The Strategy and the Progress Made on E-Government Services in the EU

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Abstract. The need for the provision of a new generation of e-Government services able to meet the requirements of modern technological societies of the member states of the European Union (EU) was quite evident since the end of the previous century. To this end, the EU urge its members to actively participate on its 2020 strategic plan for the "provision of a new generation of e-Government services" [1]. The European Union's goal is to incentivise the participating states to further develop and evolve the current e-Government services in order to promote interoperability and better e-relations between states with the introduction of e-Signatures and e-Identification (STORK 2.0 project). Even though Europe is trying to achieve an ideal by implementing eGovernment 2.0, a dipole has formed in the sense that Europe is pushing for the 2020 goals on the one end, and on the other end the countries with a high percentage of public sector corruption are prioritising e-services centered mainly on tax collection, at the expense of other objectives. In this paper, an effort is attempted to make an up-to-date review of the criteria and benchmarks used in evaluating e-government services worldwide. Also, an assessment is contacted on how the member states of the EU conform to the EU's 2020 strategy.

Keywords: E-Government · e-services · e-Democracy · e-Government indicators · Public administration

1 Introduction

In modern societies, with complex day to day activities, in order to meet the rising citizens' needs, Information and Communication Technologies (ICT) have to play an even bigger part in the public sector's transformation. As evidenced by the recent changes, the technology readiness in e-gov services is a prerequisite not only for the constantly demanding citizen's needs, but also in the sustainability of a country [2].

Considering the latest e-government development indices and the latest reports from the European Commission and other organisations, it is abundantly clear that the member states of the EU are attempting to implement better and more reliable e-gov services for their citizens and businesses. Nonetheless, ambitious plans like the above are not easily implemented due to the economic crisis and end up significantly hampered, and also, because in many countries the public sector's corruption has changed their development plan and implementation schedule, resulting in priority e-services centered on tax collection services.

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The European Union is aiming to help and supervise EU member states' efforts in developing fully implemented e-gov services. It was on March 2010, when The European Commission (EC) launched its strategic program "*Europe 2020*". This program aims to help the countries implement specific services, following a common developmental model [3].

Considering the last 10 years, while the number of twelve services provided to citizens and eight services provided to SME's has not changed, the EU strives, with its Europe 2020 strategy [4], to improve these services in order to achieve greater participation and a fairer e-Government policy. Although the public's and the SMEs' usage of the internet and interaction with e-Gov services has increased lately, the challenge remains to provide even better solutions and services.

To this end, the EC called the member states to participate on its "eGovernment Action Plan 2011−2015" [5]. This plan was included on the "Europe 2020" strategy and, in fact, was inspired by the Malmö Declaration of four political priorities, for the European Public Administration's 2011−2015 timeframe: "*to empower citizens and businesses, to reinforce mobility in the Single Market, to enable efficiency and effectiveness and to create the necessary key enablers and pre-conditions to make things happen*".

2 Information Society: Overview of E-government Development in European Union

The last decade, E-government in Europe is characterized, in general, from inadequate ICT infrastructure, "cloudy" technological background and disappointing figures in Internet usage and e-services participation among the EU member states. Moreover, particular reflection was the digital divide and the digital inequality among northern and southern European countries. So, the European Commission should specify a clear strategy with the following goals: (i) to implement ICT technologies in order to provide safer and quicker internet access, (ii) to encourage citizens to use the internet and finally (iii) stimulate the role of EU in the global aspect of the Information Society.

2.1 The E-Europe 2002 Action Plan

The first well-structured program by the European Commission, with clear objectives, launched on March 2001. The e-Europe 2002 Action Plan belongs to a general pattern, following Lisbon's pursuance of transforming the European States in a powerful union of knowledge economies that could be competitive worldwide by the year 2010. This plan is aiming to increase Internet connectivity in Europe. This may had been the motivational kick off for a digital era, as lots of innovative challenges are emerging, such as intelligent transport systems, health services, electronic access to public services and the overall maturity of e-commerce [6, 7].

2.2 The e-Europe 2005 Action Plan

The e-Europe 2002 Action Plan was completed, having put the basis for the digitisation of society, achieving most of its main goals. The EC sustained momentum and proceeded to a second phase of its strategy towards an e-competitive Europe. By e-competitive Europe, the EC actually meant stimulated e-government services with applications and content providing better and cheaper services to citizens, SME'S and public authorities. As a consequence, emphasis should be given in the development of broadband infrastructures [8].

