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17th Bled eCommerce Conference

eGlobal

Bled, Slovenia, June 21 - 24, 2004

Government-To-Government Enterprises In Brazil: Key Success Factors Drawn From Two Case Studies

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Abstract

Recently, various governments have seized the moment provided by Information and Communication Technology as the ideal opportunity to rethink and reformulate their administrative praxis. The digitally-enabled collaboration and cooperation perspective among different government agencies – commonly referred to by the acronym G2G (Government to Government) – is the main focus of this study. Consequently, this work seeks to analyze the key factors for successful implementation of G2G projects. In order to achieve this, multiple case study explanatory methodology based on two recent real-life cases was adopted. From these case studies, the critical success factors in the implementation of Government-to-Government processes between public agencies in Brazil are studied. Finally, some conclusions are drawn and further research is presented in order to assist policy makers and public administrators in dealing with this new field of knowledge adequately.

1 Introduction

This article seeks to present some key success factors associated with the implementation of Government-to-Government (G2G) projects in the Brazilian market. It also attempts to show how public agencies can benefit from the use of Internet technology in order to link their processes digitally with their counterparts in different public agencies, so as to streamline their workflows.

In order to fulfill the goal of this work, namely to identify the key success factors associated with G2G enterprises, two case studies were conducted. The first was generally perceived as a failure, whereas the second was a genuine success. The first

study examined the linkage between the Brazilian Central Bank and the Federal Senate, known as BacenSenado, while the second analyzed the linkage between the Brazilian Central Bank and the Brazilian Justice Department, known as BacenJud. The detailed study and comparison of these cases with their diverging outcomes enabled the researcher to isolate the key success factors involved in such endeavors.

Therefore, this paper intends to answer the following research question:

From the case studies analyzed, what are the key success factors in the implementation of Government-to-Government processes between public agencies in Brazil?

Regarding the paper's structure, first there is a Bibliographical Review section, for defining the theoretical background upon which this research is based. Then, there is a Research Design section, where the methodology used by the researchers is presented; then subsequently, the case studies are analyzed and presented in order to ascertain the key success factors for this kind of enterprise. Then, conclusions are drawn and recommendations made by the researchers to practitioners, academics, public administrators and policy-makers so as to enable them to comprehend more clearly the dynamics and peculiarities of G2G enterprises, and to indicate options for further research.

2. Bibliographical Review

2.1 *The Incremental Effects Of Information Technology In Organizations*

According to Henderson & Venkatraman (1993), the contribution of Information Technology (IT) to business was affected by skepticism in the early 1990s due to the failure to achieve the promised results. In view of this perception, Venkatraman (1994) pointed out the pressing need to create and develop new criteria to evaluate the impact of IT on business, duly reappraising automation logic, cost reduction and internal operation efficiency-based logic, which had prevailed until that time and might well no longer be relevant parameters.

In order to overcome this hurdle, the author developed a referential model in which five levels of IT-enabled transformations in organizations were described: localized exploration; internal integration; business process redesign; business network redesign and business scope redefinition.

According to Venkatraman (1994), the first two levels are evolutionary, whereas the latter three are revolutionary. His main thesis addresses the fact that the use of IT associated to evolutionary levels only has a very slight impact on business change, despite the complexity of the technological infrastructure used. Consequently, the real benefits of IT in business only arise from the revolutionary levels, i.e. the redesign of business processes and also of business networks and the redefinition of business scope.

Internet technology enabled organizations to rethink ways of doing business (Evans & Wurster, 1999). As regards the G2G realm, the redesign of business networks among public agencies is now a reality (Andersen, 1999) and the bedrock for G2G enterprises, as will be seen in the case studies presented below.

2.2 E-Government: An Idea Lacking A Clear Definition

E-Government is still an exploratory knowledge field and is consequently difficult to define accurately. Moreover, it encompasses such a broad spectrum that it is difficult to find one expression that encapsulates exactly what e-government really represents.

According to Zweers & Planqué (2001, p. 92), one can say that:

“E-Government concerns providing or attainment of information, services or products through electronic means, by and from governmental agencies, at any given moment and place, offering an extra value for all participant parties”.

Lenk & Traummüller (2001, p. 64), on the other hand, choose to see e-government as a collection of four perspectives based on citizens, processes, cooperation and knowledge management.

Other authors define e-government in a broader sense (see, for instance, Perri 6, 2001 and Kraemer & Dedrick, 1997). For them, e-government encompasses a broad gamut of activities, from electronic public service to online pool and e-governance. Yet, the most recent definitions see e-government as the use of information technology to support government operations, engage citizens, and provide government services (Dawes, 2004).

