

PERFORMANCE IN E-GOVERNMENT: WEB SITE ORIENTATION TO THE CITIZENS IN SPANISH MUNICIPALITIES

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Abstract

This paper is focused on the experience of web site use within local level of government in Spain. We analysed all official web sites of local governments into two regions, Basque Country and Madrid, to produce primary data about their orientation to the citizens. Results confirm a preliminary level of web site use, which means information prevalence over interaction, unidirectional approach over transactions on line and lacks in management and style. Finally, we discuss the impact of these results for further research and introduce questions for future analysis on local e-government perspective.

Introduction

During the last decade a number of authors have developed concepts such as Information Society, Informational Era, Digital Divide, Open Source Software or Hacker Ethic (Castells, 1996; Negroponte, 1995; Raymond, 1999; Himanen, 2001) and many social and political changes have arisen due to the low transactional costs of sharing information and interacting between organizations and individuals.

Different reports by the European Commission (1994), G-7 (1997), OECD (1998), European projects (e-Europe), national actions (Info XXI in Spain), even regional policies (Infoville) have recommended to different levels of government the use, promotion and delivery of Information and Communication Technologies (ICT) within public organizations, addressing their relationships with other social actors. In spite of this reality, studies about the social and political impact of the Internet and ICT's are usually focused on private sector organizations, with major contributors to the literature being public managers and consultants.

Increasingly, e-government is described as a revolution changing the public sector across Europe and the rest of the world. Within the next few years it will transform not only the way in which most public services are delivered, but also the fundamental relationship between government and citizens (The Economist, 2000).

Within this dynamic of change, the local level of government has developed some of the most interesting and complete technological innovations addressing public management, because of its closeness to the citizens and the ability of some of its managers and politicians in adapting local organizations to new managerial atmospheres and social demands. Despite the importance of these developments, there is a dearth of academic critiques focused on the local level of government. (Hale, Musso & Weare, 1999; Ramió, Salvador et alia, 2000).

This paper is a preliminary, descriptive and academic contribution regarding Internet performance in Spain's local level of government. Our main objective is to identify web site orientation to the citizens within the municipalities of two Spanish regions: Basque Country and Madrid. We present three specific objectives:

- Address the influence of municipalities size in adoption and type of web site used.
- Point out the information that municipalities give on line, interaction with citizens and attention to management and style.
- Classify web sites on the local level of e-government and present problems for further study.

This paper proceeds as follows: The first section discusses our theoretical framework, hypothesis and methodology; the second section presents the analysis of Basque Country and Madrid municipalities web sites and classifies them into a typology; and the final section discusses the implication of these initial results and identifies directions for future research.

1. Theoretical framework, hypothesis and methodology

1.1. Theoretical framework

Hood (1995) considers the impact of ICT's on public governance as one of the most important issues within the Public Management discipline, despite the lack of academic discourse regarding e-government. Briefly, e-government refers to the application of Internet-based technologies to the commercial and non-commercial activities of government (PUMA-OECD, 1998). In this paper, e-government is defined as the different ways in which governments and public managers contact and interact with their citizens through their web sites, but also other Internet uses, and tools like video conferencing, touch-tone data entry, CD-ROM's, and private Intranets (Criado & Ramilo, 2001). Attending this definition, our paper is focused on one of the parts of e-government: Web technology and Internet.

The authors adopt some different and complementary debates among academics to inform this paper: literature about the effects of ICT's in democracies and government; then, considered is the discussion about interdependence between technology and society. At the same time, we present the debate that point out whether governments have to (or not) lead policies for making access to ICT's universal. Finally, we complete this framework addressing New Public Management literature to explain post-industrial societies, governments and public administrations.

1.1.1. Debate about ICT's effects within democracy and government

Rapid technological innovation and widespread dissatisfaction with the current status of democracy in developed countries have sparked a lively debate concerning the likely effects of advanced communications and information technologies on democratic governance (Hale, Musso & Weare, 1999). As some authors point out (Bimber, 1996), the literature on electronic democracy tends to emphasise utopian or dystopian visions of such effects.

On the one hand, utopian or optimistic consider that technologies have the potential to transform the nature of political and institutional realities, what governments do and how they do it (Dunlop & Kiling, 1991). Moreover, they predict that democracies and public servants will enhance their responsibility, accountability and empower individual citizens (Barber, 1984).

On the other hand, sceptics or pessimistics argue that ICT's will not naturally stimulate change within organizations (Connell, 1996) and will create a lot of administrative problems for governments. They will permit government intrusion and control of citizens, approaching

“1984” or “big brother” scenarios. What is more, the Web has the danger of increasing the digital divide between the information have and have-nots (The Economist, 2000).

In societies rich in experience with technologies of information and communication it is feasible that the inclusion of new technological instruments will only have incremental effects, opposed to radical views predicted (Hale, Musso & Weare, 1999). In the case of Web technology this means consideration of more moderate changes than extreme ones. This papers will show what kind of information web sites promote, its management and level of interactivity, more than searching for deeper reasons to explain this emergent reality.

1.1.2. Thesis about mutual interdependence between technology and society

Castells (1996) places the origins of our Information and Knowledge Society by the end of 60's of the past Century. There are three main factors working at the same time: economic crises of capitalism and real socialism; emergence of new social movements (feminism, anti-militarism or ecologism); and revolution of new information technologies. All together promote a new culture: the Culture of the Real Virtuality; a new economy: the Informational Economy; and a new society: the Net Society (Castells, 1996).

The most important aspect about such transformations is the position taken by a number of authors regarding the ability of technologies (Internet and Web for this paper) to affect society, politics and government (Castells, 1996; Kranzberg, 1992). Technology does not determine society, it shapes it. At the same time, society does not determine technology, it uses it (Braudel, 1967; Qian, 1985). It exists as a dialectic interaction between society and technology.

All of these reasons allow us to consider wide explanations about the spreading of technologies, even more, attending complex and diverse realities like local level of government. Some political, social, cultural and economical factors, including personal invention and initiative, operate in the process of discovering, adopting and using technologies within public administrations (Bijker, 1987; Marx & Smith, 1994).

The resolution of this important issue has been hampered by the newness of the World Wide Web, but there has been little rigorous empirical study of the effect of Internet technologies. This article reports the results of a modest first step in the program to understand the promise of e-government for our societies.

