PORTUGUESE LOCAL E_GOVERNMENT

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Abstract: The Internet, the World Wide Web and electronic commerce are transforming the way of doing business. These changes are impacting every industry in our country, including local government. The Internet offers a wide variety of opportunities to improve services to citizens and to divulge information's about the communities. In Portugal, the adherence to the Internet by local government is increasing visibly, but much more has to be done. In 1999 a first study was done in order to evaluate the situation of e-government in our country, and two years passed a new study was undertaken, this time in order to evaluate the evolution registered in this area. In this paper we describe some conclusions achieved in these studies comparing their evolution in these two years.

1 INTRODUCTION

In 1999 a first study was undertaken in order to evaluate the adoption of the Internet by local governments. This study evaluated web sites for the presence of various features dealing with information availability, service delivery, look and navigational aspects and public access. The results were impressive and revealed that many local communities were out of this growing market. In this study the authors [Santos & Amaral, 2000] concluded that a lot of work had to be done in order to develop the e-government in Portugal. Much had to be done in order to make progresses and take advantages of such a technology which offers new ways of providing better services to citizens. In this study the city councils web sites were globally weak, only 20% were good and 6% excellent [Santos & Amaral, 2002a]. Two years passed and a new study was undertaken to evaluate what have been done lately. We can find that exist some progress in this area, but much more have to be done. But, in what concerns security the web sites are very poor. Sites do not present many visible safeguards in terms of privacy, security, copyright or other legal notices regarding displayed information [West, 2002a].

It is important to re-think the way local government deals with citizens, and the Internet is a potential technology that allows a better relationships between these two parts. With the Internet local government can attend all the community and satisfy their needs more quickly and reliably.

In this paper, we describe some results achieved in this second study. More information could be found in www.dsi.uminho.pt/gavea. The paper is organized as follows: Section 2 describes the methodology used in the study. Section 3 overviews some aspects of evaluation done to the web sites. Section 4 concludes with some remarks and presents some future work.

2 METHODOLOGY

The first step of this work was to collect the web site of the 308 portuguese city councils, using a group of sources available, such as the web site of the *Associação Nacional de Municípios Portugueses* (National association of portuguese communities) (http://www.anmp.pt), the search web site Google (http://www.google.com), and two portuguese search web sites, Altavista (http://www.altavista.pt) and Sapo (http://www.sapo.pt).

Next, each site was evaluated online according to a set of parameters previously defined, such as
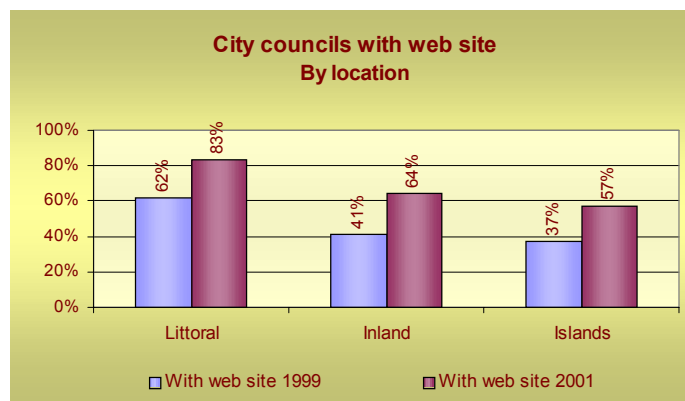
Figure 1: City councils with web site by location

geographical location, administrative division, number of accesses to the web page, actualness, party of the city councils, among others. Some of these parameters were already used in the first study and others constitutes the novelty of this second study, such as the maturity level of web sites. This index allows to distinguish those web sites that are really useful from those that aren't, putting them on a scale of maturity.

So for this analysis, four ranges (or stages) were created:

- On-line information about the city council – level 4;
- Interaction between the city council and the citizen: download of forms – level 3;
- Interaction in both senses – level 2;
- Transaction – treatment, decision and delivery (payment) of services – level 1.

With this index is our purpose to distinguish which web sites are offering better services to citizens since aspects like the level of download forms, payments and online transactions are evaluated.

3 EVALUATION OF THE WEB SITES

The city councils were split up in two groups: city councils with web site – 72% in 2001 against 50% in 1999, and the ones that haven't – 28% in 2001 against 50% in 1999. Table 1 shows this results. Here we have a visibly growth in the number of city councils with web sites since 1999.

An important parameter studied here was the use of email. As we can see in table 1, there exist

only three city councils without email (that corresponds to 1%) and all the others have at least one email available at their web site, which citizens can use to contact the city council and obtain some information's. It is useful to have email contact information on government web sites, but this material is not helpful unless there is someone who actually answers the email [West, 2002a]. To test the responsiveness of governments to citizens a study was undertaken [Santos & Amaral, 2002b] and the results shows that this useful and cheap method of contact are not being used as expected. Comparing these results with a study made in USA, federal and stadual government revealed that, in 2000, 68% had a email in their web site and in 2002 this number growth to 81% [West 2002b].

Another index used to analyze city councils were according to their geographical location. In that sense, the cities were arranged in three groups: Litoral (littoral), Interior (inland) and Ilhas (Islands, that include Azores and Madeira).

Figure 1 shows the evolution in terms of location between the first study made in 1999 and the new study. Looking for this figure, we can see that is the Litoral were the majority of city councils with web sites are located, similarly to what occurred in the first study.

Table 1 – Number of city councils with web site and email.

