

## Towards e-governance: Evaluating the use of the Internet by the Slovenian government

*ABSTRACT: The government has potentially good possibilities of employing the Internet for its activities. It can use the Internet for boosting its internal efficiency, or it can use it to provide better life for citizens and improve the democratic process of governance. In the paper we are questioning Slovenian government's use of the Internet with regard to various possibilities provided by the Internet and taking into account broader social and political factors of Internet use by the government. We critically evaluate Slovenian government's use of the Internet at the beginning of 2002 (53 main websites), taking into consideration three important factors: different possibilities of government employment of the Internet, social conditions of successful Internet use by the government, and the corresponding model of adopting the Internet by the government in relation to its particular national background. For this purpose we are introducing a special methodological approach: an evaluation study that is based on five classical evaluation criteria of public policy analysis. We try to determine how (1) effectively, (2) efficiently, (3) equitably, (4) adequately and (5) responsively the Slovenian government uses the Internet. Based on the results we can conclude that the Slovenian government only employ the Internet to a limited extent and we suggest a number of improvements for a more effective and successful use of the Internet by the Slovenian government in the future.*

*KEY WORDS: Internet, government, e-governance, e-administration, e-participation, public policy, evaluation*

### 1. Introduction

The Internet provides new possibilities for government activities in its relationship with the citizens, the private sector, and also for internal use, for administration purposes. The Internet not only provides another possibility for the government to present and disseminate its information to the public, but also opens new channels for two-way communication that could introduce new ways of operation between government and its environment. These channels could improve the government administration's efficiency and may provide its citizens the possibilities for an active public participation in the process of governance. Some authors (Hernon 2001; Layne and Lee 2001; Smith 2001; West 2000) are looking at the Internet in the way of its capacity for service provision with government administration using the Internet to provide citizens a non-stop

access to public services, bringing them directly to the citizens in a simpler and more efficient way. Again some others (De Sola Pol, Grossman in Oblak 2003; Hacker and Todino 1996; Lukšič 2003; Norris and Jones 1998; Oblak 200, 2003, 2003a; Rosenblatt 1999; Van Dijk 1996) look at the capacity of the Internet in different way, namely, as a chance for bringing the public closer to the government activities and its decision-making. Among the latter, the Internet is seen as a proper tool for establishing a classical model of participatory democracy, which could lead the society to a new social order often called “electronic democracy”.

When evaluating the government’s use of the Internet, we should consider various potentials of the Internet and many possible ways of employing it by the government. In this respect the government’s use of the Internet could be evaluated on the basis of its level of adequate presentation and information provision through the WWW, quality of administrative electronic service delivery, endeavour to involve citizens in government activities including decision-making, and finally by the appropriate implementation of all these possibilities regarding specific social conditions of the Internet use and corresponding national model of establishing e-government. Taking such consideration into account, each government should implement its ideas of electronic governance in a different mode and in a different manner, accordingly to its national characteristics such as social and political system, cultural practices, historical tradition ... etc.

In the paper we are therefore concerned with the use of the Internet by the Slovenian government, more precisely, with the extent to which the Slovenian government employs various Internet possibilities, taking into account appropriate ways of their implementation due to particularities of the Slovenian national context. The main research question guiding the study would be the following: *How well is the Slovenian government using the various possibilities provided by the Internet and how successful is it in reaching the idea of electronic governance?* With the intention to exceed just a common assessment of (government) websites, we introduce a special methodological approach that takes into account some broader social and political factors of the government’s use of the Internet. Applying this methodological approach of *evaluation study* roughly based on five classical criteria of public policy analysis, we attempt to estimate: (1) *how effectively*, (2) *how efficiently*, (3) *how adequately*, (4) *how equitably* and (5) *how responsively the Slovenian government uses the Internet?* Finally, by answering to these five questions we try to determine a general comprehensiveness of the government’s employment of the Internet. We argue that the Slovenian government only employs the Internet to a limited extent and provide a number of suggestions for its further improvement towards fully functional electronic governance.

The structure of this paper is as follows. First, we elaborate on the theoretical framework that may serve as groundwork for evaluating activities, concerning the use of the Internet by the Slovenian government. Here we present different ways and possibilities of employing the Internet by the government, paying special attention to some important ways of their implementation; we develop a corresponding model of establishing e-governance in Slovenia with regards to its specific national context. From the theo-

retical discussion we derive a methodological approach applied in our case study. The following section brings extensive and detailed empirical results of the evaluation study, organised by each evaluation criteria separately. At the end, we look at all of the evaluation criteria results together, and draw conclusions with regard to general successfulness of Slovenian government's Internet use. Finally, some reasons for the current condition of government's employment of the Internet are discussed and a number of suggestions for an improved Internet use by the Slovenian government in the future are provided.

## 2. Conceptual framework of electronic governance

A brief theoretical review of electronic governance key concepts will help establish foundations for understanding our latter evaluation attempt. Electronic governance (*e-governance*) can be defined as "... any process that citizenry, in pursuit of governance, conducts over a computer mediated communication", or as "... the use of information and communication technologies (ICT) to support government operations, engage citizens, and provide government services", or even as "...a special case of ICT enabled business process change" (Scholl 2001: 2). Following these definitions *e-government* is "a government that applies ICT to transform its internal and external relationships in order to optimize carrying out its functions" (DPAM/UNDESA 2002:1) or "a government that uses the tools and techniques of electronic commerce in the business of governance for the benefit of both - government and citizens" (Heath 2000: 39).

Layne and Lee (2001: 123) suggest that that establishment of e-governance is an evolutionary process going through four major stages in government's adoption of the Internet: (1) *cataloguing* (digitalization of government information and documents followed by their presentation on the WWW), (2) *transaction* (connection of the internal government information systems with the WWW allowing citizens to interact and transact with government electronically), *vertical integration* (online connection of local with higher-level government departments' information systems within the related functions), and (4) *horizontal integration* (online integration of different government areas and functions into a single point of entry on the WWW). These four stages together presents a process of gradual transformation of governance from a traditionally and hierarchically structured government to an integrated entity of e-government, uniformly structured around life scenarios of the average citizen with "one stop shop" for completing any level or any kind of government service (Layne and Lee 2001: 132).

E-governance can be described as using electronic means to ensure delivery of the full range of information and services provided by government departments and their agencies for the citizens and private sector (Malina 2003: 142). Regarding the full range of information and services possibly provided by the government through the Internet, e-governance in general can be broken down into three areas (Banisar 2003: 3): *government transparency* (online presentation of the government and its activities), *electronic administration* (provision of government administrative services online) and *electronic participation* (provision of online possibilities for public participation and its engagement in the process of government activities).

*Transparency* includes general presentation of government departments, providing insight into governmental work and enabling access to all government documentation so that citizens can get all the information about the government at any time and have the possibility of supervising its activities and work. All these can help prevent corruption and strengthen good governance. A government open to scrutiny and accountable to its citizens contributes to building public trust in government and establishes the legitimacy of its work (Misnikov 2003: 22). Yet, we have to add at this point, that it is not always an easy task to list consistently and in a commonly agreed manner all the public departments, their benevolent activities and work duties, which a government is responsible for. As noted elsewhere in political science literature, a state and its government has often to handle not only "pleasant" services but also less pleasant obligatory demands - either due to tax collection or other measures resolving interest conflicts and power struggles within the real politics, which all gives different public services a variable shadow of coerciveness (more on this in Schedler et al. 1999).