1.1.3. Government leading universal access to ICT's

Web technology has spread rapidly: NUA Survey estimates that 407 million people were online in November 2000, over 6,7% of the world's population, up from 249 million (4,1%) in January 2000, and 150 million (3,7%) in December 1998 (<http://www.NUA.com>, 2000; Demchack, Friis & La Porte, 1999). The most conservative previsions point out 2000 million people by 2005-2007 (Castells, 2000). It is clear that technologies will not arrive at the same time around the world. Technological policies change with regard to countries and regions, and mirror social, political, economical and cultural differences. These policies are also influenced by attitudes about commerce, communication, social initiative, but also governmental leadership.

Debate about the position of government in making access to ICT's universal has developed two distinct positions within European countries (OECD, 1998):

The European Commission (1994) recommended government intervention on the following ICT's issues: regulation, use and encouragement, promotion of self-society work, searching for resources, innovation and proposals for dissemination of information. This view

supported by Germany, UK, France, among others, considers markets more efficient for developing and managing technological progress.

On the other hand, countries such as Sweden, Denmark, Finland, also Norway, lead an alternative position that estimates ICT's accessibility for everybody as their core policy. This position is reflected in the adoption of governmental initiatives and policies about ICT's that show the way where going on, both for private and public sectors (G-7, 1997).

This paper suggest that Spain is one of the countries which has embraced the trends of Bangemann Report (INFO XXI Project to concrete e-Europe in Spain is the clearest example). At the same time, we consider that local reality can modify some of these national trends. It is necessary considering local level of e-government in order to understand realities that can overcome national frames. In Spain, this is that we show in the case of the Basque Country and Madrid, where we find developed regional, and even, local projects for promoting and monitoring ICT's within specific areas. This paper focuses on understanding better these local realities.

1.1.4. New Public Management

Finally, we adopt the New Public Management (NPM) point of view about government and public administration studies, addressing its different formulations (Hood, 1991; Hughes, 1998b; Osborne & Gaebler, 1993). NPM describes the adoption of a private sector management model emphasising the accountability of managers and a results driven orientation. All of these authors cited above consider the necessity of measuring public sector results attending the new post-industrial logic, which means more systematic evaluation of governmental action.

Justification of the adoption of this position is a consequence of NPM proposal to obtain within public organizations more flexible models, which will allow managers to introduce ICT's toolkits for enhancing governmental action. Even if this is not clear, what is beyond doubt is that there will be effects caused by e-government on public sector organizations and that such changes have implications for broader theory. *Prima facie*, e-government seems to fit better within the rubric of NPM much more than traditional public administration.

The paper encourages this debate within Public Management studies and gives preliminary ideas about future research trends on e-government, especially at the local level.

1.2. Hypothesis

Addressing the different approaches and debates presented above as a theoretical framework and with the practical investigation of different web sites, our research was based on the following hypothesis:

- Whether in considering a preliminary stage of ICT's development within the local level of government in Spain, it is feasible to find out a low level of web site orientation to the citizens.
- Addressing this initial development of technologies in the municipal sphere, we consider that the type of information on web sites will not refer to the most practical and delicate areas of political and managerial local systems (specifically, services and functions), thus, we expect limited interaction with citizens.
- Finally, it is more likely that larger cities will have more presence on the Net than smaller ones and that this presence will be more independent from other public administrations and local actors.

1.3. Methodology

This paper is the result of an empirical research based on the study of the web sites from the councils of the Basque Country and Madrid, two of the Spanish most developed Autonomous Communities (regional government) in economic terms, and more advanced in using new technologies within local level of government (MAP, 1998).

This study analyses only institutional webs, that councils consider official sites. Addressing that the region of Madrid has no provinces, the government of the Autonomous Community has a strong role within a territory divided in 179 municipalities (for only 5.091.336 people). The Basque Country is divided into three provinces (Alava, Guipúzcoa y Vizcaya), which governments have their own ICT's policies, and mainly support their development within a territory with 250 municipalities (for only 2.098.628 people).

One of our objectives was to generate primary data that illuminates local studies under e-government rubric. Results were collected during October 2000 and January 2001 and this was possible due to the analysis of 174 web sites (all inside both Basque Country and Madrid). Web sites addresses were gathered with phone calls to the city councils and the access to different engineers on the Internet (<http://www.admiweb.org>; <http://www.pglocal.com>), or using information from different governmental agencies, such as the Ministry of Public Administrations (Ministerio de Administraciones Públicas, <http://www.map.es>), Community of Madrid Government (Gobierno de la Comunidad de Madrid, <http://www.comadrid.es>), the Basque Government (Gobierno Vasco, <http://www.euskadi.net>), EUDEL (<http://www.eudel.es>), and web sites of two provincial governments of the Basque Country: Vizcaya (<http://www.bizkaia.net>) and Guipúzcoa (<http://www.gipuzkoa.net>). We also used population data census of 1998 for Madrid and EUSTAT and the Provincial Governments' 1999 census for the Basque Country.

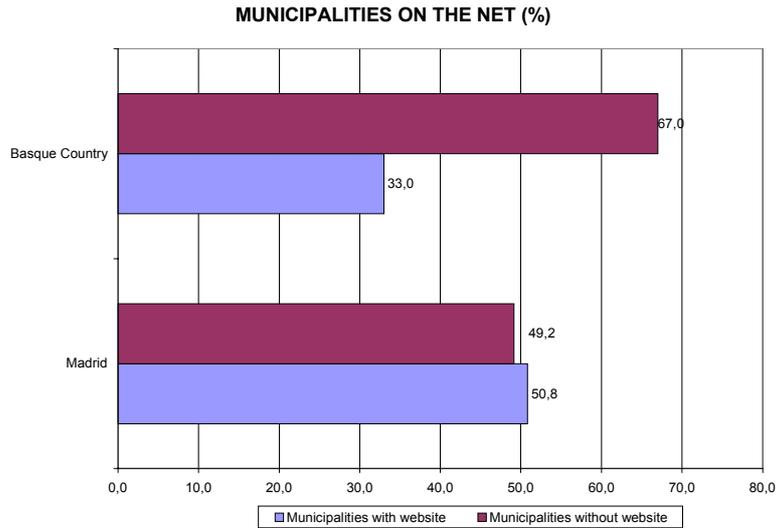
This paper presents results in a descriptive statistical method with simple frequencies of appearance of each indicator. We consider it premature to use more advanced statistical analysis within e-government studies, because we would need more developed theoretical frameworks and preliminary and qualitative studies to assume statistical results. This is the scope of this study.