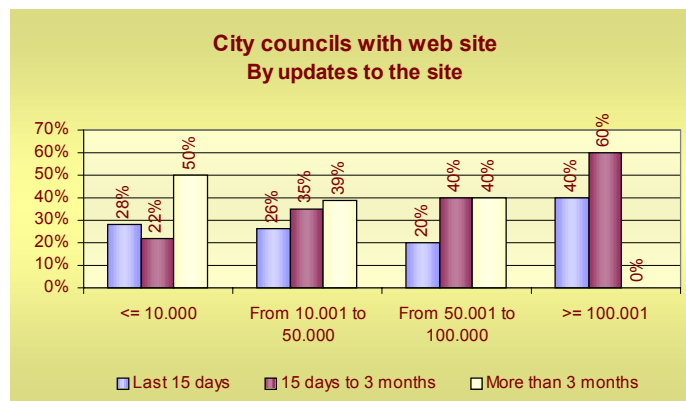|	With web site	With email
1999	50%	86%
2001	72%	99%
Dif. 2001 and 1999	22%	13%

Figure 2: Updates of the web site

Another index were some considerable progresses has been made is on disability access. To be recorded as accessible to the disabled, the site had to display features that would be helpful to the hearing or visually impaired [West, 2002a]. Here the sites were evaluated if they are "Bobby Approved", meaning that the site has been deemed disability-accessible by a non-profit group that rates Internet web sites for such accessibility (http://www.cast.org/bobby/). In 1999, none of the government web sites had some form of disability access to citizens. Now, the scenario have changed a few. Crossing this index with the number of voters and, the results shows that not much have been done but some measures in that way were taken.

In terms of foreign language translation, some city councils are concerned in translate information in some languages, essentially French, English and, in a fewer percentage, German.

In this new study some new indicators are considered. Aspects like updates of the web site, accesses to the web site and a ranking of the best city councils web sites are the novelty of this new study.

In the update index, the city councils were grouped in 3 ranges:

- Updates in the last 15 days;
- In the last 15 days to 3 month;.
- More than 3 months.

The ranges created for the number of voters, were crossed with these ranges, as demonstrated in figure 2. So for each range of the number of voters, the web sites were divided according this new ranges.

Globally the great majority of web sites are updated a few times. According the results achieved, 39% of the sites are only updated in periods of more than three months and the rest of the sites are grouped in the other ranges: 27% are updated in periods of 15 days and 34% between a 15 days and three months.

Another index considered for this new study is the accesses to the web page. This parameter can be very useful since it indicates if the page are visited regularly or not. If this parameter shows that the page aren't visited very often, it is possible to make some conclusions about the need of reformulate the web site. Globally, the average per day to the web site is of 40 accesses, what we can consider not a very good result because it takes us to conclude that city councils are not providing services with some quality using the Internet.

Finally, one of the most important parameters analyzed is the maturity level of the web sites.

The first study revealed that 98% of city councils only published information – specially about tourism, history, culture, heritage, events and news, and only 2% offered on-line services [Santos & Amaral, 2002a]. The study revealed also that web sites were not updated regularly. In that way, and with the purpose to generate some competitiveness between city councils in what concerns their web page, this parameter was implemented in this study.

As referred in section 2, four stages were created. Analyzing figure 3, we have a fifth level that corresponds to those city councils without web site. As seen before 72% of the portuguese city councils have a web site and 28% don't have one. Globally, 59% (that corresponds to 180 web sites) are located in level 4. These web sites only provide information about the community and don't allow any kind of interaction between the user and the city council (excluding the use of email).
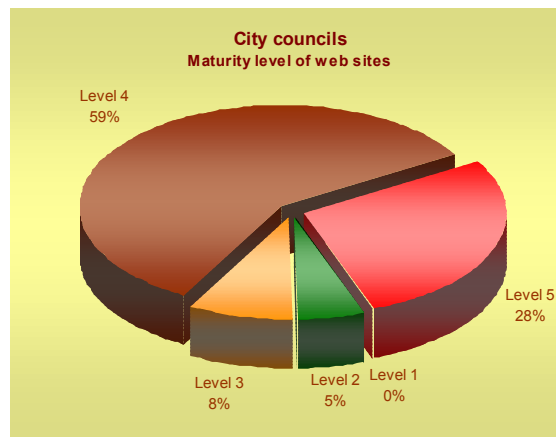
Figure 3: Maturity level of web sites in local government

In level 3 only 8% of the web sites (that corresponds to 26) have available forms for download. These is an improvement but much more have to be done. It is not enough to have some forms available, it is necessary that city councils allows the delivery of this forms on-line.

Only 5%, that corresponds to 16 web sites, allows some kind of interaction in both sides. This reveals that city councils are concerned to improve their work.

Finally, 0% of the web sites are located in level 1. This is the desirable level, but to be here is necessary to invest more money and time, what ours city councils are not yet prepared to do.

4 CONCLUSIONS

This analysis are part of the quantitative results achieved in the second study about the presence of Internet in portuguese local government. Globally, we can find that there has been considerable improvement over last year in the amount of online services, disability access, and giving citizens access to download some forms. But much more has to be done.

Comparing with the study made in 1999, it occurred an increase of city councils presents in the Internet. In 1999 only 50% had a web site, and two years after, this number had grown to 72%, what can be considered an excellent growth.

The results achieved so far reveals a positive growth in e-government, but much more has to be done to obtain an effective delivery of on-line services. A first step was undertaken it is now necessary to develop and make progress in this area.

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