Good practices in Local Government - A first overview of Portuguese reality

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Abstract: Good practices in eGov are being increasingly used by Local Governments being that it is considered by them as an advantage. The main goal is providing to the town hall a differentiation point and approximate their services to the citizens. For this, it is necessary to define and apply innovative strategies in order to increase the use of services by the citizens. This paper is framed in a research work and it presents a first overview of the existing good practices in eGov, taking in consideration the Portuguese’s reality. The good practices identified were distinguished with many awards and with a positive response from the target audience. The use of digital marketing strategies aims to increase their membership and coming closer the municipalities of its citizens through the dissemination of the good practices. At this moment the data collected are almost exclusively of good practice in Portugal, however some international practices were also identified. As a result of this study the community has a list of good practices that can be applied in their municipalities.

Index Terms: eGov, Local Government, Good practices, Town hall, Municipalities, Digital Marketing

1. Introduction
The municipalities increasingly need to adapt their services to provide better services to the citizens. The town hall must balance the need to transmit information and capture information, based on a set of factors, such as population, topographic, climate and economy. Local governments must define their own goals and progress reports in accordance to the interests and expectations of the citizens. So, each town hall needs to determine the objectives and the appropriate level of citizen participation[1]

The town hall has a permanent management function of municipal services and activities. The town hall creates local laws and obligations to citizens. These laws are reviewed, approved and after that are provided by the services, in the municipality[2]. The services included are: Energy; Transport and Communications; Education and Culture; Leisure spaces; Health, social action and housing; Civil Protection; Environment and Sanitation; Protecting the rights of consumers; Land-use planning and Urbanization; External Cooperation; Urban police. The town halls need to be able to respond quickly and easily perform all the tasks. Consequently, municipalities have adopted the use of electronic Government (eGov) services. The eGov is a generic term to refer governmental services which are based on the Web. The government uses information technology and particularly the Internet to support their operations, engage citizens and provide public services. The interaction can be used to obtain information, filings, or making payments and a number of other activities through the World Wide Web. In summary, it aims to promote a more effective government, make the government
services more accessible, allow greater public access to information and makes the government more accountable to the citizens. eGov involves services Internet, telephone, community centres, wireless devices and other communication systems[3,4].

Local eGov is a form of governance, which focuses specifically on the services provided by local authorities. The local municipality however is closer to the citizen, for example, the territorial proximity to the citizen is a differentiation point between the eGov and local eGov[2]. The main goal of eGov is improving the performance of the organization and the citizen’s satisfaction. For that it is necessary doing market studies to obtain a vision about the citizen’s needs. So, the eGov combined with a good marketing strategy allows the municipalities to have a privileged interaction with their citizens. This article aims to inform those of what some of the eGov best practices are. The main focus is the Portuguese reality and the benefits of adopting eGov practices.

This paper describes the first results gathered from a research project. This research project has as main goal identifying a set of good practices used at a Local government level. It is important to note that all of the good practices identified need to be focused on the citizen, in their health, security and in the capability to improve the relationship between them and the town hall.

There are studies which discuss good practices that focused on public administration. Studies such as Missouri Municipal League INNOVATION AWARDS [5] and the Good practices and innovations in public governance [6] demonstrates a set of good practices which won innovation and transparency awards. However, these studies only describe the project but did not describe how well the good practices implementation was doing. In order to search the good practices, a benchmarking methodology is used to define keywords and was done with an annual granularity time. The timeline for this was placed only in the XXI century, where once in the timeline a large technological development was found particularly in the use of Internet. A brief background along with related work is presented in section 2. Section 3 presents the Local eGov. Section 4 briefly describes the Good practices using eGov. Section 5 addresses an introspective discussion of this work. Section 6 presents the Conclusion and Future Work.

2. Background

2.1. electronic Government (eGov)

Local eGov is a level of formal state institutions that provide services to citizens and local organizations, acting in accordance with existing national laws. The electronic government allows local governments another way to serve the citizens and bring innovation to its internal operations. According to Cook[7] the practice of local eGov is reflected in four dimensions: eServices is the electronic delivery of government information, programs and services, mainly of the internet; eManagement is the use of information technology to improve government management. This service enables business processes to be simplified in order to improve the flow of information through government departments; eDemocracy is the use of electronic media such as email and Internet that increase citizen participation in the decision-making process; eCommerce is the exchange of money for goods and services over the Internet, which may include citizens who pay taxes and utility bills, vehicle registrations, and more.

