

GUIDELINES FOR EGOVERNMENT IMPLEMENTATION

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ABSTRACT

Online electronic services, like inquiry possibilities which are made available for citizens and businesses by administration authorities are one proof of changes in the public sector because of modern information and communication technologies. EGovernment includes all governmental measures at all levels for qualitative improvements in citizen's different spheres of life, in businesses and for optimization of business processes within the administration itself. EGovernment can cause an improvement of the relationship between administration, citizens and business.

KEYWORDS

eGovernment, services, public sector, implementation

1. INTRODUCTION

Since the 1990's economies experience changes because of information and communication technologies [3,4]. These changes take place in the public sector too [1]. One proof of these changes are electronic services like online-information procurement or inquiry possibilities which are made available by administration authorities and political institutions for citizens and businesses. The use of information and communication technologies enables the development of eGovernment and causes an improvement of the relationship between administration, citizens and business [9]. EGovernment includes all administrative measures at all levels (union, states and local governments) to improve the requirement satisfaction for citizens (qualitative improvements in many spheres of life) and businesses and to optimize the business processes within the administration (structural changes). In reaching these targets there are used information and communication technologies [2,4,5]. Possible interaction partners in the area of eGovernment are government, citizens / customers and business. In Section 2 there will be shown guidelines for implementing eGovernment incentives. There has been developed an implementation concept addressed to all who are responsible for eGovernment issues within administration including organizational, technical and legal aspects. The guide can be seen as a meta-model for implementing eGovernment which has to be adjusted to specific circumstances. There will be shown all general necessary phases within the implementation process. The attention is turned on the consideration of administrative targets, the evaluation of critical criteria for online services and a classification scheme for evaluating online services.

2. IMPLEMENTATION CONCEPT

The following implementation concept has been developed as a guideline for all who are responsible for implementing eGovernment and the provision of public services in the area of administration [6]. There will be shown organizational and legal aspects as well as technical ones. This guide can be seen as a proposal for an eGovernment strategy where the concrete strategy has to be modulated regarding actual circumstances. The main idea of the guidelines is a classification of the development process in different temporal steps with different synthesizing content [6].

Provisional results of one step can be seen as the basis for the following step and as a decision support for decision-maker. Nevertheless, there is no one-way information provision (single-loop). Furthermore, it will be supported that results of subsequent steps can be used for the improvement of decisions in former steps (feedback-loops). The underlying eGovernment process is a dynamic one with steady organizational and technical changes and adjustments. Therefore, of special interest for adjustments are changes of legal conditions for services, development of demand for a service, new platforms and IT-security issues.

The different steps of the eGovernment development process are [6,11]:

initialization

In this first step there has to be formed an eGovernment team which has to become qualified for doing eGovernment and the human resources union has to be integrated in this initialization process.

strategy

The main idea of this step is according to the global administrative targets to identify and evaluate online-provideable administrative services. At the end of this step there should be stated which of the evaluated services will be implemented and therefore provided electronically.

analysis

The in the former step identified services are analyzed in detail regarding data protection and the resulting security issues. Additionally, there are analyzed the underlying processes and there are evaluated optimization possibilities.

concept

Predefinition of the required information technology for the realization of the electronic services according to the current circumstances and the existing platforms. Furthermore, there have to be developed and completed existing IT- security concepts.

realization

The required technology and software has to be procured and installed and adjusted to current circumstances. Furthermore, new components have to be integrated according to existing security concepts and there has to be started the qualification process for the staff.

test

functional tests, revision of IT-security issues, and test mode

implementation

stepwise implementation of online services with attending marketing activities.

In the following section the phases initialization, strategy and analysis should be discussed in detail because they are the main base for all other steps within the concept for implementing eGovernment strategies successfully.

2.1 Initialization

The main activities during this phase of the development process for eGovernment services are the brainstorming and exchange of information between all administrative members who are integrated in this development process. There has to be formed and qualified a team for the implementation of e-services which will have to evaluate potential online services in step 2 (analysis).

The required actions can be divided in different single activities.

In the following section there will be shown possible activities during the period of initialization. There has to be taken into consideration that most of the mentioned steps should be done in parallel with each other for increasing a time saving potential.

activity_1: information provision to all who are involved in the development process and all administrative members who will have to do e-services. The leader of the process has to make the others sensitive for

eGovernment issues. There should be done two different sessions of such an information event: the first one for the top and middle management of the administration and the second one for all other administrative members to quieten fears of possible changes

The main issues can be the definition of eGovernment (usage, targets, advantages for the administration), examples for online services, chances and risks of an eGovernment project and an explanation of the administrative implementation concepts.

activity_2: formation of an eGovernment team

This eGovernment team has to accompany the project during the whole development process and should be composed of a main team supported by other selected qualified persons who accompany the team temporarily.

activity_3:

start-up of the eGovernment project: public announcement of the project: provision of required financial and personnel resources, timing of the current step within the development process.

team qualification: there is a sum of qualification the main team should possess, like experience in project management, legal conditions (for administrative services in general, privacy, security issues), organizational conditions (overview about organizational area matrix), IT-security issues (encryption, signatures, security management) and information technology (workflow, client server architecture).

activity_end: At the end of each step there should be developed a checklist for evaluating all results of the above mentioned activities.

