The Evolution and the Future of e-Gov

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Introduction

Defining e-Gov

Implementing an e-Gov Platform

e-Gov in Europe

e-Gov in Portugal

The Future of e-Gov
We live in the century of Information and Knowledge Society;

Information Systems, are actually a strategic side that brings enterprises and governments an additional value;

Generalized use of ICT in capturing, storage, processing and information diffuse;
A growing number of initiatives has been taken by the European Union, providing the forthcoming of new opportunities;

e-Gov appears as a strategic side of the Government intervention in different areas of activity;

Public Administration appears to be a privileged area to work on;
What is e-Gov?

E-Gov, promotes, based on the use of ICT, a Public Administration in-line

- More productive;
- Efficient;
- Capable
- Transparent;
- Modern;
- Less bureaucratic;
Despite websites and electronic mails, **e-Gov** should be capable of promoting **new working paradigms** in the organizations;

- **Physical services** should be **available on-line**;

- **Processes that support the organizations should be rebuild**, supporting the development of a citizen call center, centralized and capable of answering through multiple communication channels (e-kiosks, SMS, Portals, Call-Centers, Cell Phone, Digital TV, etc…);
Definition of a **structure less complex**;

Implementation of a **technological infra-structure** providing new ways to access Public Administration;

Modernization and **development of new services**;

**Employees optimization**, moving them to other functions less repetitive;
Potentialities and Opportunities

Optimization of internal processes;

Higher level of cooperation between different entities of the Government, due to the integration of it’s systems;

Simplification of services, cutting off redundant processes;

Better information (data consistent) due to data sharing (there will be no more repeated data);
### Potentialities and Opportunities

<table>
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<th>Potentialities and Opportunities</th>
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<tr>
<td>Decisions based in facts, not in suppositions (<strong>decision support systems</strong>);</td>
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<tr>
<td><strong>Better performance</strong> increasing the answer volume of the services;</td>
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<tr>
<td><strong>Better services</strong>;</td>
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<tr>
<td>Available permanently, <strong>24 x 7 x 365</strong>;</td>
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</table>
Decrease of bureaucracy / Increase of productivity / decrease of costs;

Greater comfort;

Larger transparency;

Citizens satisfaction;

Incitement to the exploration of new businesses and markets:

- Autarchies, Justice, Health, Digital Democracy;
But there are also some Difficulties and Obstacles

Reaction by people and organizations;

Need to train up employees of public administration;

Promotion of a legal scene propitious to a full use of the services;

The existence of two realities: analogical and digital format;
But there are also some Difficulties and Obstacles

**Equality in information access**, guarantying the participation of all;

Assure a confidence relationship between citizens and public administration, through the development of a **safety solution** that can guarantee the information;

Need of a high level **coordination** to maintain and share the information **between organisms physically not connected but necessarily inter-related**;
The success of an e-Gov platform it’s more than just technology. It depends on people, an on the significance that the organizations give it;

E-Gov is the opportunity that Governments have to stimulate the reformation of the services in two main sides:

- Simplify the processes that support the organization
  - Based on the reorganization of the Information Systems back-office
  - Providing new working paradigms in the organizations
Develop new services and readapt old ones

Reorganizing the integrated access point (front-office)

Making available to the citizens new ways of accessing public administration
Introduction of e-Gov, stimulates **public services to reorganize themselves**;

**e-Gov implies significant differences in the manner** Information Systems capture data, save, manipulate, diffuse and use information;

So that citizens **won’t need to know the internal organization of the government** and **without the need to share**, more than once, the **same information** to distinct authorities;
The Government should work just like an abstraction layer (only one point of delivery...many access points), isolating the internal complexity and making available new communication channels;
Front-Office

Online Development

Stage 0

Information

One-way interaction
(downloadable forms)

Two-way interaction

Transaction
(full electronic case handling)
Europe Action Plans are nowadays an important policy in most of the European countries;

eEurope 2002, defined in 2000, had as main focus the use of Internet to be as common as possible;
eEurope 2005, defined in 2002, included, aside the infra-structural expansion, the development of new services, applications and contents that close citizens to public administration, as well as the access through new communication channels:

- Public services in-line – eGov;
- Electronic learning process – eLearning;
- Telemedicine – eHealth;
- Dynamic environment businesses – eBusiness;
- Safety information infra-structure;
- Broadband Internet access and fully available;
**i2010**, defined in 2005, pretends to support the growth and the employment in the Information Society

- Realization of a single market, open and concurrent in the domain of information society services;
- Substantial increase of public and private investment in ICT research;
- Participation of everybody in the Information Society;
IDABC (Interoperable Delivery of Pan-European eGovernment Services to Public Administrations, Business and Citizens) is an e-Gov program to the period 2005 – 2009

- to encourage and support the delivery of cross-border public sector services to citizens and enterprises in Europe
- to improve efficiency and collaboration between European public administrations,
- to contribute to making Europe an attractive place to live, work and invest
Since October 2001, Capgemini has performed a report to evaluate the online availability of public services.

The report considers 28 countries (UE25 + Norway, Iceland, and Switzerland) and the analysis of 20 services (12 concerned to citizens and 8 to business):

- Online Sophistication;
- Fully Availability Online;
OnLine Sophistication

- Austria
- Malta
- Estonia
- Sweden
- Norway
- United
- Slovenia
- Denmark
- Finland
- France
- Ireland
- Portugal
- Hungary
- Italy
- Spain
- Netherlands
- Iceland
- Belgium
- Germany
- Lithuania
- Cyprus
- Switzerland
- Greek
- Czech
- Luxembourg
- Poland
- Slovakia
- Latvia

2004
2006
Média

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Fully Availability OnLine

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### 2004

- Austria: 90,00%
- Estonia: 60,00%
- Malta: 10,00%
- Sweden: 30,00%
- Norway: 20,00%
- United Kingdom: 10,00%
- France: 10,00%
- Slovenia: 0,00%
- Denmark: 0,00%
- Finland: 0,00%
- Portugal: 0,00%
- Italy: 0,00%
- Spain: 0,00%
- Netherlands: 0,00%
- Hungary: 0,00%
- Ireland: 0,00%
- Belgium: 0,00%
- Germany: 0,00%
- Iceland: 0,00%
- Lithuania: 0,00%
- Cyprus: 0,00%
- Czech: 0,00%
- Greek: 0,00%
- Luxembourg: 0,00%
- Poland: 0,00%
- Slovakia: 0,00%
- Switzerland: 0,00%
- Latvia: 0,00%

### 2006

- Austria: 90,00%
- Estonia: 80,00%
- Malta: 40,00%
- Sweden: 30,00%
- Norway: 20,00%
- United Kingdom: 20,00%
- France: 10,00%
- Slovenia: 10,00%
- Denmark: 10,00%
- Finland: 10,00%
- Portugal: 10,00%
- Italy: 10,00%
- Spain: 10,00%
- Netherlands: 10,00%
- Hungary: 10,00%
- Ireland: 10,00%
- Belgium: 10,00%
- Germany: 10,00%
- Iceland: 10,00%
- Lithuania: 10,00%
- Cyprus: 10,00%
- Czech: 10,00%
- Greek: 10,00%
- Luxembourg: 10,00%
- Poland: 10,00%
- Slovakia: 10,00%
- Switzerland: 10,00%
- Latvia: 10,00%

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** Média**

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[www.ipt.pt] [hultig.di.ubi.pt]

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The Evolution and the Future of e-Gov
Conclusions of the Report

The report reveals that:

- 76% of the services reach two-way interaction (step 3 of 4) of **online sophistication**;

- Almost **50%** allow a **fully electronic** realization of the process;

- Comparatively to previous report, **Austria** (95%) continuous to be the leader, followed now by Malta (from 16th to 2nd) and Estonia (from 8th to 3rd);

- **Portugal** gone up 2 positions, being now at the 12th with **83%** (+15% than the previous report and +7% than the actual average). Slovenia and Hungary are also successful cases. Poland, Slovak and Latvia, although it’s growth, still occupy the last positions;
Conclusions of the Report

The report reveals that:

- **Austria** (83%) is also leader of fully availability online, followed by Estonia and Malta;