By 2005, the aim was to support new projects in e-government, e-health, e-inclusion, e-learning and e-trust/security. More specifically, the main proposed actions for the e-Europe 2005 action plan were: to implement interactive public services in order to reduce costs thought supply chain management including e-procurement, to create public Internet Access points that all citizens could have easy access to the Internet and to promote tourism and culture. The current action plan was trying to improve education and e-leaning with the provision of equipment and thus, most schools are now connected, and work is underway in order to provide convenient access to the Internet and to multimedia resources for schools, teachers and students [9].

2.3 The i2010 E-Government Action Plan

The 3rd in a series of programs, the i2010 Action Plan finds the situation of e-government in Europe slightly improved. The figures in 2009 were the following: Internet usage had reached nearly 49 % and EU members had implemented well- structured e-Government strategies and policies [10]. The most important thing was that in 2009, 29 countries overall presented E-Government strategies, in comparison with the year 2005 that there were only twelve. It is obvious that Action Plan programs have succeeded in the majority of their main objectives [11].

Consequently, with the i2010 Action Plan, the European Union is aiming to stimulate and update the efficiency of public administration services, keeping up with the daily needs of citizens and businesses. According to the EC plan, the five new objectives that were defined are*: (i) Inclusive eGovernment, (ii) Efficiency and Effectiveness of e-services, (iii) High Impact Services, (iv) Key Enablers and (v) e-Participation*. Thus, the EC was again directed in designing and implementing of cross-border services allowing citizens to establish across borders e-relations. Evidently, this necessitates e-IDentification (eID) for all citizens of the EU and improvement of the overall framework of e-government services throughout Europe [9, 29].

2.4 European eGovernment Action Plan 2011−2015

Action Plan 2011−2015, the last, and current, EC plan, is a part of Digital Agenda 2020. As it was emphasized above, it is urging for the provision of a new generation of eGovernment services. The ICTs should become an important enabler in the development of innovative ways to provide reliable e-services to citizens who are facing constrained public resources [12].

The 5th Ministerial eGovernment Conference (the 'Malmö Declaration') was a milestone in defining new critical priorities of this new action plan. The 'Malmö Declaration' recognised 4 challenges that the European Commission should overcome in order to establish a stable background and aspire for open, flexible and collaborative relations between European Governments and their citizens and businesses [13, 14].

With an informal deadline in 2015, all European Public Administrations should implement the following 4 policy priorities:

- *Citizens and businesses are empowered by eGovernment services designed around users' needs and developed in collaboration with third parties, as well as by increased access to public information, strengthened transparency and effective means for the involvement of stakeholders in the policy process,*
- *Mobility in the Single Market is reinforced by seamless eGovernment services for the setting up and running of a business and for studying, working, residing and retiring anywhere in the European Union,*
- *Efficiency and effectiveness is enabled by a constant effort to use eGovernment to reduce the administrative burden, improve organisational processes and promote a sustainable low-carbon economy,*
- *The implementation of the policy priorities is made possible by appropriate key enablers and legal and technical preconditions [15–17].*

2.5 Cross-Border Pilots

The EC's Action Plan, described above, is considered as a framework for the development of e-government services in both national and European level. Reliable cross-border services are now needed allowing increased citizens' mobility within the European states. By these new generation applications, personal documentation and data are following citizens throughout Europe. Obviously, this comes to reality by the development of an environment which promotes the interoperability of systems and key enablers such as eSignatures and eIdentification.

In order to bring public authorities, service providers and research centres, all over the EU, onboard, large scale pilot projects (LSPs) have been created and operate under the ICT Policy Support Programme in five prime sections: eID, eProcurement, eBusiness, eHealth and eJustice. Cross-border digital services in the aforementioned policy sections become feasible by a number of solutions or building blocks that the Seven LSPs are conveying [22].

Every block includes various components (common code), makes use of various standards and blueprints, and all have an identical attribute: they aim to be occupied as piece of online services which craft these online services 'cross-border enabled'. Also there are future challenges in order to entirely employ cross-border digital public services such as the LSPs expansion and to formulate the building blocks that could be applicable in other policy sections [18, 19].

The four LSPs that are running at this time are:

e-SENS (Electronic Simple European Networked Services) is aiming to facilitate the administrative procedures by enabling internet access and thus, to develop the European Digital Single Market and thought ICT technologies. This project involves 100 partners from 20 countries, including Greece, it started on April 1, 2013, and its duration is 36 months [20, 21].

e-CODEX (e-Justice Communication via Online Data Exchange) concentrates in the improvement of access in legal information (laws, procedures) across European borders. In a nutshell, the main objectives of the project are to contribute the implementation of the EU legal framework and modernise the judicial systems, so that the European Union Members can provide a safer environment for their citizens and their businesses. This project has started on December, 2010, it will be complete on February, 2015 and it involves 26 participants [23, 24].