2. Analysis

In this section, we consider the nature and distribution of the web sites attending population. Then, our analysis measures web site orientation to the citizens of the Basque Country and Madrid municipalities. To do so, the paper addresses three dimensions: contents, management and style of the web sites, finally, a typological classification is also presented.

2.1. Population: Nature and Distribution of Web Sites

Presently, 33,2% (83) of the Basque Country councils are on the Net. Madrid presents 50,8% (91) of its councils with a web site.



Within this dimension, in order to improve comprehension about the nature of web sites and their relationship with municipalities size, they have been divided into two groups (the rest of the analysis considers both together). First, *Council Web Sites* offer information, not only about the municipality, but also the different services, buildings and organizations, that councils and municipalities offer to local citizens and visitors. On the other hand, *Municipality Web Sites* are managed by other public administrations, at the provincial or regional level, (this is the main criteria to distinguish), and we observed that they usually give general information about the municipality, forgetting more strategic categories: they are less complete and interaction is more difficult. The reason of this is related with municipalities size, because some of them do not have personal or material resources to maintain their own web sites: local level of government is widely disintegrated in Spain.

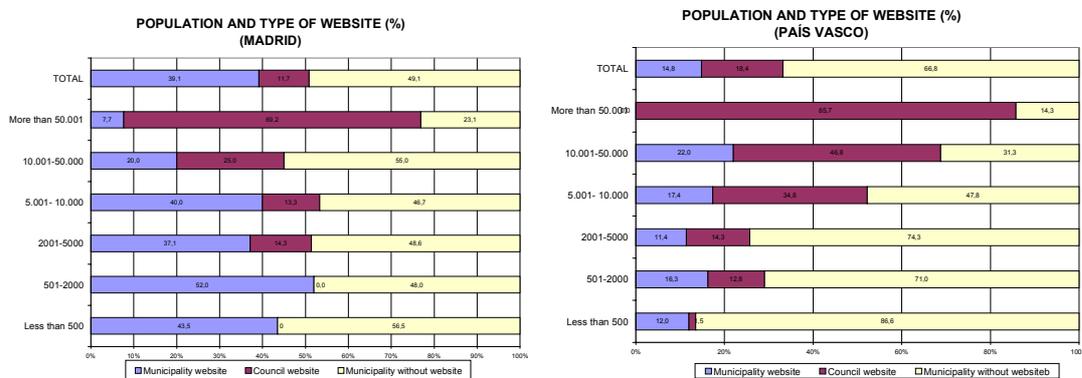
	Total No. of municipalities	Web sites as a % of No. of municipalities	% total No. of municipalities	Council Web Sites	% total no. of web sites	Municipality Web Sites	% total no. of web sites
MADRID	179	91	50,8	21	23,1	70	76,9
BASQUE COUNTRY	250	83	33,2	46	55,4	37	44,6

In Madrid, 76,9% (70) of the cases are *Municipality Web Sites*. The Basque Country presents 44,6% (37) of sites within this group, however, we can differentiate between the three provinces: Álava with 51% (26) of its municipalities on the Net and 49% of them *Municipality Web Sites*. Guipúzcoa (35%) and Vizcaya (23%) present less relative amount of web sites, however, only a few of them are *Municipality Web Sites* (7% and 4% of the cases). Within the Autonomous Community of Madrid the promotion of Internet and web site using was lead by the Gema Project, which provides free sites to the municipalities: only 39% of them used this service.

In the Basque Country we find out an even more complex reality because of the division in three provinces. In Alava, the task of developing local web sites is being lead by the cuadrillas, (another public administration that involve few municipalities), which offer services to the councils short of resources. In Guipúzcoa, with only 33% of councils on the Net, the provincial government has formulated programmes in order to develop ICT's within local level of government. Finally, in Vizcaya there has not been uniformity regarding projects, in the main, the larger cities have carried out their own initiatives, and this explains why only 25% of this province councils have a web site.

The fact is that when a number of municipalities within an Autonomous Community (or province) attain a web site, the new ones are *Municipality Web Sites*, developed under provincial or regional governments support. This is observed in Madrid, and even in another Spanish region such as Catalonia, where a previous study (Ramió, Salvador et alia, 2000) pointed out the same trend: with more than 60% of its municipalities on the Net, the percentage of *Municipality Web Sites* is more than 70%, near Madrid results. We expect the trend in the Basque Country will be similar. Councils adopting web sites will be supported by other public administrations. This presupposes the necessity of developing nets through different levels of government and local actors in order to give the ability to the smallest councils to access and maintain Web technology.

Addressing size criteria, the bigger are the cities, the more feasible is their presence on the Net. On the other hand, specifically in the Basque Country, we only find 13% of less than 500 inhabitants municipalities have a web site.



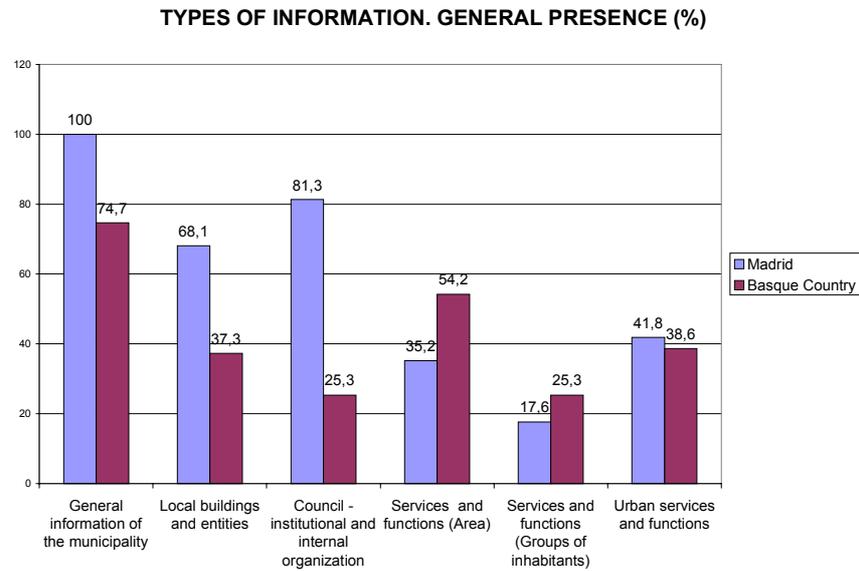
In conclusion, both in Madrid, especially the Basque Country, the action of linked governments and agents settled in the local area will give to the smallest councils the opportunity of accessing Web technology. In our opinion, regional or provincial projects, such as Udalweb, e-Gipuzkoa in the Basque Country, Gema in Madrid, should be accompanied by jointed thought and action of local public and private agents, in order to enhance possibilities of local e-government. Where local level of government is fragmented, collective action of institutional agents will be the usual way to solve problems where human and material resources are lacking. The experience of Localret in Catalonia (<http://www.localret.org>, 2001; Ramió, Salvador et alia, 2000) has shown that council association to share costs could be a good way for developing expensive technologies in the future.