- **Portugal** (like in the previous measure) obtained 5th highest growth (+20% than the previous report) with 12% above the average. Hungary and Netherlands have also registered a huge growth;

- In both cases, **Latvia stands in the last position**;

- **Portugal** registers in both measures the 5th higher growth (**+15% in Online Sophistication** and **+20% in Fully Availability Sophistication**), above the average, in obvious opposition to Ireland, which, after successive years of progress is in this report the only country that did not grow up anything;
Conclusions of the Report

The report reveals that:

- From 2004 to 2006 we verify an average grow up of **10% in terms of online sophistication**, **15% in what concerns to Portugal**;

- In fully availability online we verify a grow up of **8% in terms of average and 20% in Portugal**;

- Generally, there is still a **higher level of sophistication in public services to business** (exceeding the two-way interaction in most countries) than to citizens (some countries still progressing in reaching the one-way interaction);

- Being the second year of benchmarking the services in the 10 new member states, **this report is highly impacted by the progress made in these recently countries**, particularly Malta and Estonia;
In **Finland** all **births** in maternity hospitals are now **recorded electronically** in the national population information system;

In **Greece**, citizens can have **access to public service information** through a 24 hour administrative information **call center**;

In **Iceland**, people can **submit inquiries** through the police **website**. The police scans incoming mail submitted and responds either by phone or by visiting a given address;

In **Netherlands**, citizens can **register as jobseeker** and apply for unemployment’s benefits;

In **Malta**, citizens can **renew their vehicle** road licenses online;
In 1997 was published the **Green Book** for the Information Society;

In 2000 is approved the **POSI** (Operational Program for the Information Society), known as the main financial tool for the development of the Information Society;

In the same year appears **UMIC** (Agency for Knowledge Society) main agency in the definition of strategies to the development of the Information Society and e-Gov;
In 2002 is approved the **Action Plan for the Electronic Government** (integrating the Action Plan to the Information Society), which aim is to put the public services among the best services of the country, **assuring public services with quality, transparency and efficiency** by:

- Reinventing the organization of the government;
- Defining new relations between citizens and the government;
- Diffusing the benefits of the information society to public administration;
Relevant Projects

Citizen Card, http://www.cartaodecidadao.pt

Electronic Passport, http://www.pep.pt


Relevant Projects


e-Voting, http://www.votoelectronico.pt

Electronic Daily Republic, http://dre.pt

Enterprise on the hour, http://www.empresanahora.pt

### Level of Basic Public Services in Portugal

#### Citizens

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<th>Service</th>
<th>Stage</th>
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</thead>
<tbody>
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<td>Income Tax Declaration</td>
<td>(4/4)</td>
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<tr>
<td>Job Searches by labour Offices</td>
<td>(4/4)</td>
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<tr>
<td>Social Security Contributions</td>
<td>(4/4)</td>
</tr>
<tr>
<td>Personal Documents</td>
<td>(3/3)</td>
</tr>
<tr>
<td>Car Registration</td>
<td>(2/4)</td>
</tr>
<tr>
<td>Application for Building Permission</td>
<td>(1/4)</td>
</tr>
<tr>
<td>Declaration to the Police</td>
<td>(2/3)</td>
</tr>
<tr>
<td>Public Libraries</td>
<td>(4/4)</td>
</tr>
<tr>
<td>Certificates (Birth, Marriage)</td>
<td>(3/3)</td>
</tr>
<tr>
<td>Enrolment in Higher Education</td>
<td>(2/4)</td>
</tr>
<tr>
<td>Announcement of Moving</td>
<td>(3/3)</td>
</tr>
<tr>
<td>Heath-related services</td>
<td>(3/4)</td>
</tr>
</tbody>
</table>

#### Enterprises

<table>
<thead>
<tr>
<th>Service</th>
<th>Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Contributions for Employees</td>
<td>(4/4)</td>
</tr>
<tr>
<td>Corporation Tax</td>
<td>(4/4)</td>
</tr>
<tr>
<td>VAT</td>
<td>(4/4)</td>
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<tr>
<td>Registration of a new Company</td>
<td>(4/4)</td>
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<tr>
<td>Submission of data to statistical offices</td>
<td>(3/3)</td>
</tr>
<tr>
<td>Customs Declaration</td>
<td>(4/4)</td>
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<tr>
<td>Environment-related permits</td>
<td>(2/4)</td>
</tr>
<tr>
<td>Public Procurement</td>
<td>(4/4)</td>
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</table>
What about the future?