2.2 Strategy

In this step of the development process there should be evaluated existing online services and services which are not able to be done electronically. After identification of these services there starts the evaluation of single services for setting priorities. At the end of this step there should be developed a strategy for the implementation of eGovernment and published guidelines for doing eGovernment at the concerning administrative department.

The required actions can be divided in different single activities.

In the following section there will be shown possible activities during the period of strategy development.

activity_1: predefinition of administrative targets which have to be weighted according to its importance for the administration.

Typical administrative targets are:

- rationalization
avoidance of media breaks can make administrative work much more efficient and there can be created a decrease in efforts for human resources. Apart from the simplification for personnel there can be seen an improvement for administration's customers, citizens as well as businesses and other administrative departments
- customer focus
- The selection of suitable methods (service improvement, more transparent and faster business processes)
– adjusted to customers' demand - can create marginal utility for citizens, businesses and other administrative departments as well.
- image improvement because of modern and innovative online services an administrative department can improve administration's image because of creating marginal utility for customers. There should be presented the effectiveness and efficiency of the administration to the public.
 - public-private-partnership
When offering eGovernment online services together with industry there can be talked about a public-private partnership. The focus of this co-operation can be the outsourcing of specific services to the private or marketing of private activities at public sites.

activity_2: definition of measurement criteria for online services

These criteria can be created according to the administrative targets and priority rules which have been defined during activity_1.

For the successful implementation of eGovernment - systems there exist some critical general conditions [2,3]. Principles are public access, possibility to select whether the conventional method of contact or the electronic one, prevention of abuse, creation of trust in the service's quality on the part of the users, measurements for adjusting the administrative processes (redesign or optimization of processes) [3,4]. Areas for reaching a sufficient development of eGovernment are demand orientation of the services, organizational, legal and technological conditions which will be explained in this section [2,3,4].

Demand orientation:

The demand for electronic governmental services has been proved empirical. The main interests of citizens as users of governmental services are simple and fast information procurement and transactions to simplify the contact to the governmental authorities. The use of electronic administrative services therefore should be demand and impact orientated. As criteria for the demand you can use empirical surveys, user-feedback-possibilities or the number of visitors or the volume of contacts to administrative authorities [2,3,4].

Organizational conditions:

Redesign of administrative processes and structures according to the New Public Management (NPM) approach: reform of tasks and structures as well as 'within' modernization for higher efficiency and better control of transactions. The premise is that the development of eGovernment and the redesign of administrative processes and structures must agree with each other and have to be synchronized. Coordination has to take place in three areas:

- Coordination of organizational and technological redesign
- Coordination of technical organization decisions at all level of eGovernment
- Synchronization of internal (administrative) changes and external offers services of administration [2,3,5].

Legal conditions:

Mainly there should be met the following legal conditions:

- formulation of an information policy
- definition of rules for access and use of electronic services by citizens and businesses.
- Regulations about security infrastructure [2,3,5,10]

Technological conditions:

Use of modern information and communication technologies [3].

activity_3: classification and evaluation of online services:

One method for evaluating eGovernment incentives is to create classification schemes for these initiatives and strategies [6]. In a classification scheme there are analyzed different characteristics of a e-government procedure for assigning the procedure to different classes. Table 1 shows the criteria for suitable classification schemes [6].

Table 1. criteria for classification schemes

Transparent and simple assignment of e-government procedures to different classes
The classes should show the value-added utility for users of e-government (citizens and businesses)
The classes should differentiate the potential for increasing efficiency within administration authorities
The class assignment should show the degree of complexity for realization.

Targets of the classification are the evaluation of main features of procedures and the creation of comparable initiatives. There are two main views within the schemes: the user-view and the IT-view. Within these views there are two main features, which can be found in every scheme:

User-view: The online-availability of services

IT-view: The possibility for information technology based eGovernment procedures. According to the above mentioned views of users and information technology there can be created a two-dimensional classification scheme.

