



Program on _____
**Networked
Governance**

Crossing the boundary - Why putting the e in Government is the easy part

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Abstract:

eGovernment is maturing but as the latest academic research and practitioners' experience shows, challenges rather lie in the managerial and political domain. Cross boundary collaboration, therefore, crossing jurisdictional and organisational boundaries is the next step for government. I offer recommendations and insights from around the globe. This working paper is aimed at administrative and industry professionals who are interested in current trends and challenges in eGovernment.

1. Introduction

Hierarchical government structures are the dominant model for public service delivery and meeting public policies. Work processes are separated into many sub tasks executed by specialists. To command and control such an environment, organizations developed hierarchies and uniform operating procedures (rules). Interpretation of rules and conflict solving is left to higher level managers. Although desired outcomes are mostly realized this set-up turns out to have various downsides. Results are a silo like, inward-looking culture, slow decision making, change awareness or knowledge diffusion. While the latter also led to an institutionalized disconnect from citizens it can cause system failures when information and decision making transcends organizational and jurisdictional boundaries. Hurricane Katrina, the Avian Flu, various non-prevented terrorist attacks or helping an unemployed welfare recipient are such representative cases.

In addition, government administration has become continuously more complex. Economic, social, political and technological developments in the past decades have lead to a growth of the administrative apparatus, its size, power and obligations. Market-based reforms have optimized agency operations and privatized public services through contracting-out (i.e. Public Private Partnerships) or completely conferring them to the private sector. While government administration sometimes decreased in size, market based administrative arrangements with private and non-governmental organizations (NGO) increased. Hence, public managers and policy makers have to work within a sphere of multiple stakeholders and understand interdependent relationships for service provision, regulation and policy making. Knowing whom to hold accountable and a general understanding of this complex system is important for legislators as well as for citizen. Most constituents struggle with it, which is one of the factors influencing public government perception and public participation.

Consequently, Networked Government (Table 1) or Joined-up Government are the latest terms to be found in literature [1; 21]. The idea has been around for quite a while but it seems ICT has finally reached a level of reliability and affordability to advance forward.

Key features	Hierarchy	Network
<i>Normative basis</i>	Employment relationship	Complementary strengths
<i>Means of communication</i>	Routines	Relational
<i>Methods of conflict resolution</i>	Administrative supervision	Norm of reciprocity, reputation concerns
<i>Degree of flexibility</i>	Low	High
<i>Amount of commitment among parties</i>	Medium to high	High
<i>Tone / climate</i>	Formal bureaucratic	Open-ended mutual benefits
<i>Actor preferences or choices</i>	Dependent	Interdependent
<i>Management</i>	Controllable	Complex

Table 1: Comparison between hierarchies and networks [29].

From power lines, people to servers, networks surround us. In general, a network is understood to be a set of nodes related to each other by certain links [27]. In government, administrators have always formed and relied on informal networks within and across agencies.

Joined-up government was a key part of Tony Blair’s government reforms – meaning, more coordination and more teamwork. Since then, the term has been used to describe shared service initiatives and seamless integration of data, applications, processes or applications. This can happen between all government levels. Australia’s Centrelink is such a case of centralized decentralization [41]. It has over 6,5 millions customers and offers services on behalf of 15 agencies and other government entities at more than 1000 service delivery points throughout the country.

As ICT advancement and the emergence of the information society changed our thinking on organizational structures, ways to do business and knowledge sharing, public leaders have recognized its potential for government. The Millennium Bug and eGovernment offered new opportunities for rapid modernizations and gaining accesses to the required budget resources. Desired effects of ICT initiatives are usually cost reductions, better information sharing, reduction of processing time due to parallel instead of sequential working, overall efficiency gains, new forms of shared service delivery and higher citizen satisfaction. Underlying outcomes are transparency, changes to internal and external accountability and control. Although many projects were thoroughly planned, some ICT initiatives today still fall short of their expectations, a few

completely fail. One example might be that forms, websites and online transactions are as complex as their former offline design. Another, the FBI's attempt to build its "Virtual Case File" information sharing and processing system without an enterprise architecture [22; 44]. It was stopped and cost the tax payer USD 170 Mio. Yet shared services remain to release further benefits for government and its clients once organizational hurdles are overcome.