With this values almost reaching the top, the predisposition is to take care off some issues ignored till now and to explore some new opportunities;

- Promote an inclusive society applying WWW Consortium rules to the accessibility of people with disabilities and by making the contents available in more than one language;

- The exploration of a new paradigm, the m-Gov, supported in the availability of services and contents more intelligent and user-oriented;
In Europe 15% of the population have inabilities, most of them facing obstacles in the use of ICT products or services;

In fact, many websites are too complicated for inexperienced users with cognitive disabilities, or simply impossible to read or browse for blind people;
Accessibility is part of the i2010 Action Plan and assume a particular meaning:

- **eInclusion**: Everyone (including people that are in disadvantage because of education, age, sex, origin) should have access to the benefits of the Information Society;

- **eAccessibility**: people with disabilities;

- **Digital Divide**: people who live in geographical areas limited in terms of technological resources;
The European Commission has defined the realization of a report in the period of 2005 – 2006 intended to identify measures with a positive impact in electronic accessibility;

In Portugal, although the resolution taken by the Ministers Council in 1999, which determined that all public administration websites should allow and make easy the access to citizens with special needs, the problem is still unsolved;

The resolution was then replaced by the National Program to the Participation of Citizens with Special needs in Information Society and in 2006 the government approved the Action Plan to the integration of people with disabilities:

- Includes an issue intended to promote web page accessibility mainly in Public Administration portals;
The mission of the WWW Consortium is to develop protocols, rules and specifications to guarantee the compatibility of the technologies so that any software and hardware can be used to access the web;

Web Accessibility Initiative exists under this scope to make easier the access to the web for people with disabilities:
ATAG (Authoring Tool Accessibility Guidelines) is primarily for developers of authoring tools (software and services that people use to produce Web pages and Web contents) and defines how they should help web developers producing web content that is accessible and conforms to the Web Content Accessibility Guidelines;

WCAG (Web Content Accessibility Guidelines) is primarily intended for web content developers and explains how to make web content accessible to people with disabilities;

UAAG (User Agent Accessibility Guidelines) is primarily for developers of web browsers, media players, assistive technologies and other user agents, and explains how to make user agents accessible to people with disabilities, particularly to increase accessibility to Web content;
Web Content Accessibility Guidelines

Under the WCAG document, the working group has defined 3 priority levels based on the impact on accessibility:

- **Priority 1**: A Web content developer **must** satisfy this checkpoint;
- **Priority 2**: A Web content developer **should** satisfy this checkpoint;
- **Priority 3**: A Web content developer **may** address this checkpoint,
And 3 levels of conformance:

- **Conformance Level A**: All priority 1 are satisfied;

- **Conformance Level Double A**: All priority 1 and 2 are satisfied;

- **Conformance Level Triple A**: All priority 1, 2 and 3 are satisfied;

The Austrian government portal (**www.help.gv.at**), and the Access Program in Portugal (**http://www.acesso.umic.pt**), for people with special needs, are two great examples of Conformance Level Triple A;
Redefinition of Accessibility Concept

The concept of accessibility should also be reconsidered taking into account the existence of 2 new paradigms of accessing the information:

- **Mobile Access**;

- An even more **internationalization of Internet**;

So, Despite the need to guarantee a free access for people with special needs;

Accessibility should also include guidelines that meets multilingual access and user-agent independency (no matter if it’s a cell phone, a computer, a palm or a laptop).
In fact, nowadays, it’s possible to access the Internet, through a wide range of mobile equipments;

Cell phones for example, are used not only to voice, but also to change emails and to access Internet;

Since 2004, Portugal had more card cell phones than population, but in the counterpoint, only 54% used computers;

Meanwhile, appeared other devices like PDAs (Personal Digital Assistants), easy to carry on and cheaper than computers;
Naturally e-Gov will evolve to m-Gov

