or simply to generate a receipt such as the entry receipt given to the citizen. These records generated on demand are usually produced in .pdf or .xml data formats.

7. *What are the digital components of these digital records?*

Although at some points in the investigation carried out the possibility of treating the register entries as digital objects has been considered, this idea has been shelved for the time being because it is not considered truly viable with the current

application. We have just developed a theoretical idea that would apply to all three levels of digital records.

We present two possible diagrams. The first would apply to the Protocol Register database all treated as a digital object. The second raises the possibility that each entry could be treated as a digital object.



In both cases, the digital object would be in .xml format and would capture preservation metadata such as METS and PREMIS. We stress that the proposal presented here is merely a theoretical development.

8. *How are these digital records identified (e.g., is there a [persistent] unique identifier)?*

The Protocol Register as a record does not have an established identifier but it does have a classification code forming part of the corporate classification scheme. However, each entry is identified by the incoming or outgoing entry number that is automatically and unmistakably assigned to it. This identifier is the result of the combination of the following data: dd/mm/yy/hh/mm/ss. The noting of the exact time is marked by the link with the time from the Royal Naval Institute and Observatory (ROA), by legal requirement. This identifier can never be changed, not even in cases where the law establishes the controlled modification of entries. As for associated documents, they are identified with a non-significant automatic numeral and linked to the specific entry by attaching them to the same row in the database.

9. *What measures does the creator take to ensure the accuracy, reliability and authenticity of the digital records and their documentation?*

Before the intervention of the archive service in the Protocol Register, the measures intended to maintain its reliability were based on restricting access to the

application to people competent to use it and by limiting the power to make changes to a few people. Security measures which under no circumstances made it possible to verify the quality of the data filled in, a key element for determining whether the Protocol Register is performing its function correctly. The review of the application has made it possible to check how its essential properties are preserved. We have considered this as follows:

As for reliability, we can speak of a kind of commitment or social acceptance concerning the legitimacy and genuine nature of the data provided by protocol registers. The legislation does not discuss their existence or their functions or their administrative efficiency, but neither does it strengthen it, presumably because it does not consider it to be under threat. As we were saying, the existence of this record has been socially accepted for some time, so it enjoys an initial presumption of reliability.

Beyond this social commitment, however, reliability must be internally verified. As a computer application, the Protocol Register will be reliable if the application is robust, if the security measures are constant and strong, if the access control and modification control measures are exhaustive, if the traceability of all operations carried out on every entry can be checked and, in the long term, if the preservation and conservation measures are secure and periodically verified.

Meanwhile, reliability can also be proved if the content of the entries is equally trustworthy. To be so, despite the fact that there is always the possibility of fraudulent action, the quality and accuracy of the data compiled must be improved. This is achieved if there is a precise, complete form largely closed to ambiguous interpretations followed by exhaustive compilation by the civil servants at the offices of the Protocol Register. The human factor in this compilation is a risk factor.

Having improved all these elements, the authenticity of each entry can be shown from whole—that is, complete and precise—data, based on showing the identity of the parties involved in order to be able to allocate responsibilities and demonstrate competences. As for associated documents, entries must also be whole.

In terms of guaranteeing the usability and accessibility of register entries, we can say that, in the short term, in the period while most legal actions are administratively effective—between four and five years from the time intentions are stated—this is assumed. These properties will have to be guaranteed in the medium and long term. The Protocol Register is now a permanently operating application—it is perennially at an active phase—and that has been the case since 1995. When data migration takes place, for example, checks will have to be made that there is no data loss. In fact there is already some experience with this problem. Data migration of the entries from 1995 to 2000 (carried out in 2000) was carried out without apparent incidents. All the form data seemed correct until someone noticed there had been an error in an important field: the entry number. This error would not have been particularly serious if this number had not been created with the date and time of the entry. This information could not be recovered, and the entries between 1995 and 2000 do not have an established date!

10. Once a digital record is created, how is it handled? That is, where is the record stored (e.g., the creator's desktop, sent to an information system, printed, etc.)?