Each rectangle represents one class, orientated by the corresponding state of the two possible views. Within the user-view the following states are possible [6]:

Information: public online access to administrative information

General service: public online access to administrative information with respect of special needs

Individual service: information provision to identified persons and legal entities

Within the IT-view the following states are possible [6]:

Media break: information technology based service provision without continuous processing

No media break: information technology based service provision with continuous processing

Automation: complete information technology based service provision and processing. No human interaction necessary. The more to the right and the more upwards the less weaknesses can be found within e-government processes[6]. The two-dimensional classification scheme does not include a concept for showing the dimension of the administration. There is made no comment on how efficient for the administration the evaluated e-government incentives are. Because of the fact that eGovernment incentives should improve administrative business processes as well as citizens/businesses contact with the administration [6]. The portfolio considers the user-, IT- and the administration-view. The user- and IT-view remain unchanged [6].

Within the administration view the following states are possible [7]:

Negative - efficiency: large - scale administrative work because of eGovernment incentives

Null-efficiency: no effect on administrative work because of eGovernment strategies and activities

Effective - efficiency: decrease in administrative work because of eGovernment initiatives

2.3 Strategy

In this step of the implementation process there should be done a business process analysis followed by a business process reengineering process with optimization of the analyzed processes [8]: activity_1: to add up all eGovernment processes, assigning them to services and visualization of the processes. First, there are added all sub components of a process and then there has to be done an inquiry for all parts of the sub processes, like sequences, responsible persons, means of labor and receiver(s) of output (copies).

activity_2: evaluation of critical processes. Processes can be seen as critical because of their frequency, complexity or (high) percentage of human resource interaction.

activity_3: process optimization. During this analysis step there have to be evaluated weaknesses of processes and online services.

activity_4: development of online-services. The target of this process step is to summarize the planned optimization activities to one planned IT-project. Normally, to-do-lists are used for adding the single optimization steps in a common way.

activity_5: evaluation of legal requirements (laws and regulations)

activity_6: adjustment of the former defined eGovernment strategy according to planned reengineering operations.

2.3.1 Strengths and Weakness Analysis

In the following section there are shown how a strengths and weakness analysis can be done for eGovernment incentives using critical conditions, which have been introduced in section 2.2 [7].

Table 2: Strengths and Weakness Analysis

administrational department		
	positive (+)	negative (-)
Demand orientation		
Organizational conditions		
Legal conditions		
Technological conditions		

Table 2 shows a strengths and weakness analysis for an exemplary administrative department. On the vertical axis are mentioned the critical conditions for eGovernment strategies which have been introduced in section 2.2. They are: demand orientation, organizational conditions, legal conditions and technological ones.

On the abscissa there has to be evaluated whether the department's taken measures in the different areas can be defined as positive or negative within the development process of electronic services.

This analysis can be done for one department or more administrative units. When doing for one unit (single-department analysis) there has to be evaluated all 'positive' measures and it has to be considered whether and how they can be improved much more. Furthermore, there have to be evaluated all 'negative' measures whether they have to be done wrong or too less effective and efficient and how they can be improved.

2.3.2 Classification portfolios

If the analysis is done for more than one administrative unit (multi-department analysis) there has to be started like a single-department analysis and additionally there have to be compared the results of all administrative departments with each other. For doing this analysis there can be used the classification portfolios introduced in section 2.2. The use of classification portfolios enables to evaluate the utility for the user, the degree of information technology use and the state of efficiency for the administration. There can be shown classification portfolios for single eGovernment approaches (single-department analysis) and there will be shown a comparative portfolio of all approaches (multi-department analysis).

3. CONCLUSION

Within this work was introduced guidelines for implementing eGovernment. There were shown the main phases within the implementation process for eGovernment. The attention was turned on administrative targets, the evaluation of online services and the classification of these services. There has been shown how to differentiate between single- department analyses and multi-department ones and there were introduced concepts like strengths and weakness analysis and classification portfolios for doing these analyses.

REFERENCES

- [1] Aichholzer G.; Schmutzer R.; E-Government - Elektronische Informationsdienste auf Bundesebene in Österreich.; Institut für Technikfolgen-Abschätzung der österr. Akademie der Wissenschaften; Wien 1999.
- [2] Arbeitsgruppe e-government der Koordinationsgruppe Informationsgesellschaft; Guichet virtuel - Der elektronische Weg zu Verwaltung, Parlament und Gericht; Bern 1997
- [3] Europäische Kommission; eine Informationsgesellschaft für alle, Brüssel 2000
- [4] Europäische Kommission; Grünbuch EU KOM, Brüssel 1998
- [5] Gesellschaft für Informatik (GI); Informationstechnische Gesellschaft (ITG); Memorandum Electronic Government, Bonn/Frankfurt 2000
- [6] Oberer; classification portfolio for Electronic Government approaches, Klagenfurt 2001,
- [7] Oberer; future trends of electronic government, Klagenfurt 2001
- [8] Oberer; electronic services within the public sector, Klagenfurt 2002
- [9] Barns et al : E-Government – how?, Toronto 2002
- [10] Alvers et al: Public Services in the US, Philadelphia 2001