EpSOS is a European project that is focusing in the area of e-Health. It is the first European e-health program which connects a large number and variety of countries in a practical cooperation. Also, epSOS is a project for the interoperability of eHealth services, funded by the European Union, and it aims to build and evaluate a service infrastructure that will allow cross-border interoperability of electronic health records in Europe, but not more than laws and existing national systems. As a consequence, the member states of the EU are trying to develop electronic health records for every citizen in order to improve the quality and efficiency of its healthcare system. This project is very important because, on the one side, it is trying to unify the health systems of all European countries, so that every citizen's medical data could be available in every country and on the other side to forward the use of electronic prescriptions ("ePrescription"). The project has started on July, 2010, it will run for 6 years and it involves 25 participants (22 EU member states and 3 non-EU member states) [25].

STORK 2.0 (Secure idenTity acrOss boRders linKed 2.0) is a 3-year project. It was which has been launched to promote the creation and development of an integrated and sustainable workplace for eID and e-Authentication in Europe, for both legal entities and individuals. STORK 2, a continuation of STORK 1, allows businesses and citizens, through a common architecture and standards, use their national electronic identities (eID), in order to obtain secure electronic access to public services across the EU.

The four main objectives of the STORK 2.0 are:

- Accelerating the development of electronic identification for eGovernment services, by coordinating the National Community initiatives in support of a federal structure for the management of electronic identification across Europe.
- Maximizing the uptake of scalable solutions across the EU, with a strong commitment to open standards and long-term viability, with a vision to evolve electronic identification in service (with the support of the participating European countries and industry).
- Facilitating convergence of private and public sector into a fully functional framework and infrastructure, using electronic identification (eID) for safe and consistent certification of legal and natural persons across the EU.

- Operation of four cross-sectoral pilot to test and demonstrate the capabilities and benefits of interoperable electronic identification (elD) environments factual circumstances.

STORK 2.0 is attempting to (i) enable the Digital Single Market focusing on legal entities & attributes which is important for boosting SMEs & private sector, (ii) Facilitates cross border eGovernment applications and (iii) Reduces administrative burdens for the companies & individuals wishing to provide services across borders. In this project, there are 58 partners from 26 participating countries [21, 26].

3 Evaluation of Implemented e-Government Services

In the last decade, the EC has been attempting to supervise the governments of the European Union members in order to implement a series of essential and simultaneously innovative e-services. The remarkable action plans that are designed by European Commission and implemented by the European governments are strictly related to the ICT technologies of each country. So, it is evident that the sophistication level of e-gov services is related to the technological framework of ICTs, a fact that the first action plan tried to address.

The lasting and honorable efforts of European governments in the development of eGovernment services, in the local and national level, yielded results but not as expected. On the one hand, the European Programs have really high demands and on the other hand, the economic crisis and the financial problems that hit many European countries, in the last 4 years, have slowed down the planning and the expenditure for the implementation of e-services. Surveys published by the EC and other authorized organizations provide reliable statistics and benchmarks. These surveys have shown that the existing e-government services fail to meet the citizens and businesses needs in a Government to Citizen (G2C) or Government to Business (G2B) mode. Proportionate failures are also recorded in a Government to Government (G2G) mode [27, 28].

3.1 The Current Situation

The EC released on May 28, 2013, a very important survey that was carried out by the Capgemini Group, which showed that citizens and businesses are recognizing the efforts for the full implementation of e-gov services, but there was still room for improvement. The survey looked into 19 public services and involved 28.000 European citizens. The key findings are very significant as (i) 46 % of respondents use online services but 28 % expressed reluctance to continue using them, (ii) Between 19 electronic services, the majority of European residents use tax collection services (73 %), 57 % claimed they use the service to change their address and 56 % is enrolling a studenst in higher education which is the third most widely used service, (iii) the less used e-gov e-services include: ‘reporting a crime’ (41 %), ‘starting a new job’ (41 %) and ‘starting a procedure for disability allowance’ (42 %) and finally (iv) 47 % of respondents claimed they got all they wanted from the public administration, 46 % of

respondents partially fulfilled and 5 % encountered problems while interacting with the public administration services [30, 31].

Moreover, the present survey approaches the barriers that prevent the use of e-government and present the E-government satisfaction and the benefits of use of E-government services. In a nutshell, 21 % (mostly students) indicated incomplete information on the availability of relevant websites and e-services, 80 % of respondents (women and elderly) do not find interest in the use of electronic services, 11 % said their personal data are not protected and overall the satisfaction in eGovernment services decreased by 1,3 %, with the service of finding a job presenting a low score of satisfaction, reflecting the current economic conjuncture of corrupted countries. Finally most of the respondents claimed that even though a service provides simplicity, transparency and is time-saving, the quality of a service is less relevant to citizens (Fig. 1).