2.2. Web Site Contents

We assume that at one end of the spectrum are councils which use web sites like a mimetic policy without reflection about its meaning and possibilities. On the other hand, we consider councils using web sites to approach information, services and functions to the users, simplifying processes and making easier the relationship between government and citizens.

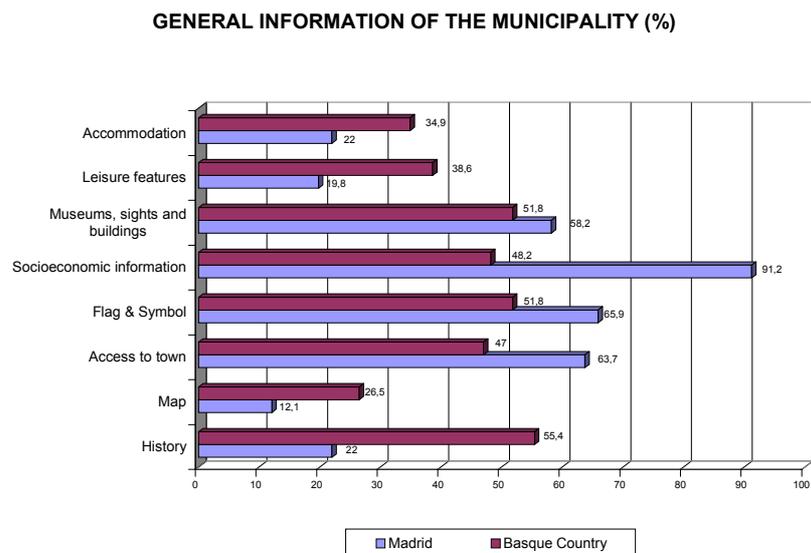
Web site contents is the core dimension of this analysis, because it allows us to view governmental proximity to the citizens. We consider five different groups of contents: *general information of the municipality*; *local buildings and entities*; *council - institutional and internal organization*; *services and functions of the council*; and *relational information*.

With this analysis we cover the principal areas of the agenda within the Spain's local level of government.



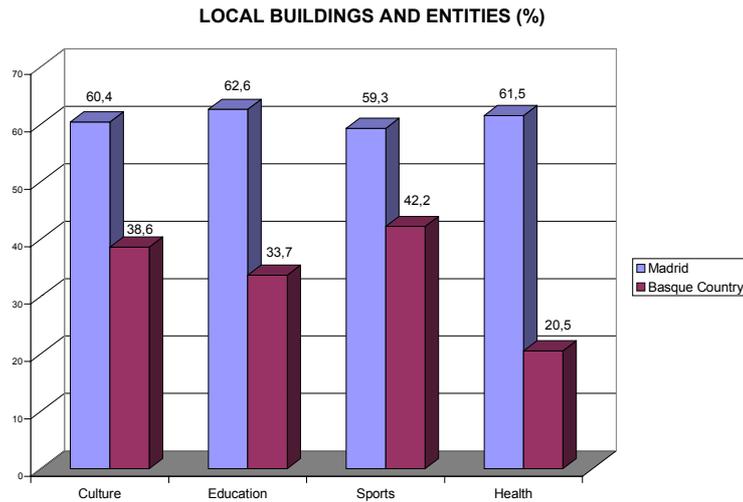
2.2.1. General Information of the Municipality

This category reflects the most symbolic and miscellaneous data. At least one of the indicators considered is presented in 100% of Madrid web sites and 74% in the Basque Country. Includes generic data about some general areas related to the municipality, from an economic, social and historic view: *flag/symbol*; *history*; *museums, sights and buildings*; *socio-economic information*; and *access to town*. The rest of indicators have minimal presence; they inform about *accommodation*, *map* and *leisure features* and are on less than 50% of the web sites.



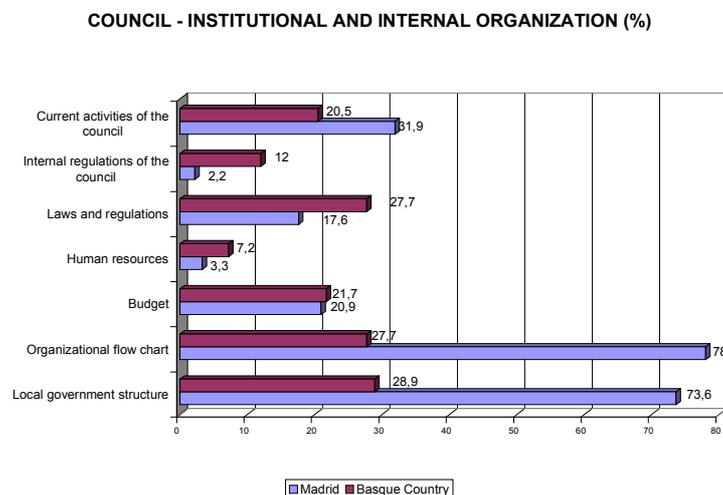
2.2.2. Local Buildings and Entities

Here, we find information about public structures, buildings, entities, etc., used to deliver public services. This type is found in 68% (Madrid) and 37% (Basque Country) of the web sites. Mainly, they refer to *culture, education, sports* and *health* items: the percentage of web sites reaches to 60% in Madrid, and varies from 20% (health) and 40% (sports) in the Basque Country. Levels of data vary from offering phones and addresses, work timetables, to complete more detailed issues about principal activities, resources and objectives. Within this category we find descriptive and static information, rarely updated, because of the general contents.