As public budgets are shrinking all over the world and society is increasingly calling for more accountable Public Administration, integrated electronic processes between public agencies, via the Internet, known as Government-to-Government (G2G), can be the answer to this question (Canuto, 2001).

Internet technology has spurred governmental agencies to participate in this new paradigm (Andersen, 1999). However, this step is not achieved simply by offering new services to citizens via the web, in what are now called G2C (Government-to-Citizen) initiatives. In Brazil, most E-Government projects have addressed the provision of new digital services (G2C) for the citizen as well as purchasing of goods and services from enterprises, mainly through web-based reverse auctions (Joia & Zamot, 2002), in what we now call Government-to-Business (G2B). Unfortunately, very few projects strive to link public agencies so as to manage their knowledge and to allow them to put new workflows into effect (E-GOV, 2000).

3 Research Design

Researchers in this paper used a multiple case study research methodology. Close scrutiny was given to the case study analyzing the digital link between the Brazilian Central Bank and the Federal Senate and the digital link between Brazilian Central Bank and the Brazilian Justice Department. The researchers sought out the critical success factors involved in G2G projects, and assessed the increase in efficiency over former processes conducted by these public agencies, relating to these endeavors.

Case studies are particularly suitable for answering “how” and “why” questions, and are ideal for generating and building theory in an area where little data or theory exists (Yin, 1994). It also enables researchers to use “controlled opportunism” to respond flexibly to new discoveries made while collecting new data (Eisenhardt, 1994). Embedded case research methodology (Yin, 1994) was used in this paper to study the linkage and system between the Central Bank and the Justice Department, as multiple units of analysis – courts throughout the country – were taken into consideration and analyzed, as well as holistic case research methodology was used to analyze the linkage and system between

the Central Bank and the Federal Senate, as the latter was considered as a whole. Moreover, as the cases produced contrasting results for predictable reasons, theoretical replication was used (Yin, 1994).

An explanatory approach was adopted in the case studies. Explanatory case studies are useful for assessing how and why a form of intervention is working. The methodology verifies whether problems and modifications are needed, and attempts to explain the causal effects revealed. Different sites are necessary in order to develop a comparative analysis (Morra & Friedlander, 1999), as was done in this work.

Yin's tactics (construct validity; internal validity; external validity; and reliability) were carefully considered in this research.

In particular, construct validity was dealt with in the study through the use of multiple sources of evidence – as the Federal Senate as well as several courts were examined and related data collected –, the establishment of a sequence of evidence, and having the members of the group review the draft case studies reports. Internal validity in the findings was also taken into account, mainly by interviewing the professionals involved in the processes and asking outsiders to read the research drafts. External validity was verified by using replication logic and trying to infer behavior patterns in similar environments, so as not to introduce biases, as well as comparing a case study considered a failure (Brazilian Central Bank – Federal Senate) with a successful one (Brazilian Central Bank – Brazilian Justice Department). Finally, the reliability of the results was ratified using a case study protocol and developing a case study database, in order to make it possible for other researchers to reach the same outcomes and conclusions, as those presented at the end of this paper.

4 Description And Review Of The Case Studies

The two case studies mentioned above are examined in detail below. The first examined the link between the Brazilian Central Bank and the Senate. This project was considered a failure, as it did not fulfill the desired objectives. The second case study assessed the link between the Brazilian Central Bank and the Justice Department and was considered a genuine success.

4.1 *Bacensenado: A G2G Project Between The Brazilian Central Bank And The Brazilian Federal Senate*

Brazil applied for and received a loan from the International Monetary Fund (IMF) in 1999. This agreement had to be approved by the Brazilian Senate in order to ensure compliance with the Brazilian Federal Constitution. The Central Bank realized that greater transparency would be guaranteed if the Senate, namely the organ in charge of controlling the Central Bank's acts and procedures, were able to monitor compliance with the agreement at all times.

It was realized that an electronic link between the Senate and the Central Bank would be ideal. It was decided that Internet technology would be used to build a website granting restricted access, with the same security features adopted by the Central Bank. Consequently, only senators would have permission to access this website instead of using e-mail, as the transmission of e-mails was not considered a secure channel. All

necessary information about the agreement would be posted in timely fashion for access by the Brazilian Senate on this website.

During the implementation of this option, the Central Bank faced several problems that eventually jeopardized the success of this G2G enterprise.