As we have said, the Protocol Register is basically a database. Specifically, it is a set of tables inserted into a relational database from the ORACLE company. The Protocol Register, understood as a record, is a continuing record, so it is permanently in an active phase. The preservation and storage strategy is back-up, so we can consider the strategy as a 'non-solution'. records documents in .pdf and .xml data formats on request by the possible user. These records are conserved on citizens' devices: on their desktop, on the hard drive of their PC, on an external hard drive, etc.

The records associated with the entries are conserved inside the database row belonging to each entry in their original data format.

These entries are rarely printed, except the receipt given to a citizen who has stated his/her intent and does not want the document in electronic data format. In this sense, to show the authenticity of the printed document, an attempt has been made to generate PDF-417 codes and those called CSV (Secure Validation Codes) in Spanish law. These CSVs are non-significant and non-evident codes allowing the original to be located inside an information system as long as the user who wants to consult it has been identified. These CSVs are printed on the paper record.

11. How are changes to these digital records made and recorded?

The changes or modifications made to some entries can only be monitored by checking the modification date and the identity card number of the person who has made them and then comparing this information with the creation date and checking whether that identity card number corresponds to a person who has the powers to make the changes. By legal precept, reasons must be given for changes to register entries and they must be properly checked as, in principle, they are not allowed.

12. Are these digital records linked by an archival bond to records on other media? If yes, what records? How are their relationships made explicit?

As we have already noted, the Protocol Register activates legal actions. In this sense, the records producing these actions are very diverse inside Terrassa City Council and they cannot be listed in detail here. The archival bond between each entry and the documentation produced was not made explicit until the archive service became involved. Today, every entry is archivally identified with the records series belonging to it. At a later phase, the aim is to link the entry with the file or dossier started, making this archival bond one hundred per cent explicit.

13. If the archives have the records in custody, when and how were they acquired? How were they processed? How are they preserved?

To begin with, the Archives service only has the protocol registers prior to 1994 in custody on paper. The continuing Protocol Register that is still active maintains entry data since 1995. The archives service is not responsible for this application in terms of custody. This responsibility has been assumed by the council's IT systems

service. Protection against any loss of information or malfunction of the application is achieved with the weekly back-ups carried out.

The only action carried out by the archives service in terms of long-term preservation has been drawing up files in .pdf data format between 2006 and 2010, with results that were not very satisfactory. This was, firstly, because the file created was very large (more than 800 pages), and incomplete in terms of fields (it was therefore not whole in terms of its intellectual form). Custody of the files has also not remained in the hands of the archives service. We can therefore roundly consider that it has been an imperfect measure.

14. If the archives have the records in custody, when and how were they acquired?

To date, no provision has been made to transfer the Protocol Register to the deposits under the responsibility of the archives service. The service only carries out consultancy and audit tasks, if necessary, on the measures taken.

Appendix 4 – Case Study 03- The Protocol Register of Terrassa City Council: Diplomatic Analysis.

INTRODUCTION

The #CS03 of the InterPARES project carried out by Team Catalonia covers the management, preservation and appraisal of the essential properties of the archive records in the Terrassa City Council Protocol Register from all possible perspectives. Management, because we consider that the definition of the essential properties of an archive record is developed from its creation and during the period when it is juridically and legally effective in the records management systems.

Preservation, because we consider that the proper maintenance of these essential properties is the result of careful management throughout the archive record life cycle, at the active, semi-active and inactive phases.

Appraisal of the essential properties, that means reliability, authenticity, integrity, identity, accessibility and usability have to be demonstrable at any time in its life cycle and sufficiently provable so that the document is trustworthy and credible within the juridical system.

Terrassa City Council's Protocol Register is an instrument within an electronic management subsystem. It is quite an old computer application (the first design is from 1997) that has been updated several times but in general terms is considered as obsolete. The different approaches made in the light of this study have strongly recommended the migration of its data to a new application with new functions.

The application began as an electronic management tool for incoming and outgoing records that has received sporadic improvements which have never turned it into a proper electronic records management system. This situation has prevented it being adapted to the most current needs. Despite this, and in spite of the far-reaching review of computer systems architecture for the whole council begun in 2008 and which has involved an important update of these systems, a definitive solution for the Protocol Register application is still awaited. The Protocol Register application is currently used by more than 600 Terrassa City Council workers and this is a critical point which, in order to prevent a considerable impact on the ordinary work of the organization, deserves a clear solution and a very well measured timetable for changes.