*E-administration* comprises government's provision of the information on various services offered by central government departments and their agencies, with the possibility for the citizens to fully carry out these services online. With the use of the Internet, the citizens could conclude transactions with administration from their "home sofa" and "through a single point of entry" on the WWW (PCIP 2002: 2); also, the government could increase its internal efficiency (employing electronic data administration, operations and storage). Appropriate implementation of the bureaucratic administrative services on the Internet where they can be fully conducted electronically therefore results in reduced administrative costs, as well as a better quality of life for citizens.

Beyond the area of e-administration as a mere e-service delivery matters, *e-participation* is related to the ambitious idea of using the Internet for improving the democratic process of governance. It encompasses government's provision of online possibilities for public participation and citizens' engagement in the process of government activities. In its various forms (e.g., synchronous chat, asynchronous forum, web-polls...) the Internet enables various possibilities that could strengthen democratic activities (e.g., civic consultations, referenda, voting...) and lead to better governance. The main idea of e-participation is thus in using the Internet to *simplify* (make it easy to take active part), *broaden* (include all citizens) and *deepen* (include deliberation and consultations) the democratic process of governance (Oblak 2003:1).

Considering the various areas and possibilities of the government's Internet use altogether (e.g., transparency, e-administration and e-participation), the Internet can soon become the primary source of government information and services delivery (Eschenfelder and Beachboard 1997: 174). But this will only be accomplished if some important conditions of the government's use of the Internet will be taken into account. The success of government's Internet services implies some important conditions about government's Internet use on which a word of caution should be mentioned.

The Internet potentially brings a chance for strengthening the democratic process, improving government internal efficiency and providing a better life for the citizens. But a practical realization of all these potentials strongly depends on the appropriate

ways and methods of the government's Internet implementation. First of all, the government should avoid illegally strengthening its surveillance temptations, inherent to new information and communication technology as well as to a state's internal affairs and investigation agencies. The most important condition of the government's successful employment of the Internet is therefore above all strong consideration for citizens' *privacy, confidentiality and security* in governmental online interactions. Another important conditions are also *universal access* to the government's online services, and *user-centric design* of the government facilities on the WWW. Of course all these features should be guaranteed and controlled also by civic and not only government supervision.

Public fear has its solid base. A collection of various private information about citizens and integration of government databases holding all kinds of interlinked information, presents a sensitive but necessary condition for provision of government services and chances for public participation electronically. There is a strong fear that such activities could become a strong means of registration and central social control, which could result in a Foucault's idea of *panopticon* - an effective government control over citizen behaviour instead of a better and more democratic governance (Blanchette and Johnson 1998: 1; Foucault 1977: 195-231). Therefore, taking special care for citizens' privacy and security (confidentiality of personal data and high security level of electronic transactions with the government) is the pre-condition of developing a successful e-governance.

Assuring *universal access* to all of the e-governance services is the other such important condition of a successful Internet use by the government. E-government should be equitably available to all citizens without social or technological discrimination and though not subverted to a project that will empower only social elites, that can afford technology and know how to operate it (Malina 2003: 146).

Along with universal access, *user-friendly* or *user-centric* design<sup>1</sup> of government features on the Internet is another condition for successfulness of e-governance. User-centric design of government online facilities presents a necessary condition for their easy and simple use by the citizens. "Without possibility for an easy and simple use of the (government) Internet features by their end-users (citizens), there is no real chance of taking benefits of the potentials provided by the Internet (neither for the government, nor for the citizens) (Nielsen 1993: 24, emphasis added).

### **3. Model of adopting e-governance by the Slovenian government**

Different governments are implementing their ideas of e-governance in a different ways. On the basis of their national context, socio-political system, cultural characteristics, historical tradition ... etc. they are adopting different models of establishing e-governance. The process of developing e-governance can be systematically driven either from the top (top-down approach), or more randomly, namely, from the bottom of government departments up. Some governments have systematically organized a top down approach in managing its activities on the Internet. Others have been driven by

individual agencies that set up their own websites because they saw a need and necessity for it (Banisar 2003: 1). However, a coordinated, integrated approach and crosscutting of government activities among different levels and departments of government on the Internet is urgent at least for developing a more cohesive, holistic and common approach to e-administration processes (Malina 2003: 148). Before evaluating the Slovenian government's use of the Internet, we will therefore first try to present a proper (ideal) model of its Internet implementation regarding the particularities of the Slovenian national background.

Kramberger et al. (1998) identified some general factors of differentiation among governments regarding their way of implementation of the Internet. The factors are based on different approaches to the presentation and operation of the governments on the WWW. These factors of differentiation are: *degree of centralization* (central vs. individual organization of government departments on the WWW), *degree of democratization* (amount of possibilities for public participation through the Internet), *openness of the system* (orientation of government Internet facilities: internally - to the government itself vs. externally - to the public and environment), and the *authenticity or credibility* of information provided on the WWW (information provision vs. propaganda) (Kramberger et al. 1998: 215).

Slovenia is a very small country, with a tradition of representative democracy, high integration of power, and rather centralized system of administration. On the basis of factors introduced by Kramberger et al. (1998) and considering particularities of the Slovenian national background, the ideal model of Slovenian government on the WWW could be as follows. The entire system of Slovenian government websites should be highly *centralized* (like the government itself), *authentic* and *credible* in providing information about government work and activities (democratically oriented society), with relatively high degree of *democratic* potential (citizens should have possibility to be in contact with their official political representatives) and *open* to the public and environment (originating from the basic right of being informed about government activities as ensured within the Constitution of the Republic of Slovenia).

#### 4. Method: Evaluation study

Several attempts of evaluating the use of the Internet by the governments have been done in the past (Eschenfelder and Beachboard 1997; Fagan and Fagan 2001; Herson 1998; Purcell 1999; Smith 2001; Stowers 1999; West 2000, 2001, 2001a). They vary with regard to different methodological technique(s) applied, introduced measures of quality and the government level being assessed (e.g., local, national or other), but all of them are rather limited in their assessments of only selected (different) characteristics of government websites and their benchmarking. None of them considers a more complete framework of government employment of the Internet, embracing its broader social context, neither do apply comprehensive criteria that would systematically take various dimensions of governmental Internet activities into account. All of the mentioned attempts are similar in another deficiency, namely, that they are

commonly concerned only with a single area of governmental Internet use (e.g., online presentation, e-administration, e-participation). Also, they usually take position of a biased examination of the government websites – in the way that is either government or citizen-centric, which as such fails to provide a relevant evaluation including different areas of government Internet activities and both involved parties (state bodies and relevant users). When examining the use of the Internet by the Slovenian government, we will try to overcome these major deficiencies with introduction of our special methodological approach - an *evaluation study based on the criteria of public policy analysis*.