Mobile access has become part of our days, and will incite government organizations to adapt themselves to this new concept;

Offering accessible public services at any time, everywhere

Offering a higher convenience and more flexibility to the user

Naturally e-Gov will evolve to m-Gov;
Consequences

The first consequence will be:

- **Accessibility** (alternative channel of communication);

But also:

- Evolution of the traditional e-gov service to **m-gov**, with the definition of new **personalized services, user-centered** and that make use of information obtained by the **user’s localization**;
Consequences

In fact, **m-Gov** will allow the services to become **more proactive**, offering to the user, real-time information and a set of specific programmed services;

Aside alerts or e-mail notifications, **SMS** appears as an **alternative channel** and can be used, for example, to inform the users they have a health appointment, to receive grades from the university, warnings about passport renovation, car inspection, etc...
Progressively, user-centered services will become more intelligent, going ahead of the user need’s, based on the knowledge obtained about the user’s localization, enabling the emission of contextualized information:

- Weather Forecast
- Maps
- Road Traffic
- Culture Information
Although being cheaper and easier to carry on than computers, mobile equipments (except laptops) have:

- a reduced interface area;
- lower processing capability;

Plus:

- Smaller broadband internet access;

Implies some limitations in terms of the **volume of the contents** that can be shown to the user;
Therefore, we should consider the following points:

- Kind of user;
- Preferences and Usages;
- User’s localization;

Use Web Usage Mining techniques which allow the development of personalized services and adapted to each user, showing, only the relevant information, considered at that instant time;
Data security and privacy should also be guaranteed, just like legal questions that define the use of mobile equipments as a new communication channel, used to change information between the user and government entities;

The use of mobile equipments to access governmental platforms could be a great solution to the Digital Divide problem;
e-Gov isn’t just a **technological process**;

The way **government entities inter-relate** themselves (set of organizations disposed far away, but self dependent) is an **additional problem**;

The realization of e-Gov, requires that the **different organizations relate** between them, **using a standard language**, by offering multidisciplinary **abstracts services**, designed to their needs and perspectives;

Therefore, the development of **e-Gov**, should be **combined with organizational changes and the definition/reformulation of services, contents, competences and communication channels**;
Benefits of e-Gov

e-Gov promotes the forthcoming of **new platforms**, crossing the difficulties, through boarding training and reorganization the structures;

**Guarantee the participation of all**, powering a technological movement, so that can appear **new services and contents**;

e-Gov should:

- Facilitate;
- Reduce bureaucracy
- Simplify;
- Reorganize;
- Integrate and speed the processes;
Contributions of e-Gov

Help on:

- Increasing transparency on Public Administration;
- Increasing productivity;
- Make economy more competitive;
Almost Reaching the Top

The Capgemini report reveals a considerable evolution in practically almost the countries, reaching 76% of online sophistication and 50% on fully availability online;

The Reason?

- Malta, Estonia, Hungary, Slovenia and Poland;

And Portugal?

- Reached the 5th grow up among all the countries (+15% online sophistication; +20% on fully availability online)

[w w w . i p t . p t] [h u l t i g . d i . u b i . p t]
Almost Reaching the Top

Austria and Latvia are the best and the worst countries respectively;

Against the previous reports, no progress was verified in Ireland;

With the **majority of the countries almost reaching the top**, plus an even more **internationalization of the web** and the **frequent use of mobile equipments to access Internet**, developers will take attention to:

- Accessibility
- Multilingual
- Development of new access channels
From e-Gov to m-Gov

e-Gov will naturally evolve to m-Gov, providing:

- New services;
- More intelligent;
- Proactive;
- Personalized;
- User-Centered;
m-Gov could also be the solution to Digital Divide;

However, the effective definition of services based on this concept, implies changes and structural adaptations, from which is necessary to find a technological solution;
Questions

- Which will be the impact in economical terms, resulting from the increase of efficiency, reorganization of the processes, etc…

- What will be the impact in social terms, digital culture, safety, life quality, etc…?

- Will it be real possible to change a public sector so bureaucratic in an inter-connected government global network, effective, dynamic and accessible anytime and everywhere?

- Will push services be the services of the future?
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Thanks for your attention!