The electronic management system of the Terrassa City Council Protocol Register can act on three digital entities:

(i) The whole computer application—that is the sum of the software and the database support. All this can be considered a dynamic, interactive entity.

(ii) Each register entry based on a data form can be considered as an archive record. Each of these entries can be considered as a static entity within a higher dynamic entity (i).

(iii) Each record in electronic data format provided by citizens to provide their statement of intent with a solid backing of information. All these records can be considered as static entities belonging to their specific entry (ii), even inside the dynamic entity (i).

The following text presents the results of the diplomatic analysis on the digital entities

above indicated. The purpose of this analysis is to assess the status of the identified digital entities as records, to determine whether preservation has to focus on the stored or manifested form, and to determine the salient characteristics that need to be protected by a preservation plan.

IDENTIFICATION OF RECORDS

The current version of the InterPARES glossary defines a record as ‘a document made or received in the course of a practical activity as an instrument or a by-product of such activity, and set aside for action or reference.’³⁶ This definition implies that, to be considered as a record, a digital entity must present five necessary characteristics: stable content and fixed form, embedded action, archival bond, five persons, and five contexts. The application of the definition on the Protocol Register of Terrassa City Council is therefore analyzed accordingly:

1. TO BE IDENTIFIED AS A RECORD, THE DIGITAL ENTITY MUST POSSESS STABLE CONTENT AND FIXED FORM, AND BE AFFIXED TO A STABLE MEDIUM (OR PHYSICAL CARRIER).

- The content of the Protocol Register is stable. Its structure based on register entries in series one after the other in strict order of creation means that, once the entry is closed, its content can be considered stable. Legislation protects this stability by legislating in favour of its inalterability. The dynamism of the Protocol Register digital entity, understood as an application, applies in that entries that can be changed in the five days following their creation in order to correct data and make specific alterations to descriptions and clear up errors, among other reasons. All of them are accepted by current legislation, although an attempt is made to prevent or limit them as far as possible. Interaction and dynamism come from the simultaneous action of the different creation agents during the day. The agents can create entries or display and correct entries. The former register each entry using the established form and, depending on its legal nature, refer it to the internal department that will have to manage the relevant legal action. The agent from the internal department displaying the entry can return it to the creation agent if it does not have the power to carry out the legal action requested.
- The documentary form³⁷ of the Protocol Register is fixed, if we understand that, after the possible modification period, each entry is absolutely unalterable by law. However, with certain properly justified permissions, entries can be accessed and modified, but a record must be left of the reason and of what has been changed. Once this period for incidents is completed, the Protocol Register will have an entirely fixed form, at least in terms of its representation on screen based on the predesigned form. Concerning other possible representations,

³⁶ InterPARES Terminology Database, http://www.interpares.org/ip2/ip2_terminology_db.cfm.

³⁷ In the InterPARES Terminology Database, cit., the definition of documentary form reads: The rules of representation according to which the content of a record, its administrative and documentary context, and its authority are communicated. Documentary form possesses both extrinsic and intrinsic elements.

bearing in mind that the data resides in a database, it can appear in different forms and data formats. So the aesthetic arrangement of the corporate identity can change over time and .pdf or .xml data format can be chosen depending on the need to have the entry outside the actual management application. In conclusion, the data is fixed without the possibility of change, the subsequent formal representation can change.

- The digital entity is not affixed to a stable medium, at least not in terms of the computer application. Until 1994, all the register entries occurring during the natural year were printed on paper and preserved in this form. However, the practice was imperfect from the start, as not all the data belonging to these entries was printed. Since 1995, the entry data has been migrated from database to database and it has always been necessary for it to be invoked by the computer application, which has also been transformed from 1997 to the present. From 2006 to 2010, register entries were fixed in .pdf data format file, but this was incomplete in terms of data. This practice was meant to be a preservation measure, but it has been shown to be incomplete and imperfect. The database, the associated documents in electronic data format and the application are currently fixed weekly on electromagnetic tape.

2. A RECORD MUST PARTICIPATE IN AN ACTION, DEFINED AS THE CONSCIOUS EXERCISE OF WILL BY A PHYSICAL OR JURIDICAL PERSON, AIMED TO CREATE, MAINTAIN, MODIFY OR EXTINGUISH SITUATIONS. A RECORD IS A NATURAL BY-PRODUCT OF THE ACTION.