Following Rossi and Freeman (1993: 3), an evaluation study is “a systematic use of procedures, methodologies, and research techniques of the social science, for assessing ideas, plans, projects, results and effects of public or political programs”. Evaluation study as a methodological approach is aimed at reviewing certain activity, program monitoring or assessment of the progress of a given program of activities (Macur 1995: 289). It is designed to question the success of the program under scrutiny in broader social context taking into account all the partners involved in the program. The purpose of the evaluation study is not only to critically evaluate the effect and success of a specific program, but also to provide some solutions for improving the performance of the program and its activities.

In our case, the evaluation study is aimed to evaluate the effect and success of the Slovenian government’s Internet use, as well as find some solutions for its improvement. The *program* under evaluation is “the use of the Internet by the Slovenian government”, where the *object* of assessment is “the whole system of Slovenian government websites”<sup>2</sup>. For the starting point of our evaluation we apply the above-sketched “conceptual framework of e-governance”.

For the purpose of the this evaluation study a large and detailed analysis of the system of (major) Slovenian government’s websites was performed, assessing various characteristics (e.g., information and service provision, usability, accessibility, privacy and security, frequency of visitation...), from different perspectives (citizens’ and government’s), applying different methods (e.g., focus groups, web surveys, usability testing, technical measurements, network analysis...), and addressing all government levels (local and national). The analysis includes a snapshot of 53 websites, among them websites of all ministries, different government bureaus and offices, the office of the President of the government and some local administration units. The analysis was carried out at the beginning of 2002; it started with the order given by the Slovenian government and was performed within a research consortium of public institutions and specialized private companies<sup>3</sup>.

#### 4.1. Evaluation criteria

It is obvious that the execution of any evaluation study should always be grounded on certain *evaluation criteria* by which the program of the evaluation study could be judged. In the case of evaluating the Slovenian government’s use of the Internet adopted the following evaluation criteria, already well established in the field of public policy analysis: *effectiveness, efficiency, adequacy, equity and responsiveness*. These classi-

cal criteria introduced by Dunn (1994) could be applied for the evaluation of any public or political program. Only when considering all these criteria together we get a relevant and valid evaluation of the effect and success in the realization of the public program under scrutiny (Graham and Hays cited in Macur 1995: 297).

**Table 1: Criteria for the evaluation, their application to the use of the Internet by Slovenian government, and their appropriate operationalization**

Criteria for the evaluation	Theoretical description of the criteria	Application of the criteria to the government's use of the Internet	Operationalization: characteristics of government websites indicating the criteria
Effectiveness	Has a potential and valued outcome of <i>government's Internet use</i> been achieved?	To what extent have the various possibilities of government use of the Internet been realized?	CONTENT and SERVICES provided on government websites QUALITY of content and service provision: ACCURACY (period of updating) in providing content RESPONSE rate and quality in online communication with government
Efficiency	How efficient is the achieved outcome of <i>government Internet use</i> ?	How well can users take advantage and benefit from the government's employment of the Internet, and how adequately in terms of rationality is government organized on the WWW?	USABILITY of websites ORGANIZATION and CONNECTEDNESS of websites
Equity	Are costs and benefits of <i>government's Internet use</i> distributed equitably among different social groups?	Are the advantages and benefits of government Internet services equitably accessible to all citizens?	ACCESIBILITY of government websites by WAI <sup>4</sup> standards of universally accessible website design
Adequacy	To what extent does the achieved outcome resolve the essential problem and reach the final goal of <i>government's Internet use</i> ?	To the what extent are provided government Internet services actually used in practice, and, to what extent is the goal toward establishing e-governance realized?	Actual USAGE of the possibilities on government websites by citizens Achieved SOCIAL and POLITICAL outcomes of government websites
Responsiveness	Do outcomes of <i>government's Internet use</i> satisfy the needs, preferences and values of particular social groups?	Does the government in using the Internet (providing content and services) satisfy the needs, necessities and expectations of the users?	Users' DEMANDS vs. government's OFFER on government websites Users' SATISFACTION with government websites EMPATHY of the government for citizens' needs on their websites: PRIVACY and SECURITY concerns

Source: derived from Dunn (1994: 405)



These criteria together address key points of the whole conceptual framework of e-governance. They also capture broader socio-political context of government employment of the Internet as they take into account important social conditions of government's Internet use and proper (ideal) national model of its Internet implementation, as well as implies both involved parties (government and governed). A general (theoretical) description of each evaluation criteria, its application in the case of evaluating the Internet use by the Slovenian government, and the way in which they were *operationalized* are demonstrated in Table 1.

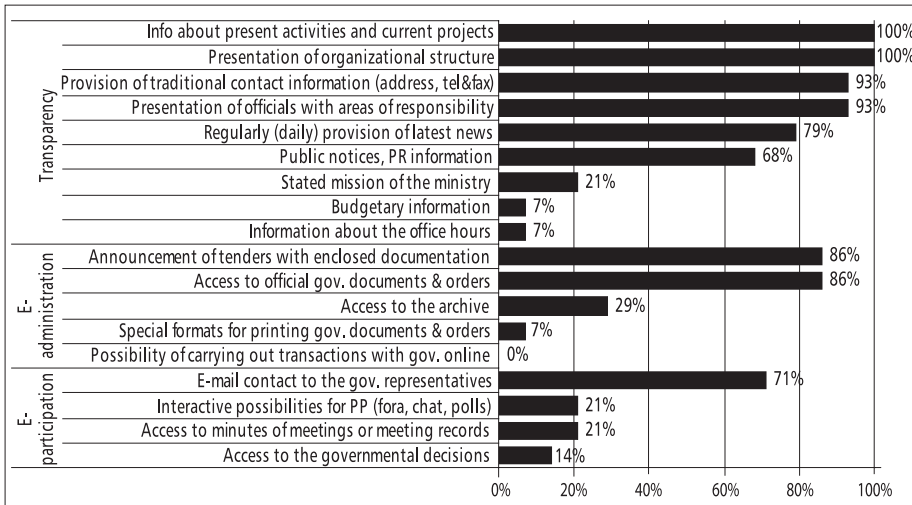
*Operationalization* of the evaluation criteria copes with the problem of applying general and theoretically grounded criteria (column 2) to some measurable facts (column 4) in order to estimate how well governmental use of the Internet in practice meets each of the evaluation criteria (column 3). As demonstrated in Table 1, each evaluation criteria is operationalized with a combination of different measurable characteristics (on the whole system) of the Slovenian government websites. A combination of assessments of various measurable characteristics of the government websites system of (e.g., content and service provision, usability, accessibility, user satisfaction) presents a corresponding indicator of certain evaluation criteria. The better the estimate of a certain combination of measurable characteristics of the (system of) government websites, the greater is the extent to which a government use of the Internet meets the evaluation criteria indicated by this combination of characteristics. Finally, the greater the extent to which the whole system of government websites meets all of the evaluation criteria together, the better and more successful an average employment of the Internet is - in our case, by the Slovenian government.