2.2.3. Council - Institutional and Internal Organization

This category refers to the aspects of political and administrative organization of the councils (81% Madrid and 25% Basque Country), such as *budget, local government structure, organizational flow chart, human resources, internal and external regulations* and *council current activities*. Interactivity increases: within local government structure we find examples from a mere compilation of public representatives to promote contact with them through e-mail, even chat rooms. The rest of categories offer good examples of interaction considering the possibility of downloading PDF documents or reports. We observe decreasing percentages of presence, significantly in the Basque Country, where no indicators exhibit over 30% presence.

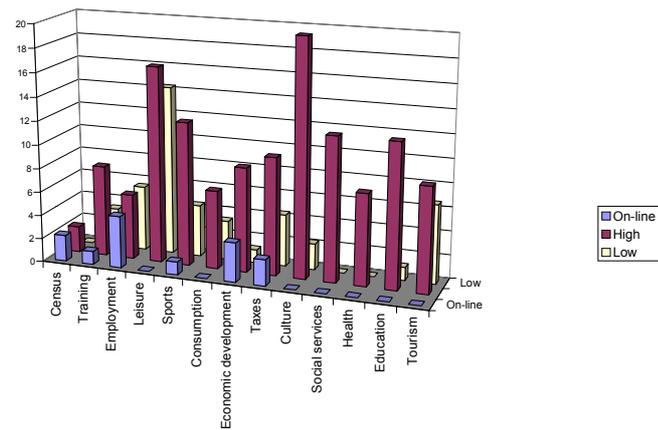


2.2.4. Services and Functions of the Council

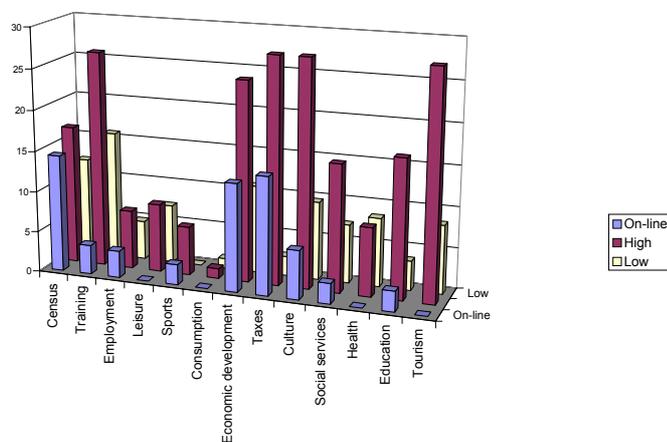
This is the most complete category analysed. We pay attention to information offered by the councils about the services and functions that they deliver to the citizens. In order to understand the complete range of categories, they are presented in three groups considering different goals (functions and services attending urban issues, areas and groups of inhabitants) and three levels of information/interactivity with the citizens (low-unidirectional, high-bidirectional and on line delivery of services).

- *Functions and Services (Area)*. This is the group of services and functions with strongest presence within local web sites (35% Madrid and 54% Basque Country). *Census, training, taxes, tourism, healthy, sports, employment, leisure, culture* are the areas considered. Within this group exists a high orientation to the citizens: it is possible to find out some services which offer fully interactive relationships with citizens, even more, services delivered on line, mainly, in areas such as taxes, employment or census. Unfortunately, presence is minor than some of the previous categories, which confirms our initial hypothesis about weakness of web site interactivity: these three groups of functions and services are more feasible regarding interactivity and on line delivery, but are the least developed categories in web sites which were analysed.

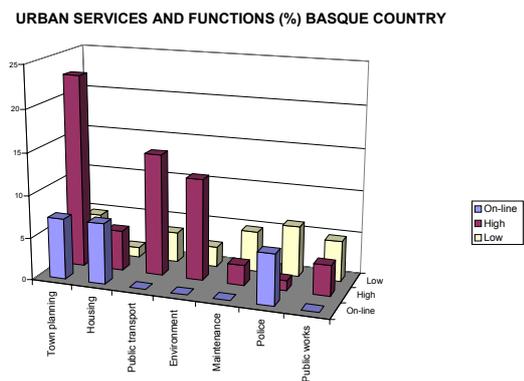
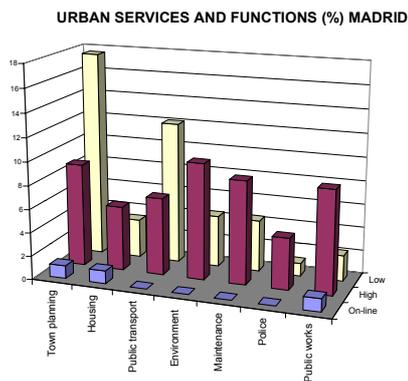
SERVICES AND FUNCTIONS (AREA) (%) MADRID



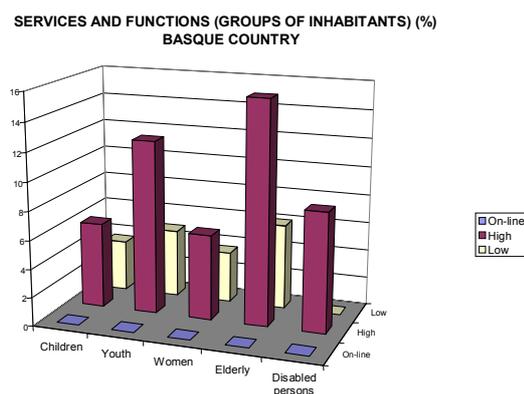
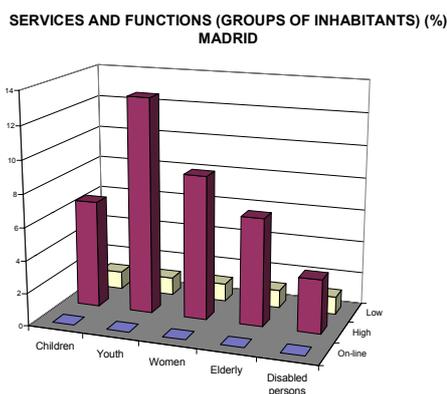
SERVICES AND FUNCTIONS (AREA) (%) BASQUE COUNTRY



- Urban Functions and Services.* Categories addressed are relevant to local government in terms of social impact and budget expenses: *town planning, housing, public transport, police, environment, maintenance* or *public works*. Services and functions within this category have an even smaller presence (41% Madrid and 38% Basque Country) than others previous. We have discovered prior attention to indicators such as town planning, public transports, environment and maintenance, but in general, results are more than modest in the majority of cases. Here, also it is possible find a small percentage of services delivered on line, but presence is almost irrelevant.