4.1.1 Security Policy

Since the information transmitted was of a highly confidential nature, security was a critical issue in the process of collaboration between these two public organizations.

Besides access controlled by password, the system featured a 40-bit digital certificate. However, these controls were not considered sufficient to ensure that the system would not be prey to hackers and crackers, so new features were introduced. One of them was to restrict access to the website, such that it would only be possible to access the system from the Federal Senate building itself.

Another security feature adopted was to grant permission to access the site exclusively to senators. This meant that it would not be possible for the senator to assign an assistant to access the information.

These security preoccupations had a highly negative impact on the working process. The fact that the system could only be accessed from the Federal Senate impeded senators from analyzing information from their houses in Brasília (Brazil's capital), or from their permanent residences located in other states in the Brazilian Federation.

An alternative solution would have been to allow senators to assign assistants to analyze the information made available by the Central Bank. However, as stated earlier, the confidential nature of the information meant that the senators were not permitted to do that. This became a contradiction in itself, since the information demanded interpretation by the technical assistants of the senators involved.

4.1.2 Acceptance By The Senators

As stated earlier, the process was designed in such a way that only the senators had access to the site. After implementation of the system, it was perceived that the use of information systems was not considered a senator's duty within the traditional culture of the Senate. All existing information systems were traditionally accessed by the senators' assistants.

This arises from the senators' ingrained conviction that their only obligations are to make decisions and to cultivate political links. Any behind-the-scenes work required to achieve these ends is traditionally carried out by their staff. The Central Bank's recommendation that senators should not give their passwords to their staff was duly adhered to by all of them, as legal formality is also part of the culture of the Senate. The obligation of the senators to deal personally with the G2G process was seen as being beneath their standing in the culture of the Senate.

The lack of an effective attempt to modify this underlying culture, mainly when dealing with new electronic processes, consequently became a critical factor. It should be stressed that no strategy was developed in order to explain to the senators how valuable the use of

this system would be for them, leveraging their importance as supervisors of the Central Bank's actions and procedures.

4.1.3 Training

The training strategy was based on giving the passwords to the senators during individual meetings, so as to explain and promote the new process, shortly after deployment of the G2G endeavor.

Despite the fact that web technology is very user-friendly and does not demand a high level of qualification, it was apparent that some senators had great difficulty using this technology. This can be explained by the fact that senators rarely use Information Technology appliances in their daily activities and do not feel any need to use it, as their assistants are responsible for dealing with IT.

Furthermore, as this was a new process both for the Brazilian Central Bank and the Federal Senate, it was not clearly defined what the best practices associated with the implementation of a G2G project would be. So, it was hard to instruct the senators, as well as the other players directly or indirectly involved in this new enterprise. The orientation provided was based on processes developed under totally different paradigms from those used in a traditional G2G enterprise.

4.1.4 Outcomes Achieved

During the first three months after its deployment, it was recorded that more than 90% of all senators accessed the system at least once. However, with the passing of time, a marked decrease in the use of the system by the senators was detected, as shown in Exhibit 1 below.

The facts mentioned above influenced the G2G process negatively and in a pronounced fashion. The last access detected was on January 28, 2000. Over the course of the last three years, the Central Bank has updated the information on the website, though there has not been a single access by any senator.

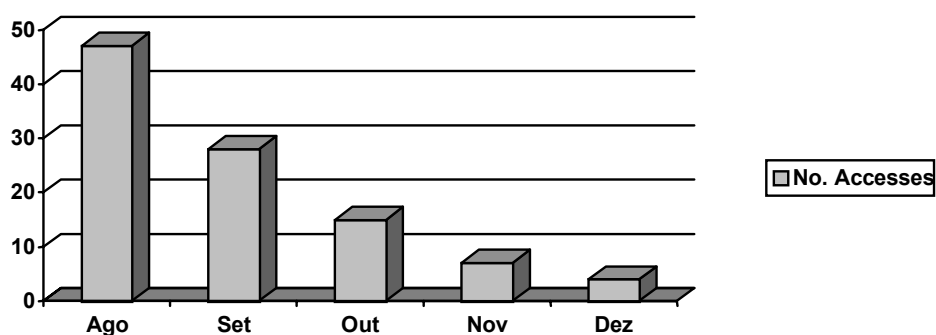


Exhibit 1: No. Of Accesses Made By The Senators Between August And December 1999

Although this linkage marked an important attempt to create a collaborative environment between the Brazilian Central Bank and the Brazilian Senate, it can be clearly seen that the outcomes achieved fell far below expectations.