## 5. Evaluating Slovenian government's use of the Internet

Before we discuss the results we want explicitly to note that the results are based solely on the general impression of the Slovenian government websites system as a whole. Within the present evaluation study, we do not consider any differences between individual governmental units in their employment of the Internet, even though they may vary considerably. We originate from the average condition of the entire system of the Slovenian government on the WWW. The use of the Internet services by all governmental bodies is apparently presented as an aggregate, with no special attention devoted to comparisons between particular departments.<sup>5</sup>

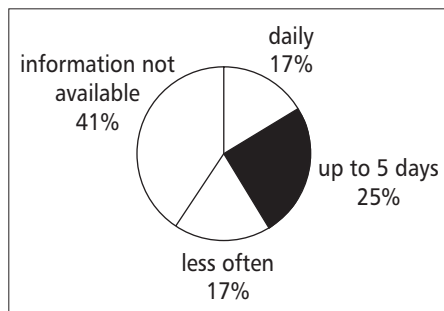
### 5.1 Effectiveness

*Effectiveness* is evaluated on the basis of existing content and services provided by the government on the WWW, as well as on the basis of quality of the content and services provided by the government online (accuracy in content provision and responsiveness in online communication). The government's use of the Internet is effective if the system of government websites offers online content and services in all areas of e-governance (content and service provision), if government websites are regularly updated (accuracy), and if government is responsive and competent in online communication (responsiveness).



**Figure 1 Content and service provision by the Slovenian government on the WWW (by the area of government online activities);** Source: *Analysis of Slovenian government websites (CATI, January 2002)*; method: *website review*; sample: *websites of all Slovenian Ministries, n=12*

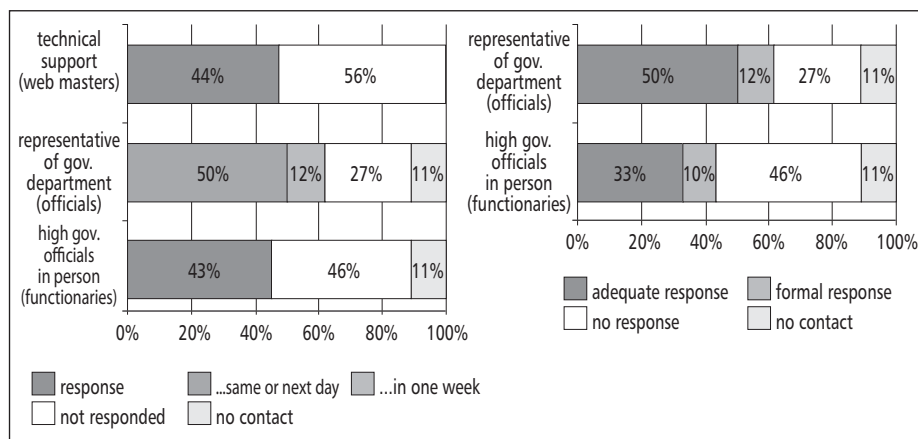
As shown in Figure 1, all of the Ministries provide online access to their information indicating their current activities; a majority of Ministries (86%) announce public tenders and provide enclosed documentation through the Internet, and only a minority of the Ministries on the WWW (14%) provide actual decisions regarding their work.



**Figure 2 Accuracy of Slovenian government websites - period of updating;** Source: *Analysis of Slovenian government websites (CATI, January 2002)*; method: *continuous website review*; sample: *websites of all Slovenian Ministries, n=12*

Evidence regarding accuracy of Slovenian government on the WWW (presented in Figure 2) show that only a minority of Ministries (17%) update their websites daily, and almost half of the Ministries (41%) do not provide information about last change on their websites at all. Here, we should mention that among all the government departments, the Ministries are among the most advanced in employment of the Internet, so

if taking into consideration the overall system of government websites, the condition of accuracy is even worse.



**Figure 3 Responsiveness of government services on the Internet: response rate and quality of response in online communication with government** *Source: Analysis of Slovenian government websites (CATI, January 2002); method: mystery visiting; sample: systematic selection of government websites (various departments), n = 53*

Considering responsiveness (Figure 3), we can see that only half of government departments respond to the question generally addressed to the department via the e-mail in decent time (same or next day). This share is even lower if the question is addressed directly to the Webmaster or to the high department's representative in person (43% and 44% respectively). A half of government departments are providing adequate answers to questions addressed to government departments in general, and only one third of them provide adequate responses if the questions are addressed directly to high department's representatives in person.

With regard to content and service provision (Figure 1), the evidence shows that the government is most successfully using the Internet for explaining the structure of government departments and their regular nominal activities, less importance is devoted to e-administration and the least to its provision of chances for e-participation. Looking at accuracy (Figure 2) and responsiveness (Figure 3), we can say that services provided by the government on the Internet are not of very high quality, also. Only a few Ministries are updating their websites regularly and the response rate as well as the quality of response in online communication with many government departments is not decent. From the evidence it is also clear that the Slovenian government is using the Internet only in a limited manner, focusing merely on presentation, not considering the potentials provided by the Internet very seriously. On the basis of these findings we may conclude that the use of the Internet by the Slovenian government (in the 2002) is not very effective.

## 5.2 Efficiency

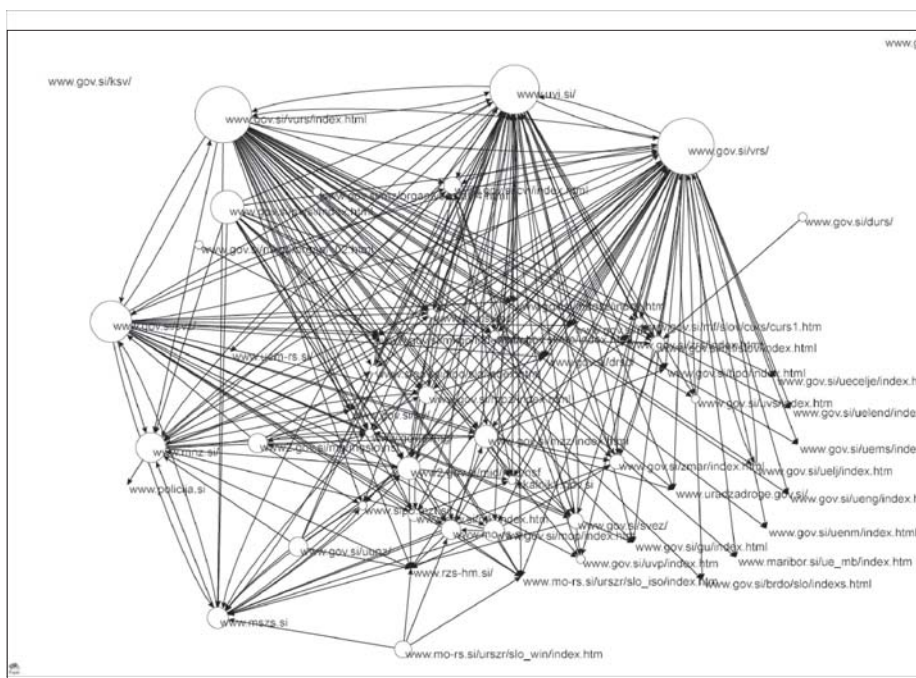
*Efficiency* is evaluated by the degree of simplicity of using government Internet services by their end-users (usability) and appropriateness of the organization of the system of Slovenian government on the WWW (organization and connectedness of government departments). A government websites system that is difficult to use by the citizens or is inadequately organized with regard to the appropriate (ideal) model of the Internet implementation corresponding to its national context, is of low efficiency for the citizens (low performance in using government services online), as well as for the government (low rationalization of its operations). The government use of the Internet is effective only if government websites are easy to use for citizens, and highly connected and integrated in a centralized system that is open to the environment, as presumed from the model, based on the Slovenian socio-political background.