The increase amount of information leads to an increase of the quality in the decision-making process. The organization needs to adopt tools enabling the acquisition, processing and presentation of information for management[8]. The use of BI in organizations is revealed as an advantage in the decision-making process, allowing the differentiation of services in organizations [9]. However, the number of solutions to local government is reduced[8]. The government needs to respond to the request for change in order to make public services more effective and efficient. Simplex, a program developed in Portugal aims to simplify services, bring the services closer to citizens, services tailored to the citizens, and do more with fewer resources[9]. Most of these goals can be achieved by the use of Business Intelligence.
2.2. Digital Marketing
Digital Marketing leads to the creation of the product/service using the internet as a key to satisfy the requirements for new forms of innovation. The internet is used as a tool to exchange value. By using the internet, products and services are positioned and promoted, purchased, shipped to distribution and requests are made for support and maintenance. The website offers a greater choice, more influence in decisions and more power to the consumers. Brands have new ways to create and sell their products to business services and markets, which results in reaching people more easily.

Digital Marketing is based on understanding how people are using the technology, and how the organization can take advantage of technologies to reach consumers more effectively. The organization works in order to understand what consumers need in order to deliver their products and services, successfully to their customers. Over the years, the use of technology has greatly increased, so the emergence of Digital Marketing was a predictable consequence [10].

In the world, 45% of the population uses the internet. North America (87.9%), Europe (73.5%) and Oceania (72.9%) are the geographical areas where the percentage of population using the internet is more pronounced. On the other hand, Africa (27%) and Asia (38.8%) are the geographical areas where the percentage of population using the internet is lower [11]. Portugal had 7,015,519 Internet users, which corresponds to 67.5% of citizens. One of the digital marketing channels that most used during this time was Facebook. Portugal has 5,600,000, which corresponds to 54% of penetration rate.

3. Local eGov

3.1. eGov in Portugal
The 2011 study, of Agência para a sociedade do conhecimento [12], made a statistical analysis of the various municipalities services. This study also had the participation of all the town halls where all the municipalities along with the autonomous regions answered questionnaires. In terms of the results, the study showed:

- In 2011, 68% of Municipalities had an ICT development; All the municipalities had Internet connection; Although all town halls have internet connection, only 37% of municipality employees used the Internet regularly;
- By type of open source software used: 73% Open source software for operating systems, 68% Open source software for Internet servers and 48% Open source software for other type of applications;
- Municipalities, by security applications used: 99% Anti-virus software, 95% Firewall, 91% Anti-spam filters, 53% Secure servers (e.g. https protocol), 40% Backup of information in a location external to the organization. However, security problems were detected: 10% Virus attack without loss of information, 3% Virus attack that caused loss of information, 3% Blackmail or threats to software or data and 2% Non-authorized access to the computer network or data; Municipalities by difficulties and problems experienced in information and communication technologies (ICT) implementation are: 89% Financial resources shortage, 58% Resistance to change, 58% Lack of informatics technicians, 56% Lack of training programs and 27% Management problems;
- Municipalities by activities performed on the Internet: 99% Search and gathering of information and documentation, 98% E-mail and Electronic exchange of files, 92% Promotion of goods and services provided by the Municipality, 91% Communication with other Public Administration organizations, 88% Purchase catalogue consultation, 87% Data bases access and 82% Communication with citizens;
- Municipalities with web presence, by services or functionalities offered in the website have: 94% Forms for download; 82% Public consultations; 80% E-mail to receive messages and information requests, 70% Newsletters subscription, 62% Geographic Information Systems / interactive maps, 44% Reception of garbage collection or street cleaning requests, 43% Online library services (e.g. search / availability, etc.), 39% Employment opportunities, 39% Forms to fill up and submit.
online, 38% User support (Helpdesk, FAQ's, etc.) and 35% Make surveys to the citizens; On the other hand, only 7% had online payments, 16% ability to guarantee secure transactions and only 18% Online Service to the public (e.g. Virtual service desk);

- Municipalities by types of concerns considered in the municipal ICT strategy: 67% ICT infrastructure, 64% Online services for citizens, 63% Security policy regarding ICT, 43% Training or certification of ICT competencies and 31% Ordering goods or services through the Internet (e-Commerce).

After the analysis of this data it was possible to conclude that all town halls have internet, but only 68% of Municipalities have an ICT development and only 35% of the town halls conduct surveys on the citizens. Other challenges for the municipalities are the number of employees who regularly use the internet (37%) and the number of municipalities which allow citizens to make online payments (7%). Through the analysis of this data, it is a possible conclusion that there are many ways to become more to the eGov services and to increase the use of their services by the citizens. In conclusion, it is necessary to improve the online payment services and online interaction with citizen's services.

With regard to Europe, Portugal according to EC [13] is one of the most evolved countries in the European Union as it regards the implementation of eGov in public administration. Therefore, Portugal is a great example in regards to their provision of online public services. Portugal also stands out from all the other countries in transparency and facilitators of information technologies (usability, easy to use and speed of use). In these cases, the transparency presents a percentage of 71% and the facilitators presents a percentage of 83%, the values in Portugal are higher than the average value of the European Union (46% and 68%, respectively).