Fig. 1. Preference eChannel vs. traditional channels for 19 citizen services (EU-27 + , %). Source: Government Benchmark 2012 – INSIGHT report, Available at: https://ec.europa.eu/digital-genda/sites/digital-agenda/files/eGov%20Benchmark%202012%20insight%20report%20published%20version%200.1%20_0.pdf

3.1.1 The Use of the Internet in the EU27

The abstinence of citizens and businesses from e-gov services, as mentioned above, can be explained by many reasons. One of these is the inadequate ICT infrastructure and results in the limited use of the internet, and consequently, limited use of electronic services. Nowadays, according to European Commission, more than 60 % of individuals in the EU27 use the internet daily and more that 79 % of users have access to internet from their mobile phones. However, the three barriers that prevent citizens to become internet users are the lack of skills, the lack of internet access and the cost. The lack of skills and the cost are the major factors for many European countries, such as, Bulgaria, Greece, Hungary, Portugal and Slovenia (Fig. 2).

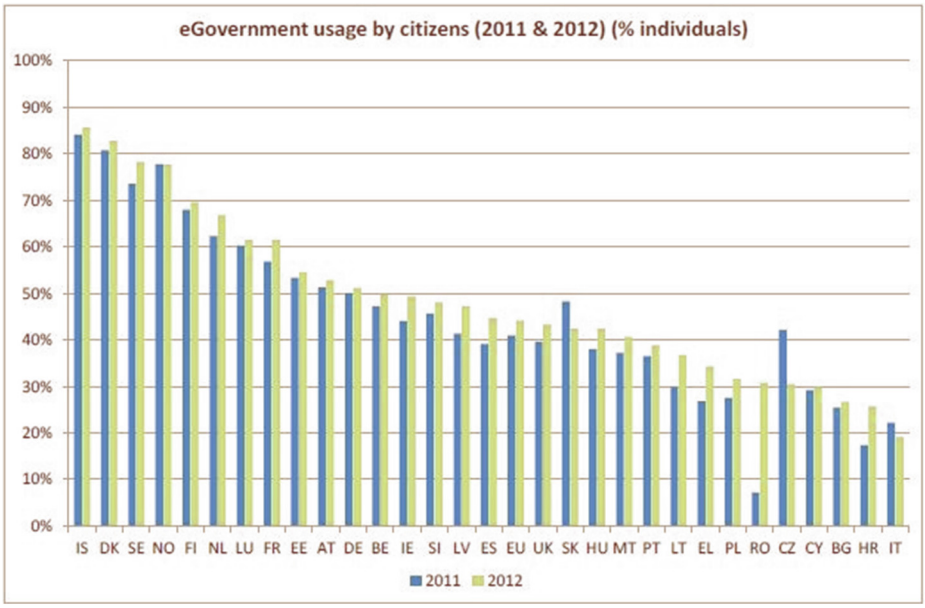

Fig. 2. EGovernment usage by citizens (2011 & 2012) (% individuals). Source: https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/DAE%20SCOREBOARD%202013%20-%203-INTERNET%20USE%20AND%20SKILLS.pdf

The last two years, the use of eGovernment services saw moderate growth, raising the percentage from 41 % to 44 %. 88.8 % of European countries improved their percentage in 2012 (23 of 27 European Countries). Some of them have recorded large increases in the use of E-government services, such as Romania (+24 p.p.), Croatia (+8 p.p.) and Greece (+7 p.p.). At this point, it is very important to look at the reasons why many citizens don't use the interactive e-government services. The survey showed that 10 % of respondents cite security issues, lack of skills (8 %), lack of supply (4 %), and quality of supply (2 %) [30, 31].

3.1.2 The Case of Greece

Greece demonstrates significant developmental effort in the implementation of eGovernment services, utilizing national and European resources, through the National Strategic Reference Frameworks programs. Also, it is actively participating in the implementation of cross-border services, contributing significantly to the technological maturity of these services.

Greece is trying to get back on track and achieve a growth trajectory, by (1) improving the sophistication level of 20 major e-gov services (twelve services for citizens and eight services for businesses) and (2) by implementing a series of pilot e-services in order to reduce bureaucracy, to fight unemployment and to stimulate factors in the local level, such as health, justice and education.