**Table 2 Usability of Slovenian government websites: performance in solving basic tasks on the government websites;** *Source: Analysis of Slovenian government websites (CATI, January 2002); method: usability testing; sample: users with average experience in visiting government websites, n=6*

Website	Task	User 1	User 2	User 3	User 4	User 5	User 6
Office of RS for equal chances	T1	⚠	✘	✘	✘	✘	ⓘ
	T2	✓	✓	ⓘ	✓	✓	✓
	T3	✓	✓	⚠	⚠	✓	✓
	T4	✘	Ⓣ	✘	✓	✓	✓
Ministry for culture of RS	T1	⚠	✘	⚠	✘	⚠	✘
	T2	✓	✓	✓	✓	✓	✓
	T3	✘	Ⓣ	⚠	⚠	Ⓣ	✓
Ministry for the Information Society of RS	T1	✘	✘	✘	✘	✘	✘
	T2	⚠	✘	✘	✘	✘	✘
	T3	Ⓣ	Ⓣ	✘	⚠	✘	✘

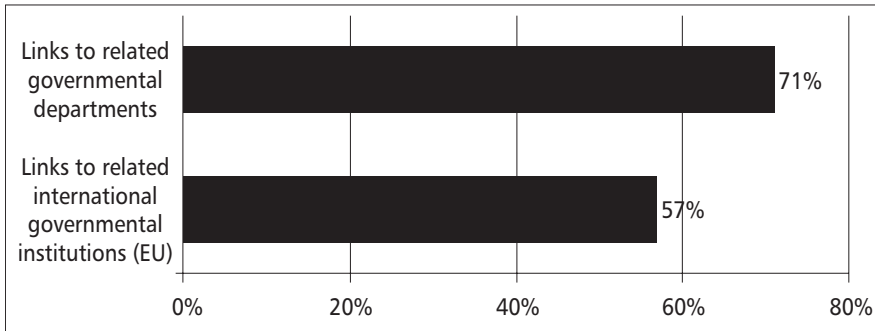
**Legend:** ✓ Successfully executed without problems; ⓘ Executed with minor problems; ⚠ Executed with major problems; ✘ Not executed successfully; Ⓣ Run out of time anticipated for the execution of the task

Results of usability testing of three highly important government department's websites (presented in Table 2) reveal that users are confronted with some difficulties while using government services on the WWW. The users that participated in the experiment of usability testing, all experienced at least some difficulties in performing basic tasks on the government websites, and none of them really succeeded to complete all of the anticipated tasks in an expected period of time.



**Figure 4 Organization of Slovenian government websites: network of Slovenian government departments' websites; Source: Analysis of Slovenian government websites (CATI, January 2002); method: network analysis; sample: systematic selection of government websites (various departments),  $n=53$**

Organization of the system of the government websites on the WWW is presented with the help of network analysis (Figure 4), on the basis of linkage (arcs in the direction of outgoing hyperlinks toward another department's website within the system of government on the WWW), between websites of individual government departments (nodes) and its frequency of recorded monthly visits among Internet users (largeness of nodes). The results indicate rather dispersed and decentralized organization of the governmental online system as grasped by their supposed mutual linkage and visitation. The system consists of a couple of highly visited government portals (main user entries) and a number of individual department websites that are almost without visitors (pay-to-designer entries). Many of the individual departments' websites can be mutually reached only through the main government portals (they are not inter-connected) and, as we can see, they cannot be reached from all of the main government portals. These findings indicate irrational and improper organization of the government websites system on the WWW, which is causing difficulties for users in seeking information and using services on the government department websites. We would expect that ideally the system of Slovenian government on the WWW would be centralized, with only one major entry point (all embracing e-government portal) and integrated with a high degree of mutual interconnection between individual government department's websites.



**Figure 5 Connectedness of Slovenian government department websites: outgoing links to related government departments and international institutions;** *Source: Analysis of Slovenian government websites (CATI, January 2002); method: website review; sample: websites of all Slovenian Ministries, n=12*

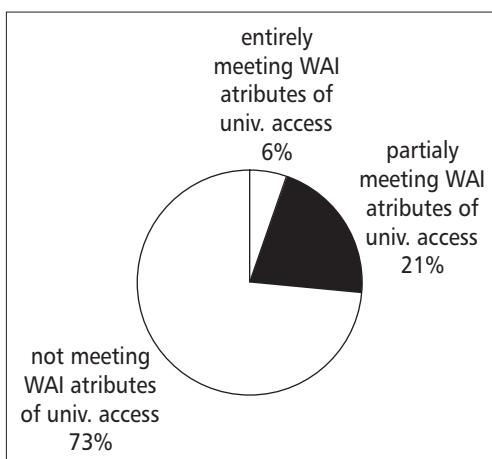
Looking at connectedness between individual government department's websites alone (outgoing links from one government department to another) (Figure 5), the results are in accordance with the findings of the above network analysis. Only 71% of all Ministries provide links on their websites to related government departments within the Slovenian government websites system on the WWW, and even less (57% of them) provide links to the important international governmental institutions as well.

On the basis of the presented evidence, where an ordinary Internet user failed to accomplish even the basic tasks on main government websites, and considering decentralized organization with low connectedness of the system of the government departments on the WWW, we may claim that the government's use of the Internet is not very efficient. This claim has two faces. The government's Internet use is not efficient from the government's point of view because of the irrational and inadequate organization of the whole government websites system, neither is it efficient from the citizens' point of view, as they are confronted with difficulties in using the intended governmental Internet services. A more appropriate model of the system of the Slovenian government on the WWW should be organized in a different way: in a more integrated and centralized, but still open fashion (i.e. offering only one major portal where the information and services from different individual departments would be integrated and provided collectively or in such a way that individual government departments would be interconnected to a greater extent between themselves).

It's worth mentioning here a general characteristic, namely, that the Slovenian administration as a whole still suffers from a substantial deficiency - at the statistical data level the magnitude of the same phenomena are hardly congruent and consistent, if one looks at them across different governmental bodies and departments.<sup>6</sup> This unpleasant feature of classic governance, having its origins in a rather dispersed state history of Slovenia during the last century, may also contribute to the persistence of the observed non-integrated e-governance through examination of its websites.

### 5.3 Equity

Since all citizens are paying taxes and therefore indirectly contribute to the development of government's Internet services, ideally they should be available to all of them regardless of their possession of latest computer equipment or the level of their ability and knowledge of using it<sup>7</sup>. *Equity* is evaluated on the basis of the universal access of government content and services on the WWW. The government is using the Internet equitably, if the government websites meet Web Accessibility Initiative (WAI) standards of universally accessible web design. Although such a measure itself does merit for a full range of conditions inherent to the universal access without technological and social discrimination and as such fails to address full dimension of equity, it presents a necessary condition for it.