3.2. Use of Digital Marketing in eGov

The local government does not take much account of the marketing strategies to get the information and services for their citizens. However, the advance of technology in the twenty-first century leads to increase the number of municipalities which have the need to create marketing strategies to reach out to their citizens. The marketing strategy should allow the customer satisfaction measurement in the services provided as well as allow them to make studies of customer satisfaction. This will allow them to provide suitable services. The use of technologies simplifies the search process and allows an easy access to the information found facilitating the citizens’ life. The phone or Internet surveys made by the municipality provides a more convenient and easier way to get information [14].

The Town Hall must analyze the Digital Marketing strategies to get closer to their citizens. They can do this by using Digital Marketing to disclose of important events that occurs in the city. Furthermore, for the citizens participating in the decisions-making process, need a well-defined marketing strategy to achieve the objectives of the organization in order to effectively participate in the decision making process.

3.3. Benefits of eGov

The eGov goal is to have more interaction between citizens and the municipality. So, it can intensify the demand and consumers choice, increase local competition, reduce the cost of the services provided, improve and innovate the way the local governance is provided to their citizens[15,16].

The main objectives that lead to adopt a strategy to a digital level are the needs of process and documents dematerialisation, reducing the budgets and simplifying the demand-response processes. The electronic government ensures another way to serve the citizens and bring innovation to its internal operations in the local governments. The use of information technology can provide alternative services, facilitate interaction with citizens and the government itself[7,15].

4. Good practices using eGov services
In the world there are several good practices at the level of local eGovernment. Below there are some examples of success, which are briefly explained. The description presents the objectives of services and creative ideas that are implemented by the town halls, with more emphasis on Portugal.

4.1. Best Digital City – Guimarães

In 2015, the Guimarães town hall [17] (CMG) won the Best Digital City award attributed by Agência para a Modernização Administrativa (AMA). The criteria as design, customization, innovation and usability in the CMG, through its services and multiple platforms referred to in ICT. CMG was recognized as the best digital city in Portugal. The CMG won the award thanks to their website, its digital services, including the “online services” and “clarify online”, the website of the executive, the assembly, the platform for education and the application for Mobitur mobile and the ePaper urbanism platform. These projects and application deployed in Guimarães were appreciated by the association of companies and they are leading the revolution of the Digital Economy in Portugal. Particularly, online shopping, financial websites, portals, media sites, telecommunications companies, e-commerce services and digital marketing.

At this time they are introducing BI technologies in the organization in order to improve decision-making and bring decisions closer to the citizens [8,9].

4.2. PlatformBizfeira – Santa Maria da Feira and Talk with the president – Setúbal

Santa Maria da Feira[18] aims to bring businesses and citizens around the world who wish to develop contacts and business with companies and citizens from Santa Maria da Feira. The platform Bizfeira is a virtual space for active and collaborative business where companies and individuals establish networking opportunities, looking ahead to leverage the local economy. Bizfeira is available to disseminate the know-how and high quality products for businessmen.

The participants can ask questions on matters related to the town hall directly to the president of Setúbal Municipality [19] getting answers in real time. The "chat" is held on Mondays, from 15 to 15 days between 21h00 and 23h00, and it is accessible on Facebook via a link provided on the website of the Municipality. This service is a form of instant conversation through the Internet, text messages, and other means of contact between the President of the Municipality and the citizens. A municipality with interest and the opinion of its citizens encourage the use of new information and technology.

4.3. CIM Câvado and Shop Mobile - Palmela

The Intermunicipal Community Câvado[20] is the NUT III Câvado, and it includes the municipalities of Amares, Braga, Barcelos, Braga, Terras de Bouro and Vila Verde. The CIM Câvado aims to combine, promote and articulate common interests of associated municipalities in the area of public proximity services, and municipal investments in terms of: Promoting the planning and management of economic development strategy, social and environmental dimensions of territory covered; Articulation of municipal investment inter-municipal interest; Participation in the management of regional development support programs, particularly under the National Strategic Plan (Quadro de Referência Estratégico Nacional – QREN); Planning of the actions of public authorities, in supra-municipal character. The Municipality of Palmela[21] offers the first Citizen Shop Mobile of the country. It consists of a mobile vehicle that circulates through the county, especially in rural areas in order for residents with limited movement can use the services and receive information from the municipality. In the mobile vehicle it is possible to treat the same subjects available in branches of municipal service like: urbanism, water, Advertising and occupation of public space, hygiene and health surveys, food stamps the scope of the feeding program and school transport, information and customer support, licensing public entertainment events, presentation of opinions, suggestions or complaints, Information on conditions for urgent action taking place in the county, information about the cultural offer, sports, tourism and leisure and others.