- Functions and Services (groups of inhabitants).* This group has the least presence amongst all considered (17% Madrid and 25% Basque Country). Percentages are low in all the categories: *children; youth; women; elderly; and disabled persons*. It is not possible to find any services completed on line. However, we point out the strong effort of some municipalities in order to inform and promote issues relevant to women, elderly or disabled persons, generally discriminated within our societies. Discrimination that also can be distinguished into Web technology in terms of use, contents and orientation.

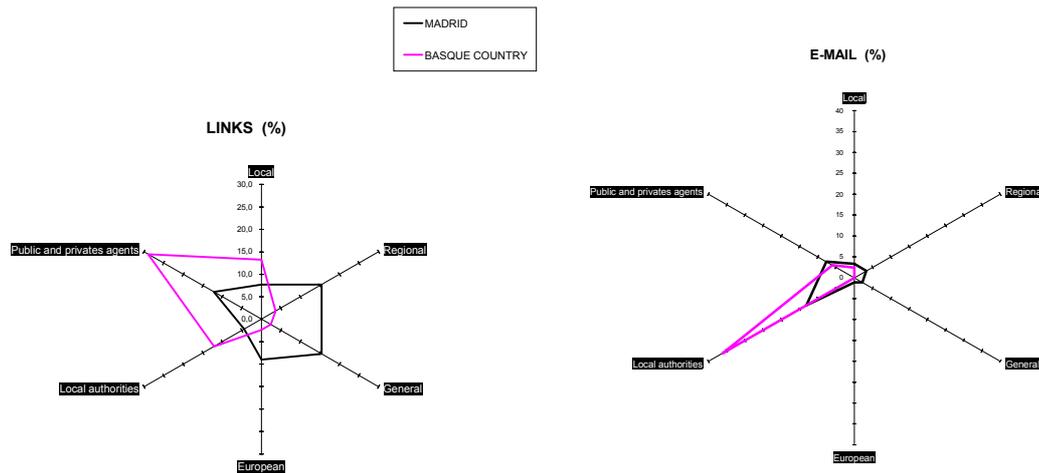


A positive fact is that within the three categories is evident a high level of information/interactivity within the different indicators. When sites are on the Net, they usually start with an acceptable initial standard of information, but this does not mean that then they promote delivery on line, management or style, as observed below.

2.2.5. Relational Information

Relational information reflects the web sites ability for linking citizens with the council organization, other entities and individuals. This is measured using an indicator for attending *e-mail addresses* and *direct links* offered and types of organizations linked.

Data interpretation shows that council web sites tend to provide contact with closer public administrations, municipal actors or internal entities of the council. Less importance is given to interaction with other governments that seem to be more distant, such as General Government (Spanish Government) or European Union.

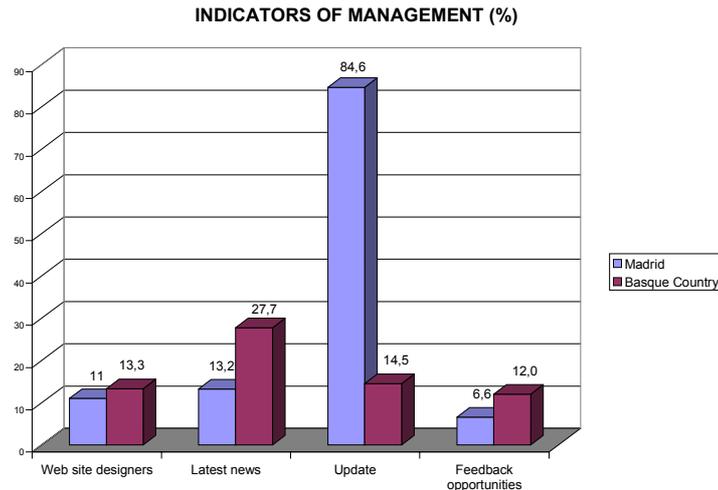


Despite some councils being on the Net, this does not a guarantee of successful use by citizens of their web sites. Municipalities have to interact and be linked with other levels of government, moreover with local agents (individuals, companies, or other municipalities), in order to ensure an effective jump into and use of the Internet.

Our net society means the use of technologies within public administration, and the future analysis of e-government becomes more difficult. Different public departments and organizations share responsibilities and results, so the strategies to analyse this new virtual part of the government should pay attention to this issue.

2.3. Web Site Management

This dimension measures how web sites are managed in terms of contents. Web sites, as a new way to communicate and give information to the citizens, need to be maintained and adapted to new realities and impacts. Citizens demand greater government accountability, however web sites seem to be fuzzier than other structures of the public sector. Regarding this issue, do the web sites enhance transparency or are they merely a shop-front providing nothing new? Indicators in this category should be clearly present on web sites: direct contact with *web site designers*; existence of categories with *latest news*; *feedback opportunities* for the citizens; and date of last updating. Finally, we consider two indicators about ICT's projects ambition: server ownership and type of domain.



Data analysis shows modest presence in the majority of indicators with no more than 30% of web sites. These results support our previous assumption considering that municipalities in the Basque Country and Madrid do not consider web sites as a live and actual competence of management and interaction. New abilities and extra resources for public ICT's projects should be displayed in order to obtain results, this seems to be one of the tasks for the next few years. Here, there are two ideas, first, e-government is considered as another area of management within public organizations. Second, web sites require attention and trained personnel to become a reality: attention to feedback and diary management seems to be the first step.