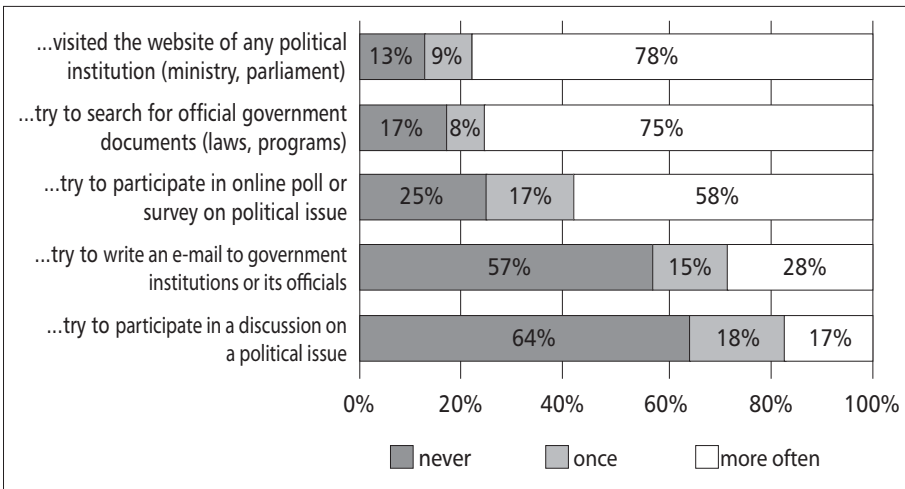


**Figure 6 Accessibility of Slovenian government websites (meeting requirements of WAI guidelines);** *Source: Analysis of Slovenian government websites (CATI, January 2002); method: HTML validation of WAI principles; sample: systematic selection of government websites (various departments), n=53*

The evidence presented in figure 6 indicates that only a minority (6%) of all government departments' websites meet WAI principles, and a majority of department's websites (73%) do not meet principles of universally accessible website design. Users with special needs (vision-impaired, those lacking necessary skills), disabled people and users with unsophisticated computer equipment are therefore automatically excluded from access to all governmental content and services provided online and cannot take an advantage of all of the services provided by the government on the WWW. On the basis of this finding, we may claim that government use of the Internet is inequitable. It favours privileged social classes and as such does not contribute to the idea of democratic government open to all citizens. This issue is just another facet of the digital-divide discussion on Slovenia.

### 5.4 Adequacy

*Adequacy* is evaluated on the basis of actual usage of the government facilities provided through the Internet and estimation of social and political outcomes that could be potentially achieved with the government’s employment of the Internet facilities. Government’s use of the Internet is adequate if its online facilities are actually used for the designed purpose and are achieving “desired” social and political outcomes: i.e. improved process of governance and better quality of life for citizens.



**Figure 7 Actual usage of Slovenian governmental Internet services: *Have you ever ...*** ; Source: *Analysis of Slovenian government websites (CATI, January 2002)*; method: web survey; sample: self-selection of Internet users, n=107

The evidence presented in Figure 7 shows that a great majority of Slovenian Internet users (78%) are actually using the government Internet services, too. A great majority of the users (75%) use government Internet facilities merely for searching the official governmental information and documents, and only a minority of them use these facilities for the purpose of political engagement - such as writing e-mail to government institutions and their representatives (28%), or participating in online discussion on a political issue (17%).

Accordingly, with actual usage of government online facilities (presented in table 7), social and political outcomes of government’s employment of the Internet at its best help in strengthening the transparency of government activities and do not result in encouraging public participation or developing a sounder process of governance (Table 3). Estimates among Internet users show that among all the possible outcomes of governmental Internet use, the greatest success by the Slovenian government is evidently achieved in assuring a direct access to government information (mean value is 3) and a smaller in provision of chances, either for e-administration or e-participation (mean values 2,5 and 2,4 respectively).



**Table 3 Assessment of social and political impacts of Slovenian government websites;** Source: *Analysis of Slovenian government websites (CATI, January 2002); method: web survey; sample: self-selection of Internet users, n=135*

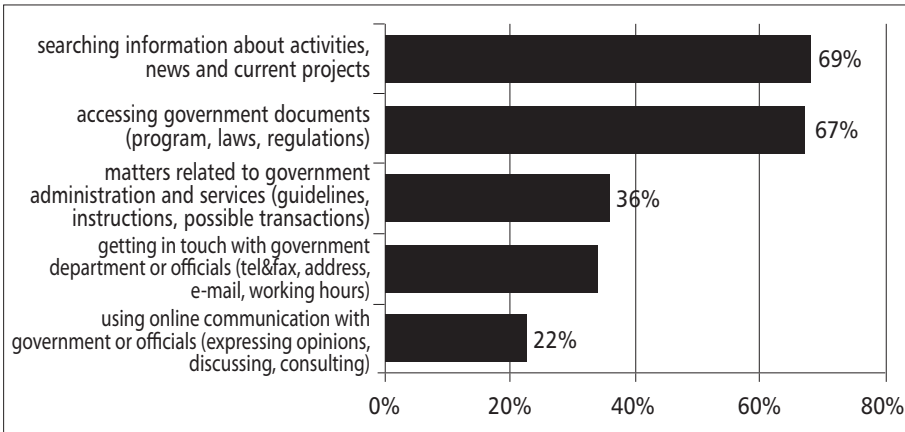
<i>What do you think, how successful is government with its websites in ...</i>	Not at all	2	3	4	Very successful	Estimate (Mean value)
... Assuring direct access to all government information of public nature to all citizens	14%	20%	35%	14%	17%	3
... Strengthening legitimacy of the government and its institutions	20%	19%	34%	18%	9%	2,8
... Building trust between citizens and government	17%	29%	29%	15%	10%	2,7
... Providing support for citizens in relation with government administration and its services	22%	34%	27%	13%	5%	2,5
... Providing democratic possibilities to take active part in the process of government decision making to all citizens	31%	27%	24%	6%	11%	2,4

Symmetry of both, the actual usage and the outcomes of government Internet facilities might have two explanations. It could suggest that Slovenian government under-employs the Internet for e-administration and e-participation, or, vice versa, that citizens simply are not properly motivated for a more “ambitious” use of the Internet. In any case, we may conclude that the Slovenian government’s Internet is quite inadequate. “Government should provide useful links to chat rooms, electronic conferences and interactive forums, combined with the proper initiatives and encouraging content that would stimulate greater citizen involvement in government activities” (Oblak 2003: 12).

### 5.5 Responsiveness

*Responsiveness* is evaluated with three factors: on the basis of comparison between users’ demands from the government online and Internet services actually offered by the government online, with the degree of government empathy for citizen needs on the WWW, and finally, on the basis of general satisfaction of users with the government use of the Internet. Therefore the government’s use of the Internet is responsive, if the

offer on government websites matches user demands, if users are appreciating the effort of government to satisfy their needs on the WWW, and if users are generally satisfied with government's use of the Internet.