According to the Information Society [32], for the year 2013, only seven of the twenty services are handled entirely electronically, three of which relate to the citizens

and, four to companies. The three fully developed services provided by the general secretariat of information systems relate to taxation (income tax by individuals and businesses, VAT refund), finding a job, the statement of changing the address, customs declarations and social security contributions for employees. Online services provided by the GSIS to businesses (income tax, VAT declarations to customs) are fully available online. Based on the latest available data, from research conducted in all EU countries regarding the availability of the twenty services, the performance of Greece, in comparison with the EU average, reached 65 % in services to citizens and 78 % in business services. In the total of all 20 services, Greece's performance reaches 70 % [31, 33, 34].

References

1. Chen, Y., Gant, J.: Transforming local e-government services: the use of application service providers. J. Gov. Inform. Q. **18**, 343–355 (2001)
2. Sideridis, A.B.: e-Government-Useful Public Administration. Invited speaker's presentation, Conference on ICT Developments, Ionian University (2006)
3. European Commission. http://ec.europa.eu/eu2020
4. Marlier, E., Natali, D.: Europe 2020: towards a more social EU? In: Marlier, E., Natali, D. (eds.) Work & Society. vol. 69(277), p. 2. Peter Lang Publishing Group (2010)
5. European Commission. http://ec.europa.eu/digital-agenda/en/european-egovernment-action-plan-2011-2015
6. EU Commission, eEurope – an Information Society for All. http://eur-lex.europa.eu
7. Council and the European Commission. http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=com:2000:0330:fin:en:pdf
8. European Commission. http://ec.europa.eu/information_society/activities/ict_psp
9. European Commission. http://ec.europa.eu/cip
10. Internet World Stats. http://www.internetworldstats.com
11. Council and the European Commission. http://eur-lex.europa.eu/lexuriserv/lexuriserv.do?uri=com:2005:0229:fin:en:pdf
12. European Commission, The European eGovernment Action Plan 2011–2015 Harnessing ICT to promote smart, sustainable & innovative Government (2010). http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0743:FIN:FR:DOC
13. E-practice.eu. http://epractice.eu/en/events/292867
14. European Commission, The European eGovernment Action Plan 2011−2015 (2012). http://ec.europa.eu/digital-agenda/en/european-egovernment-action-plan-2011-2015
15. Ministerial Declaration on eGovernment (2009). http://ec.europa.eu/digital-agenda/sites/digital-agenda/files/ministerial-declaration-on-egovernment-malmo.pdf
16. Commission of the EU. http://ec.europa.eu/eu2020/index_en
17. European Commission, Benchmarking Digital Europe 2011−2015 a conceptual framework (2009). https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/Benchmarking%20Digital%20Europe%202011-2015%20post%20Visby.doc
18. O'Dowd, L., Anderson, J., Wilson, T.M.: New Borders for a Changing Europe: Cross-Border Cooperation and Governance. Routledge, London (2005)
19. Gouscos, D., Kalikakis, M., Legal, M., Papadopoulou, S.: A general model of performance and quality for one-stop e-Government service offerings. J. Gov. Inform. Q. **24**, 860–885 (2007)

20. E-SENS. http://www.esens.eu/home
21. European Commission. http://ec.europa.eu/information_society/apps/projects
22. European Commission. http://ec.europa.eu/digital-agenda/en/ict-policy-support-programme
23. E-CODEX. http://www.e-codex.eu/home.html
24. European Commission. http://ec.europa.eu/justice/criminal/european-e-justice/e-codex
25. EpSOS. http://www.epsos.eu
26. STORK 2.0. https://www.eid-stork2.eu
27. Fang, Z.I.: Government in digital era. the internet and management. IJTM 10, 1–22 (2002)
28. Sideridis, A.B., Tsakalidis, A., Costopoulou, C., Pucihar, A., Zorkadis, V.: E-Government for small and medium sized enterprises (SMEs) in rural areas. J. IJED **1**, 119–123 (2009)
29. Danish Technological Institute, i2010 eGovernment Action Plan Progress Study (2009). https://www.tno.nl/downloads/i2010_progress_study_final_report_november_2009.pdf
30. European Commission: Public Services Online (2013). http://ec.europa.eu/digital-agenda/sites/digital-agenda/files/eGov%20Benchmark%202012%20insight%20report%20published%20version%200.1%20_0.pdf
31. European commission, Digital Agenda Scoreboard 2013 (2013). http://ec.europa.eu/digital-agenda/en/digital-agenda-europe
32. Information Society. http://www.infosoc.gr/infosoc/en-uk
33. Papadomichelaki, X., Koutsouris, V., Konstantinidis, D., Mentzas, G.: An analytic hierarchy process for the evaluation of E-Government service quality. IJEGR **9**, 19–44 (2013)
34. European Commission. http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=2231