Finally, if we observe server ownership: in 77% municipalities (70) the server is owned by the regional government of Madrid (Gema Project), only 2% (2) have their own server and in 21% (19) is owned by private companies. In 46% (38) of the cases the server is owned by the provincial governments within the Basque Country, and 50% (42) by private companies.

In terms of domains, in Madrid 80% (73) of the municipalities do not have their own domain, meanwhile, in the Basque Country 63% (52) are in the same situation.

Citizens must access local web sites through provincial and regional governments and private companies addresses and servers. This shows that municipal web site projects are in a preliminary stage (giving responsibilities to other levels of government) or public managers prefer private development of this policy (offering control of server, domain and the policy to ICT's corporations). This indicates a trend towards contracting out web site creation and development, but there are potential risks within this strategy: problems regarding the set up control indicators, dependence upon private agents or lacks in coordination amongst departments. Even if New Public Management strategies are used more than old public administration approaches to develop e-government, it will be interesting to evaluate future results of such strategies, in particular, emergent issues related to privatisation of a policy without previous background within public management.

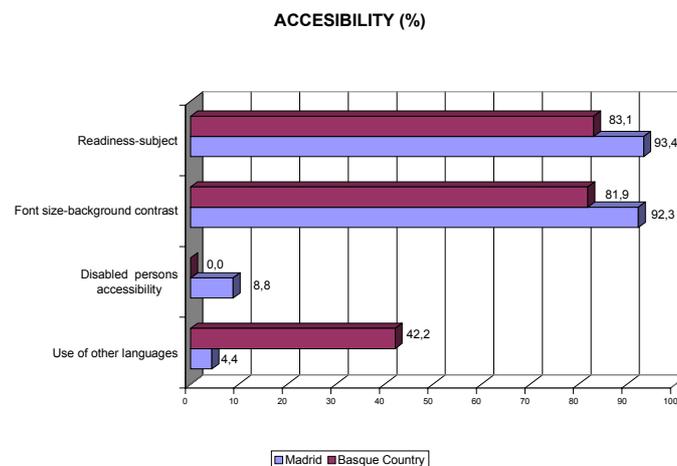
2.4. Web Site Style

Style is a more limited concept than web site design: design refers to the strategy of creating, maintaining and developing web sites; style is closer to the public policy terminology and addresses web site presentation and the kind of tools used to facilitate content access. The analysis is completed with this dimension because even if web sites have interesting and high quality information, give opportunities for feedback and interaction with citizens or complete

services on line, problems with style can decrease previous advantages making access and understanding difficult for the diverse groups of citizens who will visit the site. We present data about two different groups of indicators.

2.4.1. Accessibility

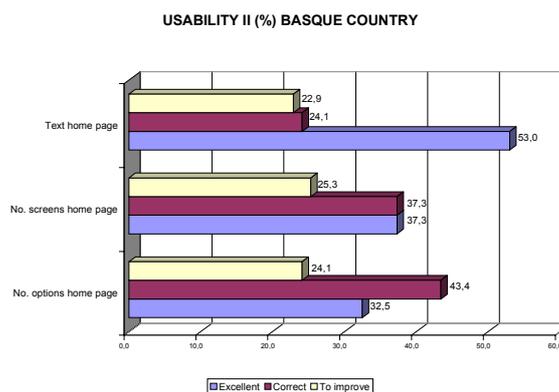
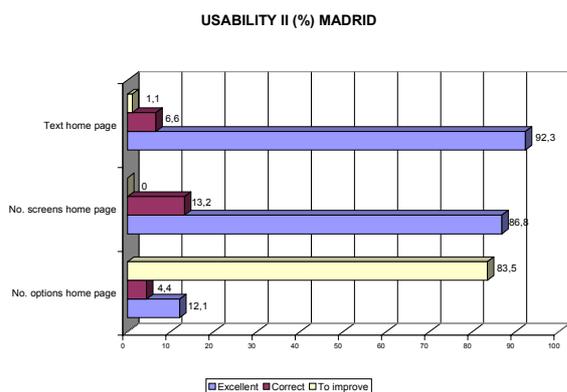
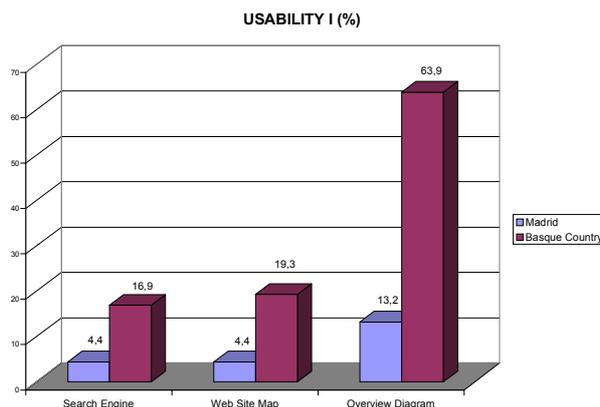
Points out the physical skills and ease of attaining the information. Here, we consider indicators related to contents comprehension for different groups of people and process of loading: *use of different languages* than Spanish to give an international view; attention to *disabled persons accessibility* with tools for blind people; *readiness - subject* or use of basic tools to write on the Internet; and *font size – background contrast* considering ease for reading text in the screen.



Results indicate more development of readiness instruments than physical accessibility ones. The core idea is that e-government encourages users with different needs (potential world wide visitors). Public managers should challenge problems with inequality in educational (levels of education), economic (types of computers or connections), even cultural (languages or interests) terms, in order to make access to web sites universal.

2.4.2. Usability

Usability addresses logic design and ease of mental comprehension for users. We show indicators about tools used to facilitate navigation and home page information effectiveness. The first group, *search engine*, *web site map* and *overview diagram*, is composed of tools that can be implemented in an easy way giving advice regarding internal structure. The second group, *number of screens*, *number of options* and *text in the home page* proposes home page efficiency to monitor users (cases are classified according to three categories: excellent, correct and to improve, where excellent refers to no more than one screen to avoid scrolling, no more than seven options and no text but only options). Both groups of indicators are based upon previous studies of web site usability within public and private web sites (Nielsen, 1999).