4.2 Bacenjud: A G2G Project Between The Brazilian Central Bank And The Brazilian Justice Department

The Brazilian Federal Constitution grants very few institutions right of access to the bank accounts of both citizens and companies or, indeed, the power to freeze financial assets of either. One such institution is the Justice Department, which intervenes by means of judicial orders handed down by the judges of several courts nationwide.

When it issues orders relating to information about the financial assets of either citizens or institutions, the Justice Department sends them directly to the Central Bank, which then forwards the orders to the specific recipients, namely either an institution or the Brazilian Financial System.

As there was already a computerized system in the Central Bank linking it to the Brazilian Financial System, it was relatively easy to meet the Justice Department's requests. However, the increasing demand for this kind of information made by the Justice Department obliged the Central Bank to involve several employees on a full-time basis and expend considerable financial resources just to deal with this requirement. Over the years, the number of claims has increased dramatically, as can be seen in Exhibit 2. Consequently, the Central Bank acknowledged the need to redesign this working process, by streamlining it and achieving greater efficiency and responsiveness at reduced cost.

4.2.1 An Innovative Process

By 1999, the Central Bank realized it was no longer feasible to process this operation manually, i.e., receiving claims on paper and feeding them into the communication systems linked to the National Financial System. In 2000, the Central Bank received 300 claims per day, totaling 71,775 claims in that year (see Exhibit 2). A team of 23 people working full-time on this task was unable to meet the Justice Department's demands in time, thereby causing problems in terms of efficacy. The Bank was spending approximately US\$1 million/yr. to process these requests, including wages, equipment and so forth.

The Bank soon realized that there was a pressing need to develop an information system where the Justice Department itself could formulate its requests that could then be forwarded directly by the Central Bank to the financial institutions.

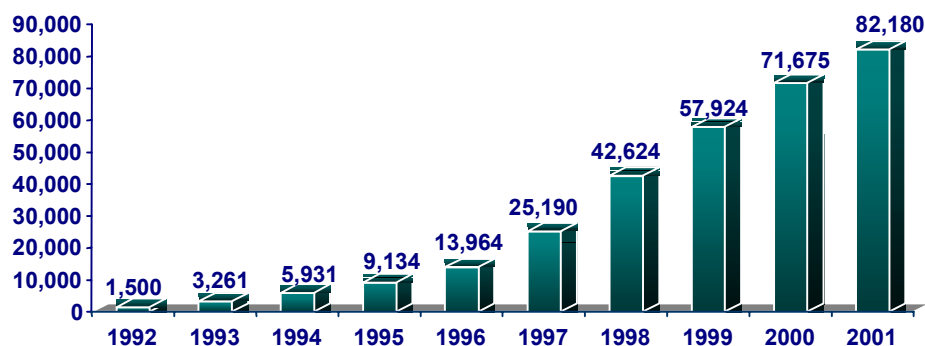


Exhibit 2: Number Of Requests Sent By The Justice Department To The Central Bank

The Bank looked into the possibility of a revised information flow, seeking to take advantage of the deployment of the existing Internet access in most Brazilian courts. A web-based system was developed in order to centralize the interaction of the judges with the Bank so that they could file their requests directly. A web-based system was selected such that the judges would not have to install any specific software on their desktops, thereby reducing costs involved in the process.

4.2.2 The Architecture Of The New Interorganizational Process

The *modus operandi* between the Brazilian Central Bank and the Brazilian Justice Department is depicted in the following Exhibit 3. From the moment a court signs an agreement with the Central Bank, it designates a professional in charge of managing the system on its premises. This manager is supposed to conduct operations including: adding users; altering data; changing passwords; granting permission to judges to access the system and withdrawing this permission when necessary. These operations are done through the system itself, which has a dynamic interface, according to user profile. Users can then access a restricted site on the Internet and after their identity is verified, the system offers web templates to allow them to fill out their requests. These are recorded directly in the Central Bank's corporate database.