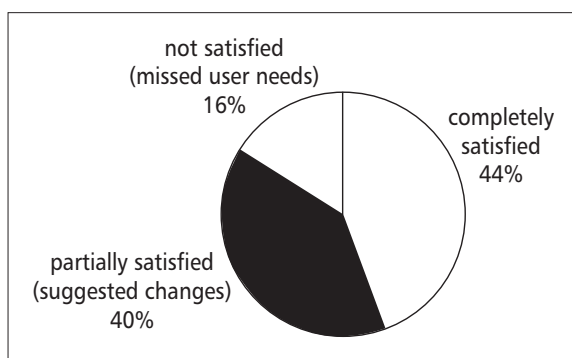
**Figure 8 Intentions for using Slovenian government websites: For what purpose do you (would you) use government websites? Would you use it for... ;**  
 Source: *Analysis of Slovenian government websites (CATI, January 2002)*; method: *web survey*; sample: *self-selection of Internet users, n=135*

Considering various possible intentions of using government websites, a majority of Internet users are mostly interested only in transparency of government activities: getting information about government activities (69% of Internet users) and accessing government documents (67%). Less than half of the Internet users have demands for e-administrative matters (36%) and even less for e-participation matters (22%). These tendencies in user demands match the distribution of content and services provided by the government on the WWW (Figure 1), where transparency gets the most attention, before e-administration, and with e-participation an the end.

Results of government empathy for citizen needs presented in Table 4 show that the majority of Internet users appreciate the government efforts to satisfy their needs on the WWW, especially in the most sensitive area of protecting citizens' privacy and security of their personal data (mean value 3,4). Also, considering the aggregated satisfaction with various characteristics of government websites (Figure 9), we could say a majority of Internet users seem to be completely (44%) or at least partially (40%) satisfied with current government employment of the Internet.

**Table 4 Empathy of Slovenian government websites – user’s assessment of government effort to satisfy citizen needs: *How much do you agree with the following statements?*** Source: Analysis of Slovenian government websites (CATI, January 2002); method: web survey; sample: users of government websites within self-selection of general Internet users, n=103

<i>How much do you agree with the following statements?</i>	Don't agree at all	2	3	4	Perfectly agree	Estimate (mean value)
Government seems to take care for users' privacy and try to provide secure transactions on their websites.	10%	15%	29%	24%	22%	3,4
Government websites are intended only for self-promotion, forgetting on citizens needs!	11%	16%	27%	26%	19%	3,3
Government websites are designed only for particular groups and not for ordinary citizens like me!	9%	19%	45%	20%	7%	3
Government websites are neglecting concrete problems faced by the citizens!	20%	18%	17%	28%	16%	3



**Figure 9 Satisfaction with the Slovenian government’s websites: *How are you in general (considering all different characteristics) satisfied with government websites?*** Source: Analysis of Slovenian government websites (CATI, January 2002); method: web survey; sample: self-selection of users on government websites, n=395

Comparison of both sides, users' demands from the government versus the government's offerings on the WWW, show that users' demands almost perfectly match the government's offer. Furthermore, a majority of users appreciate the government's effort to satisfy their needs online and in general they are mostly satisfied with the government employment of the Internet. All this evidence indicates that Slovenian government is using the Internet very responsively, in accordance with user needs and expectations.

## **6. Towards e-governance in Slovenia: Conclusions and suggestions for future developments**

With respect to the results of our evaluation study, we should notice that they are based on a general impression of the entire system of the Slovenian government websites and are thus not directly related to any of the particular government department. Results are also based on the evidence that is dated and may not reflect the existing condition of the system of government websites anymore. Nevertheless, due to the holistic approach of our study, which focuses on broader issues of e-governance and which results do not change as fast as particular characteristics of government department's websites, the results may still reveal some fundamental problems of the employment of the Internet by the Slovenian government.

The evaluation study revealed that the Slovenian government is not very effective, efficient, equitable or adequate in using the Internet, but is surprisingly very responsive. The government, using the Internet, is apparently not reaching a high level of effectiveness because of its limited employment of the Internet in the area of e-administration and e-participation, and also because of the limited quality of its Internet services. It is not particularly efficient because government Internet services are hard to use by the citizens and because the system of government on the WWW is not organized rationally, appropriately for the specific national socio-political context. The use of the Internet by the Slovenian government is also not equitable because all citizens do not have equal access to the government Internet services and it is not very adequate because it does not succeed to achieve important social and political outcomes, potentially enabled by the Internet. However, the government Internet use is highly responsive because it succeeds to meet user demands. On the basis of such findings we conclude that Slovenian government is not exploiting the possibilities of the Internet properly and that the Slovenian government is not yet fully successful in reaching the idea of e-governance.

Let us try to explain the phenomenon of responsiveness. Although the government is highly responsive to user needs it does not succeed to meet other evaluation criteria and consequently does not reach greater social and political outcomes potentially enabled by the Internet. This fact indicates that responsiveness is to some extent in contradiction with other evaluation criteria, especially with adequacy with which it is most evidently in pure contradiction. As presented in Figure 8, a majority of users do not expect government's Internet services to include e-participation features that are

essential for greater social and political outcomes, potentially enabled by the Internet. Government priority to user demands therefore directly results in disregarding Internet use for e-participation matters and consequently, in ignorance of important social and political outcomes that could be potentially achieved with the Internet. High responsiveness in government's use of the Internet is automatically reducing its adequacy, limits stimulation of possibilities for achieving greater social and political outcomes enabled by the Internet, and prevents the full range of e-governance developments.

On the basis of these findings, if we consider responsiveness as a social measure of achieved democracy, we may even speculate that an average level of achieved democracy within the country is not as high as declared elsewhere: if government is not very far-reaching in its usage of Internet and if users are still satisfied with it - than one may also guess that this is a mutually dependent issue. As overall government's Internet use was found not to be on a very high level, but obviously very responsive, we may infer that the government itself in fact is not responsive (what would be in congruency with the other evaluation criteria), but users are satisfied with its effort none the less. This would mean that the reason for the ascertained responsiveness is not in government's empathy for citizens' demands, but in the low recognition of the value of the Internet and a rather poor culture of its use on the side of both, the government and the citizens.

These last findings on e-government responsiveness would imply an interesting additional insight: namely, that our evaluation criteria on "good" and "comprehensive" e-governance are set at a much higher level than those of average users. This discrepancy can be explained with the model of government's Internet policy in the relation to the cultural values socially assigned to the technology of the Internet.

According to Werle (2003), in Europe, there are basically two subsequent policy models at work in governments' aspiration toward the "information society", which significantly differ regarding the role and value devoted to the Internet by the government. In the first one (*Old information society approach*), emphasis was put on the society's need for an efficient and internationally competitive telecommunication infrastructure, where the Internet remained in the background as a kind of hidden agenda without visible commitment to its use. In the latter one (*New information society approach*), the government is not only passively open to the Internet but actively takes up the needs, preferences and interests related to Internet use, with users playing a more prominent and active role (Werle 2003: 70-71). Considering the results of the evaluation study it seems that Slovenian government is still in the stage of "old information society approach", with true potential of the Internet remaining in the background of its "information society" activities.