Results show shorter attention to navigation tools than facilities within home page. In the first case, indicators have low percentages of presence (only overview diagram in the Basque Country reaches the 20%), all of them provide a good opportunity for enhancing e-government usability for the citizens with a classical and easy web toolkit. In the second group, we present indicators to measure the first gate of virtual public administrations. Here results are positive in the majority of cases, however our main interest was to offer some indicators to measure web site openness and closeness to the citizens from the first e-government gate.

Usability means easy access to contents, above all, whether we consider web sites as a new way to communicate and give information to citizens. At present, it is available to a minority, however during the next years of expanded use of e-government, the promotion of effective instruments for improving usability will be of paramount importance.

2.5. Typology

Results addressing the dimensions analysed in this paper have provided a basis for the classification of web sites into groups. This includes the division of web sites of Madrid and Basque Country local governments in four different levels. This is a preliminary classification referred to the local level of e-government in Spain: the objective is to introduce criteria for future analysis within this rich, different and singular reality.

2.5.1. One Way Web Sites

This first stage includes web sites where prevailing information is passive and about general issues of the municipality (history, socio-economic information, sights, museums, town

access, or flag). This type of information is passive and does not include real services for the citizens.

Besides, these web sites are not managed at all, develop the classic division of local government organization and have not been updated from the moment when they were published in the Internet.

Finally, there is no style in them, nor clear definition, they provide total disintegration and result in difficult use and access for citizens, especially the new users.

2.5.2. Two Ways Web Sites

These sites present a step further in the exchange between governments and citizens. They include information about them gathered with instruments such as e-mail or box files integrated in the sites: it is not necessary to phone or write a letter to contact government. Information offers more issues and presents functions and services, however it is not possible to deliver on line.

Management has problems to be developed. Web sites do not provide data of last updating (if so present old dates), and access to designers or managers is not possible via e-mail, limiting feedback with citizens.

Style does not consider integration with management or contents and surfing inside the web site is still difficult for users, however it is possible to find out easy tools promoting usability such as site maps or overview diagrams.

2.5.3. Interactive Web Sites

Here deeper changes are considered, because we find web sites where jobs previously developed for public servants are now delivered on line, although they require off line channels for completion.

The main information is about the services and functions provided by councils. Interaction with citizens increases and we find services delivered on line.

Management is now visible for users as a result of certain tools: updating, information about municipal events and promotion of feedback with e-mail addresses or special site boxes.

Finally, style has more coherency: working with logical tools for surfing the web, integrating information with institutional views of municipalities and councils, giving sense to the composition, and using usability instruments or different languages.

2.5.4. E-government

This final stage, which all governmental web sites should attain, means more than a simple web site: a portal that integrates the complete range of government services and provides a path to them based on citizens needs and replacing the traditional structure of government.

Variables considered in this paper (contents, management and style), are integrated and there is a global view of this new part of the organization focused on simplicity and elegance.

Web site strategic design is the core issue. Does it attend to citizens needs and does it offer a complete range of services on-line, while, seeking to extend them as a consequence of technical and human resources.

Around the world it is difficult to find examples close to e-Government: there are only two portals with these characteristics: MAXI, powered by the Australian State of Victoria and the Singapore's e-Citizens Centre, managed by the Government of Singapore (The Economist, 2000).

WEB SITE ORIENTATION TO THE CITIZENS						
		NULL	LOW	MEDIUM	HIGH	
D I M E N S I O N S	CONTENTS	Passive and general about the municipality	Passive services of the council with	Interactive	On line deliver	
	MANAGEMENT	Inoperative	Rare without updating	Periodic updating	Diary	
	STYLE	Disintegrated	Problems with usability and accessibility	Limited integration	Integrated	
		ONE WAY WEB SITE	TWO WAYS WEB SITES	INTERACTIVE	E-GOVERNMENT	
TYPE OF WEB SITE						

3. Conclusions

This paper is the result of a descriptive and academic approach to Internet performance in the Spanish local level of government. The objective was to identify dimensions of web site orientation to citizens within Spanish municipalities. Analysis was based on three dimensions of the web sites: contents, management and style, adding population to explain distribution and types used.

The analysis showed that different sized municipalities have different types of web sites. On one hand, the largest cities present more developed web sites, where interaction is prevalent over information. The extremely high number of municipalities in Spain introduces enormous problems for the small ones to create, maintain and develop web sites: provincial and regional networks involving other levels of government and actors have allowed access e-government to this group. Gema Project in Madrid and Udalweb or e-Gipuzkoa Projects in the Basque Country are playing the role of getting web site access to councils with minimal resources, promoting ICT's policies that overcome national frames and give to regional and local level of government the ability for independent action. It will interesting to analyse if this autonomous policies are oriented to spread ICT's access and enhance democracy quality within these local political systems.

Other results support preliminary hypothesis: Spanish municipalities present an initial stage of web site development and a low web site orientation to citizens. Considering the types of information, it is more feasible to find general or institutional categories than data about services and functions of the councils. Also, prevalent is unidirectional and symbolic information rather than other categories with greater possibilities for interaction with citizens. Feedback is reduced to tokenism, giving some e-mail addresses, however not related to on line delivery: only a few services and functions can be completed on line by the citizens: tax payments, census changes, employment services and training delivery. Finally, relational information reflects an initial effort for linking governmental structures with citizens and other entities and individuals, mainly, the closest to the municipality. However, it has to be kept in mind that this is a primary and not developed attempt to consider the potential of Web technology. These results encourage further research about how are web sites used in terms of focusing on citizens problems instead of attending to internal structures of the councils: this means future study about how are expanded public services through web sites and if they

are prevalent for citizens, new interdepartmental structures and vertical collaboration among different public organizations.

Web site management and style dimensions confirm our general assumption about orientation to the citizens: data analysis offers modest results in the majority of indicators. External items were used as preliminary way to measure aspects related with feedback, internal updating or privatisation. Supported in informal interviews with managers and webmasters we discovered a preliminary contracting out trend within local level of government in the Basque Country and Madrid, which fits with New Public Management approach. It is necessary to know more about this trend in the future, because there are a lot of questions needing to be addressed: how will governments control ICT's policies? How will the relationship between public/private partners be managed? Will security and encryption management of public and fundamental data be in private hands? Network based policy approaches to e-government, even more than other views, need to be considered.

Finally, it seems more than necessary evaluate e-government policies and practices to monitor future processes, like web site creation, maintaining and development, in order to provide results about this emergent reality.

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