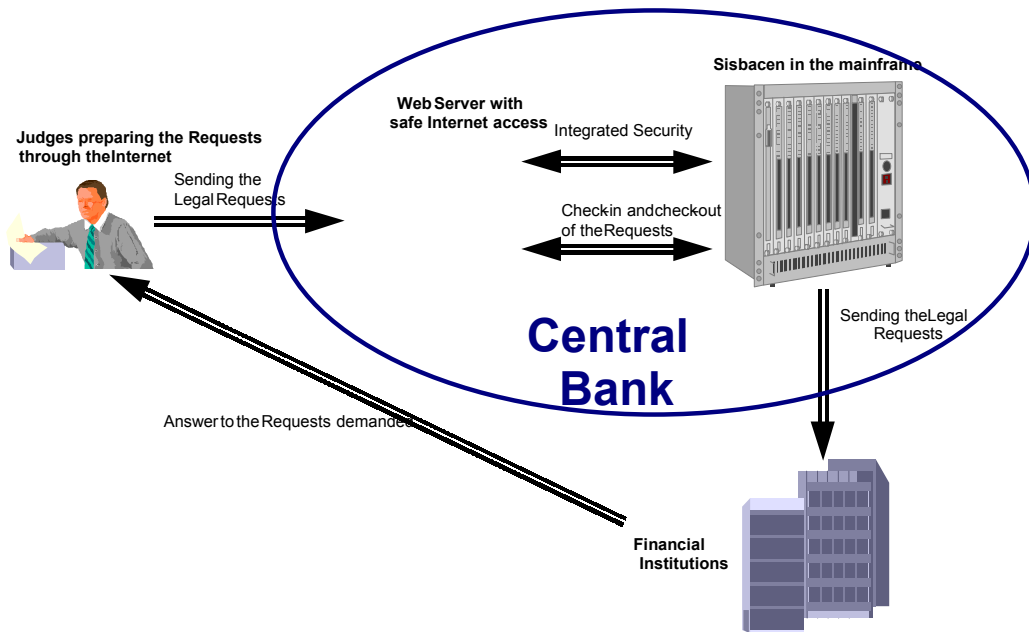


Exhibit 3: Process Architecture

At 7 p.m. every day, all requests received during the course of that day are processed and forwarded to the financial institutions as electronic files. Each institution then replies directly to the judge involved.

4.2.3 Perceived Benefits

This new process has brought several benefits both to the Brazilian Central Bank and the Brazilian Justice Department; the main benefit being the marked improvement in efficiency in processing and answering requests. Under the former system, it used to take an average of 5 days from the moment the request was made and delivered to the Financial System, though, at times it could even take as long as 20 days. Such delays can render a legal request worthless, as it gives the suspects sufficient time to remove monetary assets from the banks. Using the new process, a maximum of 24 hours is needed to prepare, transmit to the Central Bank and receive the answer to a request from the Financial System.

Another improvement in process performance arose from the tracking capabilities available in this new workflow. In the event the request is not answered in due time, the judge is aware of who must be contacted and can follow up and demand an immediate reply.

In financial terms, the new process reduces costs both for the Central Bank and for the Justice Department. For the Central Bank, the main costs are related to the infrastructure needed to complete the process. Whereas requests used to cost the Central Bank nearly US\$10.00 each, an automated request costs less than US\$0.80. Costs to the Justice Department, were also reduced, as it is only necessary to establish Internet access in every court. The costs involved in traditional mail and personnel to handle the legal requests have also been eliminated.

5 Findings From A Comparison Of The Case Studies

A comparison of the two case studies described above, clearly shows that some key factors are fundamental to the success or failure of G2G enterprises. These parameters are duly listed and analyzed below.

5.1 Security

Security is a key factor in a G2G project, as the harm caused by flaws in the new processes deployed can damage the public agencies involved. However, it must be stressed that the security solution adopted should comply with the characteristics associated with the way access will be conducted by the public agency. The access issue should deal with the fundamental fact that those who will take part in the process must have the ability to do so wherever they may be located. A G2G process must present a high level of security, but this should not impede the use of the system in a significant way. Therefore, security must be established in such a way as to allow the process to be flexible and permit the coexistence of different *modus-operandi* within the same organization. In its attempt to increase the level of security, BacenSenado limited the possibility of access, as senators could only do so from the Senate. Moreover, the restriction that only senators could use the system – and not their assistants – was unnecessary and inappropriate to the way work is carried out in the Federal Senate.

5.2 Organizational Culture

In a G2G project, purely taking the technological facets of the specific enterprise into account, i.e. disregarding the internal culture of the public agency involved can lead G2G project managers to fail to grasp the peculiarities of the specific endeavor (Kling 1980).

The acceptance level of the organization in terms of dealing with new computerized systems is one of the key points to be analyzed when studying the culture of an organization (Ginzberg, 1975). Appraisal of this issue makes it possible to implement specific strategies to overcome initial resistance. Another important issue related to the culture of an organization is the added value afforded by this new process to the organization as a whole (Markus, 1983). It is important to stress that for different public agencies the same computerized process can lead to a distinct set of values, as perceived by the employees.