Werle in his model of *Correspondence between the Internet and culture* (2003: 73) also suggests that development of the technology of the Internet is accompanied with a certain trend in changes of cultural values, assigned to the Internet by its users. Among cultural values that would better correspond to the "new approach to information society" are: individualism, freedom, self-responsibility, active participation, mistrust toward bureaucracies and hierarchies; all of them incorporating a more or less critical perspective toward the government and its power that can be easily abused. Though,

judging by the overall evaluation results that are not at all favourable, and an obviously high estimation of responsiveness Slovenian Internet users apparently did not yet adopt new cultural values anticipated by Werle. While the groundwork for our evaluation obviously already originates from the new policy model approach, Slovenian users evidently still possess the cultural values corresponding to the old one. If this is the fact, and cultural values assigned to the Internet by the users are still corresponding to the “old approach to information society”, and also, as inferred from the findings of the presented study, this approach is still at work in Slovenia, our overall (not good) appreciation of the Slovenian government’s Internet use reasonably ends in line with its rather high (good) responsiveness. Simply, a not yet satisfactory e-government supply is a mirror of the mainly parochial, a too obedient, and not very demanding overall (political) culture in Slovenia.

On the basis of general conclusions we may argue that Slovenian government on one side, and the governed on the other, have only limited benefits from the current government’s employment of the Internet. With better employment of the Internet, the Slovenian government could benefit both sides. Government itself would improve internal productivity, raise the level of democratic process, rationalize the acceptance of political decisions, and strengthen its own legitimacy. On the other side, citizens would get a chance to establish a better relationship with the government, complete services with the government from their home in an easy and simple way, participate in government activities and decision-making, and finally, improving their quality of life.

A plausible reason for a lag in the national developments regarding employment of the Internet lies in governments’ inadequate strategic political action and a lack of appropriate government incentives, already in the first period of (global) Internet developments in the early 1990s (Werle 2003: 66). This could especially be the case for Slovenia, which adopted its first public policy document concerning government’s Internet use as late as 2003 (*The Republic of Slovenia in the Information Society*), and only under the pressure of joining the European Union, following its *e-Europe+* action plan. With regard to the lack of policy initiatives in the government’s Internet domain, the presented evaluation study provides several directions that could serve as policy recommendations concerning governmental use of the Internet for the Slovenian government. Consideration of the following suggestions could bring the Slovenian government closer to the idea of fully functional e-governance:

- Utilization of the broader potential of the Internet for government activities, especially in the area of e- participation
- Raising the quality of content and service provision in the way of improving accuracy and responsiveness in online communication
- Improving the ease of use of government websites and simple exploitation of their possibilities
- Integrating departments’ websites into a more centralized system with a “single point of entry” on the WWW (the e-governance portal)

- Assuring universal access of government Internet services
- Reducing the effort of satisfying user needs for the price of more ambitious and socio-politically engaged employment of the Internet (but keeping high care for privacy and security)
- Promoting more ambitious use of government Internet facilities among citizens and stimulating their greater involvement in government activities; by Davis (1999: 179) poor interest of citizens for the politically engaged use of the Internet presents the most important barrier for achieving greater social and political outcomes, potentially enabled by the Internet

These suggestions should serve as a policy recommendation for the development of the Slovenian government on the WWW. Because government administration systems are being naturally slow, inflexible, and insensitive to social changes or changes in human needs (Caiden in Lynn 2003: 50); and because they are traditionally very resistant to internal changes with a strong tendency to predominance of the *status quo*, unless exposed to very powerful executive policy (Lynn 2003: 59), the above policy recommendations must be legally adopted. Without an adequate policy concerning governmental Internet use introduced on the highest level of the government hierarchy, we can hardly expect significant changes in the government's employment of the Internet in the near future (for more on the role of legality for bureaucracy, see Weber 1958).

All the conclusions about the use of the Internet by the Slovenian government are drawn upon single measures and are based on the condition of the whole system of Slovenian government websites at the beginning of the 2002. From the continuously changing nature of the WWW we can expect that the condition has changed considerably since the measures were taken. The factor working against this is the fact that users appreciated the already achieved level in 2002, but none the less, we can expect at least some degree of change through time also in users' expectations, which would be followed by the responsiveness of government. Therefore, future research in the area should focus on a longitudinal study with comparison of the government use of the Internet across time. Yet another form of comparison would be across different government sections regarding their exigency and expectancy of employing the Internet. We can suspect that government departments with functions such as information and service provision would somehow be more forced to move online and therefore significantly more engaged in developing their activities on the Internet. These kinds of longitudinal and cross-sectional studies would certainly help us to improve further understanding and deepen our explanation of the use of the Internet by the Slovenian government.

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## Notes

1. User-centric design in government's application of various possibilities provided by the Internet means organizing government features online in the way of needs, demands and preferences of the citizens. Namely, this is the only way that they could commonly use. A success of e-governance is dependent from actual use of government online facilities, which requires re-conceptualization of traditional government structure so that it will be organized for citizens' convenience instead of the convenience for the government.
2. We are considering all websites under the domain *gov.si* together, disregarding the differences between each unit, which vary considerably.
3. At the beginning of 2002, by the order of Government Bureau for Information and Ministry of Information Society, a detailed analysis of condition of Slovenian government websites system was carried out. The research project was conducted by the "CATI research & consulting" company, together with the Faculty of Social Sciences Ljubljana, and with support of two other specialized private companies: "PROFANO" (expertise in website development and design) and "DOTIČNI.NET" (expertise in web measurements). The summary of findings as well as detailed results of the analysis are publicly accessible through the website of Ministry of Information Society ([www.gov.si/mid/Analiza\\_spletisc/Analiza\\_spletisc.zip](http://www.gov.si/mid/Analiza_spletisc/Analiza_spletisc.zip)) (consulted Oct. 2003).
4. WAI (Web Accessibility Initiative) is the public initiative with the commitment to lead the WWW to its full potential - with promotion of universal access of website content dedicating special attention to people with all kind of disabilities. The WAI initiative includes fourteen guidelines which presents general principles of universally accessible website design. The guidelines are accessible on <http://www.w3.org/WAI/> (consulted Oct. 2003).
5. Detailed empirical results including the differences between each of the analysed governmental units can be found on [www.gov.si/mid/Analiza\\_spletisc/Analiza\\_spletisc.zip](http://www.gov.si/mid/Analiza_spletisc/Analiza_spletisc.zip) (consulted: May 2003).
6. This fact was recognized and noted to also by the European Commission while closing one of the acceptance chapters in the process of Slovenian accession to the European Union.
7. Well, a bit of exaggeration here. We can imagine that this "ideal" with government being equitable to all the citizens in practice is hardly achieved in any area of its activities. Namely, government also confronts with its own constraints and temptations, and is exposed to strong exterior pressures of various interest groups, so its equity is usually merely a result of conflict struggles among all involved parties, not being fully benevolent to the citizens.

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