The Protocol Register is a legal instrument making it possible to have true data in which a citizen's statement of intent has been made before a public administration. This statement of intent can be orientated towards obtaining a service, starting a process or beginning a procedure. The Protocol Register is a record that adds all the statements of intent that can lead to one or more legal actions inside the organization one after another, based on entries. The established date makes it reliable and trustworthy. The law also protects it in this way and requires that it is used fairly.

If a service is obtained, the legal action is documented in the Protocol Register and rarely results in the creation of other records inside the organization.

If a process is begun or a procedure started, the register entry is just the first record in a series of records that will shape the legal action. The result of the different stages of the procedure will be an aggregation of records in the form of a dossier or file.

3. A RECORD MUST POSSESS AN ARCHIVAL BOND WITH OTHER RECORDS WITHIN OR OUTSIDE THE SYSTEM. THE ARCHIVAL BOND IS DEFINED AS THE RELATIONSHIP THAT LINKS EACH RECORD TO THE PREVIOUS AND SUBSEQUENT RECORD OF THE SAME ACTION AND, INCREMENTALLY, TO ALL THE RECORDS WHICH PARTICIPATE IN THE SAME ACTIVITY.

We have said that each register entry is related to a statement of intent. This declaration can be to request a service, start a process or begin a procedure. The

register entry, understood as a record, is archivally linked with obtaining records deriving from the initial declaration. The Protocol Register, understood as a sum of records, is linked to all functions carried out by Terrassa City Council requiring a statement of intent with an established date. These functions are, in turn, divided into activities and each activity is associated with a process or a procedure. Each of these activities is associated in a 1:1 relationship (whenever possible) and it is classified with a classification code proposed by the Municipal Archives. Currently, the activities there are more than 350 activities producing records that started from the Protocol Register.

4. RECORD CREATION MUST INVOLVE AT LEAST THREE PERSONS, WHETHER OR NOT THEY EXPLICITLY APPEAR IN THE RECORD ITSELF. THESE PERSONS ARE AUTHOR, ADDRESSEE AND WRITER; IN THE ELECTRONIC ENVIRONMENT, ONE MUST ALSO TAKE INTO ACCOUNT TWO ADDITIONAL NECESSARY PERSONS: THE CREATOR AND THE ORIGINATOR.

- **The record's author is the physical or juridical person having the authority and capacity to issue the record or in whose name or by whose command the record has been issued.**

The author of the record is the secretary general of the organization acting in the name of the creator of the fonds. This is the person who has power to publicly attest that the statement of intent by a citizen can be subject to entry in the Register and can be given an established date. In traditional environments, the secretary general was the person who filled in the final Protocol Register at the end of the year. Since there has been a computer application available and the Register has not had a completion date set by law, the secretary does not fill in this book. However, if any of the entries made has to be certified, this is the secretary's responsibility.

- **The writer is the physical or juridical person having the authority and capacity to articulate the content of the record.**

As the secretary, as an individual, cannot reasonably attend to the dozens of statements of intent made every day by the citizens of Terrassa at the Protocol Register offices, power to attest is granted to various civil servants working in these offices. Each of them acts on behalf of this secretary and, by extension, on behalf of Terrassa City Council. Diplomatically, they are the writers of each of the register entries.

- **The addressee is the physical or juridical person(s) to whom the record is directed or for whom the record is intended.**

The addressee of the statement of intent is Terrassa City Council. It has developed a system of departments to which the implementation of the various functions by means of specific activities is referred. These are documented by each of the different civil servants working in these departments who have the

powers to do so. This concerns the entry of documents via the Register.

In the case of outgoing documents, the addressees are the citizens who have declared their intent or their legal representatives.

- **The creator is the person in whose fonds the record exists.**

The creator of the fonds is Terrassa City Council, a juridical person in public law.

- **The originator is the person to whom the Internet account issuing or the server holding the record belongs.**

The originator of the fonds is also Terrassa City Council, a juridical person in public law.