Regarding the BacenSenado case, the added value associated with the G2G process was related to improvement in the technical and operational efficiency of the target group, namely the senators, who were far more involved in managerial and political issues. Hence, the G2G process led the senators to perceive the introduction of the system as undermining and detracting from the importance of their duties.

Conversely, in the BacenJud case, the process gave more autonomy and flexibility to the target group, namely the judges, who saw it as a valuable tool to enhance their daily operations and their reputation in society.

As can be seen from the cases studied here, the more positive the values associated with the G2G process are, the greater the motivation of the target group to deploy and use it.

5.3 Training

Although the G2G system was developed with a user-friendly interface and based on well known technology, G2G processes demand a new *modus-operandi* that most of the staff in public agencies is not acquainted with. Therefore, training strategies related to the use of the system are necessary, in order to communicate the benefits of this new workflow. Moreover, specific training events that allow greater interaction among public agencies lead to a better understanding of the system, not to mention the possibility of upgrading it with feedback from the trainees. These training sessions are also important for disseminating and sharing the knowledge associated with processes involving public agencies, so as to make it possible to develop and implement better practices.

In the BacenSenado case, the G2G process was implemented without thinking of the necessary skills needed by the senators, and consequently, the training initiatives required. It then became clear that only a few senators had the basic instrumental skills necessary to grasp the G2G process. Besides, the lack of training sessions hampered any interaction between the Central Bank and the Federal Senate, thus making it impossible to trade experiences and improve the system.

Conversely, in the BacenJud case, it was observed that many judges already possessed the basic skills required to use the system. However, specific training sessions were conducted so as to explain the new workflow associated with the G2G process fully, to hear the feedback from the judges and to incorporate the knowledge acquired in order to improve the system. These events played a vital role in leveraging the usage rate by BacenJud in many courts.

Therefore, in general, it was concluded that “Information and Access Security”, “Organizational Culture” and “Personnel Training” are key factors for the success of a G2G endeavor, as shown in Exhibit 4 below.

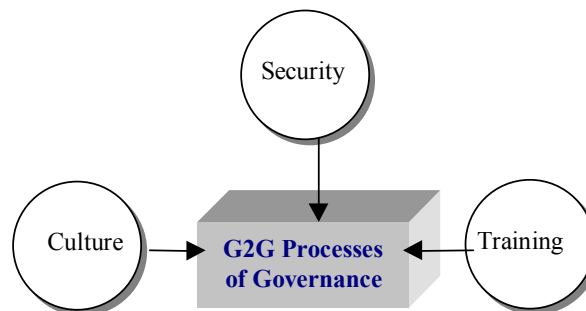


Exhibit 4: Key Success Factors in G2G Endeavors

6 Conclusions And Recommendations

From the case study analysis, it is possible to conclude that:

- Responsiveness to a G2G process is far greater than that obtained in traditional processes. This agility, itself, is of paramount importance in deploying more effective and efficient public policies;

- G2G processes are a valid alternative for Brazilian Public Administration, which is facing the dilemma of cutting back its operational budget to make the control of the governmental fiscal deficit feasible and to comply with citizen expectations regarding public agencies;
- The security issue in a G2G process is a critical factor, as breakdowns arising from it can cause losses not only for public agencies, but for society as a whole;
- To overlook the organizational culture of a public agency by concentrating efforts on a technological facet of a G2G project may cause the undertaking to fail. Each public agency has its own identity, values and culture, leading it to develop different workflows, sometimes far different from workflows addressing a similar process in another public agency. To analyze the culture and values of a public agency is of paramount importance to the success of a G2G enterprise;
- Although technology offers people a user-friendly interface and, in some cases, the technology is already being used in the public agency, a G2G enterprise involves a *modus operandi* that is new for most of the people involved. It is necessary to show the benefits this new process can bring and the best *praxis*, as important steps for proper implementation of G2G projects.

It can also be inferred that the paper deals with the “process” and “cooperation” dimensions in the e-government taxonomy proposed by Lenk & Traunmüller (2001), as presented earlier in this paper, as well as allowing public agencies to attain levels 3 (Business Process Redesign) and 4 (Business Network Reconfiguration) regarding the use of Information Technology, according to the model proposed by Venkatraman (1994).

Finally, more research is necessary to verify how these processes have worked in other countries, in order to verify whether these conclusions can be replicated in different political, economical, social and legal environments.

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