ICT initiatives have been approached as sole technology endeavours led by IT units, technology experts or technology savvy employees, organizational challenges of change were out of scope or based on the assumption that IT would facilitate change once implemented. However, when technologies become embedded in institutional settings like municipal agencies, there is no guarantee that their potential will be exploited. Real usage/ effects can diverge from expected and desired usage/ effects. The socialisation (values, routines and norms) and relationships of agencies, citizens and vendors act as filters that will not pass all technologically inspired outcomes. Unless factors like budget management, statutes and regulations that influence this environment don't change and top level political support is not long term oriented much of ICT's potential will be left unexplored. Finally, what acts as a strong incentive in the private sector to increase a firm's value and competitive advantage turns out to be a public sector constraint. Efficiency gains, budget savings and transparency lead to budget cuts, staff reductions, restricting responsibilities and loss of resources which present major sources of power in public administration. Therefore, some predict that in the long run the internet will not transform democracy but rather strengthen existing institutional and social arrangements [10], [18], [12]. Even if that is the case and departmental silos persist due to the will of legislators, ICT still offers the possibility to improve collaboration and decision making.

Hence, administrative and political leadership need to use their growing understanding of eGovernment to come up with strategies that will help crossing the boundary for better collaboration. As outlined, technology is a key facilitator but most of the time the easiest part of the equation.

The working paper begins with brief look at the state of eGovernment across the globe today. Costs, benefits and current trends are presented and supported through various cases. Although the internet promises to offer the biggest rewards for both government and constituents, the direct human interaction is not outdated. Government contact centers and a single, easy to remember number like 311 in the US have been very successful. Thus, I describe the general idea, challenges and impact. By looking at the city of Baltimore further insights into the differences between automation and innovation through technology emerge. Whether it is a call center, one-

stop service center, portal or managing emergencies, cross-boundary collaboration is a key success factor. After placing the topic into the wider context of eGovernment and Citizen Relationship Management I conclude by presenting suggestions for administrators to move forward with their cross-boundary collaboration issues.

2. eGovernment after the hype

After entering an immediate hype eGovernment is now approaching a stage of realistic, differentiated assessment and development by researchers and practitioners (Figure 1). As much has been written about eGovernment the following discussion focuses on main principles, goals and latest trends.