5. A RECORD MUST POSSESS AN IDENTIFIABLE CONTEXT, DEFINED AS THE FRAMEWORK IN WHICH THE ACTION IN WHICH THE RECORD PARTICIPATES TAKES PLACE. THE TYPES OF CONTEXT ARE: JURIDICAL-ADMINISTRATIVE, PROVENANCIAL, PROCEDURAL, DOCUMENTARY, AND TECHNOLOGICAL.

- **The juridical-administrative context is the legal and organizational system in which the creating body belongs.**
 - Juridical context: Terrassa City Council's protocol register belongs to the legal context of local administrations in public law. The legal considerations affecting its existence and its functions come from the central administration of the Spanish State. Some functions granted to the government of the Catalan Autonomous Community by the Spanish State are directly financially coordinated between the local authority and the Autonomous Community administration.
 - Administrative context: This context is described in full detail in the Public Administration Legal System and Common Administrative Procedure Act 30/1992, dated 26 November.³⁸
- **The provenancial context refers to the creating body, its mandate, structure and functions.**

Provenancial context: Terrassa City Council's fundamental mission is to oversee the rights of the citizens of Terrassa and to act fairly in compliance with its duties. To achieve this, State and autonomous community legislation grants it the capacity to carry out a long list of functions described in the contextual analysis. Implementing these functions generates direct services, documented services and documented legal actions.

³⁸ http://noticias.juridicas.com/base_datos/Admin/l30-1992.html [Last consulted: 2012/02/10].

- **The procedural context comprises the business procedure in the course of which the record is created.**
 - Procedures: The procedure for compiling a register entry is relatively simple and will be detailed below. The daily sum of all entries makes up a continuous register, which we call a Protocol Register. The basic diagram of the Protocol Register can be consulted in Appendix A at the end of this document.
 - Diplomatic analysis of procedural phases in the creation of the Protocol Register:
 - a) **Initiative:** In the case of incoming records, the initiative is taken by the citizens, who can declare their intent in person at the Register offices. This can also be done by remote data transfer by accessing the so-called Electronic Headquarters. In both cases, an instance is completed and the information from it is used to fill in the computer application form. Two steps can be carried out: either filling in an instance on paper, which is considered the first step in creating the file, or filling in the form directly in electronic data format.
 - b) **Inquiry:** The Protocol Register civil servant appraises the statement of intent by the citizen, analyses the documentation he or she has provided (if appropriate) and assesses the relevance of the whole presentation process.
 - c) **Consultation:** Once the necessary checks have been made, the entry form is completed with the relevant archival classification and the entry is sent to the manager or department with the powers to resolve it.
 - d) **Deliberation:** In fact, the final decision is not the responsibility of the Register Office civil servant. The recipient of the entry in the department assesses whether this statement of intent can actually be resolved by the administrative body. If it can, the file is registered, with the entry as its first record. If the recipient considers that he or she does not have the powers to develop the statement of intent or considers that the documentation presented are incomplete or detects any irregularity, he or she returns the entry to the Protocol Register. Of course, this 'return' is virtual, there is no physical movement. The Protocol Register central office is simply informed that the attribution is incorrect or that information is missing.
 - e) **Deliberation control:** If the 'return' is due to misattribution of the manager or competent department, the central office determines a

new attribution. If the 'return' is due to a lack of documentation necessary to open a file, either the Protocol Register central office or the department itself requests the missing documentation from the applicant by telephone or e-mail. If the 'return' is because of the detection of an error on the form or any other error affecting the comprehension of the data collected, the Protocol Register central office takes on the task of amending or clarifying the data. This can be done either by speaking to the civil servant who has made the entry or, as a last resort, clarifying the information with the citizen who has declared their intent.

- f) **Execution:** Once the entry has been accepted by the competent department and all possible errors, gaps or ambiguities have been corrected, the procedure of drawing up the entry can be considered to be finished. The documented legal action begins, resulting in a decision that will be notified to the citizen through a new entry in the Protocol Register, in this case an outgoing one.

- **The documentary context is defined as the archival fonds to which a record belongs and its internal structure.**

Documentary context: Terrassa City Council grants its archives service powers to plan, model and implement an integrated documentary management system, allowing the management and preservation of analog and electronic documentation. In terms of regulations, this context is described in the Regulations of the Terrassa Municipal Archive System. These regulations, approved in 2004, have not yet been fully deployed in 2012. The fonds of the creator—Terrassa City Council—preserves documentation dating from 1228 to 2012.