4.4. Other examples
In Table 1 an overview of the most relevant projects in Portugal and some examples internationally. The examples are from 2005 until the present.
| County / City | Year | Name | Description |
|---------------|------|------|-------------|
| Washington Mercer Island[22] | 2006 | MyBuilding Permit.com | Project developed to provide services of housing construction. It provides authorization and information for government agencies in the city. |
| Several states of Washington[23] | 2007 | NWMaps | NWMaps gives access to virtual information of city maps. It contains information about business and houses. |
| Washington Sammamish[24] | 2005 | Sammamish 21 TV | An exclusive TV channel was created for the city. The current schedule shows, the meeting of the town hall, information spots about the city and other programs. |
| Germany Hamburg[25] | 2016 | Hamburg Gateway | It provides a point of access for all citizens to online services of the city and the Hamburg state. With its strong authentication, ensures privacy and security for the customer. |
| New Zealand Auckland[26] | 2007 | Unlocking Auckland’s Diversity GmrTV | A platform has been created to host communities and migrants can work together. This aims to build the city's ability to be welcoming. |
| Portugal Guimarães[27] | 2007 | | Despite have not been developed by CMG, but the project has their support. It presents the news and events that occurred and will occur in Guimarães. |
| Portugal SMAS Oeiras and Amadora[28] | 2009 | Walkthrough Get New Skills | This project won the award for good practice in local government. The objective was improving the academic knowledge of the workers who work in the various municipal services. |
| Portugal Seixal[29] | 2009 | Seixal Digital Online Services Municipio GIS portal Arraiolos | The Seixal presented the project to put its online services always available. It aims to progressively dematerialize and reduce administrative costs of the services. |
| Portugal Arraiolos[30] | | | It was built using open source software. The GIS portal allows the city a wide autonomy in its management of the portal because it has a big flexibility in terms of content. |
| Portugal Évora[31] | 2006 | Station Access Public displays TOMI | The city is equipped with 8 vehicles that travel in the Évora district providing to citizens a free access to the internet. These screens are in different cities and they are aimed at providing information to citizens and publicize events. Each municipality has control of the information. The information is based on news, directory (with city information), calendar and transports. |
| Portugal[32] | | | |
| Portugal Trofa[33] | 2016 | GO – Gestão de Ocorrências | The municipality makes available as of April 1st the platform named “GO – Gestão de Ocorrências”, to all municipals. This platform allows the warning, signaling, lifting and solving quickly the occurrences in the Trofa municipality. The e-government platform is the first in Portugal available as mobWeDo.Oc in App Store and Google Play Store, which allows to the residents a participatory performance in a network. The network will allow the citizens to cooperate with the municipality in the identification of possible occurrences. For example, the level of building works, abandoned animals, sanitation, waste, abandoned vehicles, and other areas. |
5. Discussion
The technological evolution leads to an inevitable growth and development of online applications and services in all society sectors. The governmental sector is no exception. Currently, the services of public and local administration sectors are focused on digital services.

In this paper, it is verifying a possible set of good practices that are applied by municipalities in Portugal. All municipalities have internet access, but the online services still have problems. The good practices already implemented are not always used by the citizens with the expected frequency. Each municipality presents only a reduced set of good practices, because they do not reuse the good practices implemented in other municipalities, which could be used to improve their services. Usually, they only use the good practices and ideas created by them. This work wants to change this paradigm by making a study of the best practices and disseminating it to the community.

6. Conclusion and Future Work
In the last ten years, there was a huge advance on the services implemented in local administration to bring the citizens closer and attract visitor for their municipalities. The proposal of this study is to obtain an overview of eGov in Portuguese local government. For this is necessary to do a deep search about good practices which there are in municipalities and combine them with digital marketing strategies to increase their divulgation. The combination of these two factors will provide a new vision of eGov in Portugal. Furthermore, the study provides to municipalities a guide of good practices which can be implemented by them. These good practices have the proposal of appeal to the citizens to use the ICT and allow a cost reduction by the municipality through new innovative ideas.

The main objectives which lead to adopt digital strategies by the municipalities are the need for documentation dematerialisation, reducing costs and simplifying the demand and supply process. Therefore, a new challenge emerged focused on how the information is treated and how it reaches the citizens. As a result, the Digital marketing methods are being increasingly used due to ICTs evolution which allows the information to be reached by citizens through the multiplatform. The objective of this work was to identify a set of best practices and disseminates them to society and the scientific community. This article presents the first stage of this goal. The next steps include the analysis of more eGov good practices in Portugal and internationally, defining requisites and restrictions of the services. At the same time an interaction with various municipalities will be scheduled in order to improve their services. A set of indicators also will be defined to be used in a benchmarking process which will be applied in the municipalities which implemented eGov practices. Finally, in this research we developed a guide of good practices which could be analysed and implemented by the Town Halls.

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