- **The technological context is defined as the characteristics of the technological components of an electronic computing system in which records are created.**

Technological context: As has already been said in other parts of this case study, the Protocol Register is basically a database formed by a table of relations from an Oracle relational database. An external layer makes it possible to display the fields of a data compilation form. This layer was created with Uniface language in 1997 and is still current, although various improvements have been incorporated over the last few years. The Protocol Register forms part of a Protocol Register subsystem. This makes it the central application of a sum of other applications aimed at definitive transition to a fully electronic subsystem. This means that, as well as the Protocol Register, there is a web application to manage remote data transfer relations with citizens called the Electronic Headquarters—an access portal to electronic administration determined by Spanish Act 11/2007. As well as the Headquarters, an application allowing the digitalization of incoming

documents in analogue data format allows the introduction of specific metadata into these records and will capture documents already in digital format in the relevant entry. This application called Web Content Capture is also an Oracle program and it is currently being tested, while waiting for the Protocol Register offices to be provided with multi-functional machines making it possible to scan incoming documents. Ultimately, the Protocol Register subsystem is only the first step of a series of subsystems making up the so-called Paradís records management system. This is the structure necessary at intellectual level which, with the right systems architecture, will allow integrated processing of all documentation produced by Terrassa City Council, regardless of the medium used.

CONCLUSIONS

Overall conclusions of the status of the digital entity under examination:

If the Protocol Register is a record:

- **Recommend and explain whether preservation has to focus on its stored or manifested form.**

The Protocol Register, understood as a computer application, can be considered as a unique one to be preserved. If this was the case, emulation would be the best solution to be able to preserve both the data from the different entries and the application functions. This measure, put forward more than once during the study, has always been rejected, not so much because it is erroneous but rather because it is probably an excessive solution given the characteristics of the Protocol Register. We consider that the most important things are the data making up the different records, the fact that the functions can be reproduced or improved in future applications and the fact that the archival bond is resolved with specific metadata. The capture of the classification code as metadata that did not exist before the study has allowed a substantial improvement in the rationalization of the different entries. Now the manager or department that will have to carry out the documented action is understood better and correctly interpreted more quickly, as well as being better integrated into the overall vision of the Paradís system. This is why we consider a priority to be the application of data preservation measures, which must come through migrating it to a new computer application.

- **Describe the salient characteristics that need to be protected by a preservation plan.**

If the most important thing is the data that allows a register entry to be configured, the preservation measures must initially come through guaranteeing that such data is of a certain quality. Without quality data, clear errors often occur in the form of ambiguity, incomprehension and incorrect attributions, and the Protocol Register as a record will have to be considered as an imperfect record. Faced with this possibility, we wonder whether it makes sense to conserve an

imperfect record in the long term. What value can it contribute in the future? What were the bureaucracies of the beginning of the 21st century doing wrong in drawing up their public documents?

We strongly consider that parallel work between the Protocol Register central office, civil servants with attestation powers and the archives service is a priority to ensure quality processing of this record and its entries. This requires constant teamwork, a permanent review and audit of the terms under which entry classification is put into practice. This is a critical point, as it is necessary to agree archival terminology very much marked with the criteria of civil servants and citizens themselves, who do not always know precisely the terms and concepts that should be used at all times. This is resolved through training, but also with constant dialogue making it possible to find a common working vocabulary.

After carrying out the case study, the main conclusion is that the true preservation work cannot be carried out at a phase after entries cease to be administratively effective. In this sense, we consider it more important to apply improvements to the operation of the Protocol Register than to schedule full, long-term preservation. The use being made of the protocol registers we have in our custody at an inactive phase is very low. This is not free of cost. Very probably, despite the fact that it is a socially accepted and trusted instrument and that the legislation protects its stability, its data is not considered for information or historical purposes. It must be said that the nature of the entries is that they are brief, like old public notaries' records, but under no circumstances do they allow legal documents of a juridical nature, for example, to be drawn up at phases following the active or inactive phase. The importance of the Protocol Register is therefore at the active phase.

Appendix 5: Procedural diagram of the Protocol Register.