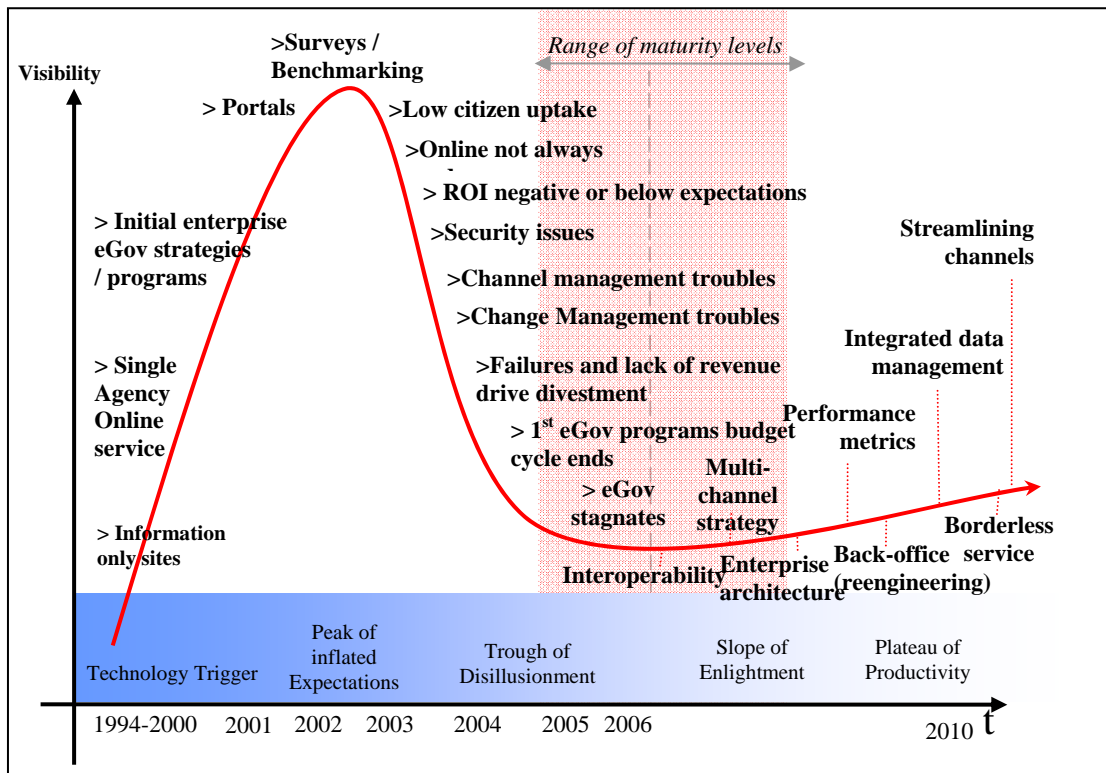


Figure 1: Modified Gartner eGovernment Hype Cycle [19].

While some prefer to stop putting the e in front of any issue that involves ICT and thus use the term Digital Government [26] or returning to just Government [19], eGovernment remains prominent. Broader definitions of eGovernment underline the change of internal and external government operations through technology, electronic public services, electronic participation and include governance in shaping an information society [23]. eGovernance is not to be

mistaken with eGovernment. eGovernance characterizes the role of the state as a facilitator providing a general framework for information society (i.e. Funding for IT equipment in schools) and regulating policies (i.e. updating property rights laws to fight illegal downloading) [36]. For this whitepaper, eGovernment is defined as the use of information technology to support internal government operations, engage citizens, and provide government services [13], [3]. Hence, eGovernment supports the aims of many New Public Management (NPM) related reforms that started in the 1980's while at the same time expanding the vision to a new level. For further analysis eGovernment relationships are differentiated into 3 groups: Citizen/Consumer, Business, Government (Table 2).

	<i>Demand side</i>		
<i>Supply side</i>	Consumer/ Citizen	Business	Government
Consumer/ Citizen	C2C auctions	C2B Job search	C2G Tax filing
Business	B2C Shops	B2B eProcurement	B2G Tax filing
Government	G2C Licenses	G2B eProcurement	G2G Immigration

Table 2: eGovernment and eBusiness relationships.

Another way of looking at eGovernment activities is to asses the level of online service sophistication. Most common levels are Information, one-way communication, two-way communication and full transaction. To present information on portals governments follow the life-events (i.e. paying taxes, marriage) methodology. Examples for one-way communication are downloadable forms or emails contacts. Whereas, forms in two-way communication level can only be filled in and submitted to a specific agency, data is completely processed electronically when public services reach the transaction level.

Governments tend to stress and communicate the citizen-oriented character of eGovernment initiatives [6], [8]. A good example is Singapore, according to West [42], [43] a leader in online service provision, which names delivering integrated electronic services and being proactive and responsive by anticipating the citizens needs as two of its five strategic goals [33]. Furthermore, this aim sends out a symbolic, legitimizing message that states or political leadership accept the empowering effects of the internet. In fact, initiatives that apply a concept based on citizens needs are more successful [20]. While many studies report the internet as a preferred way for information gathering and interaction with government, usage numbers are below expectations

and ambiguity still exists among citizens if public service processes and forms will be automatically more comprehensible through the internet [31]. Computerisation in the back-office actually reduces citizen government interaction to a certain extent as information is stored in databases.

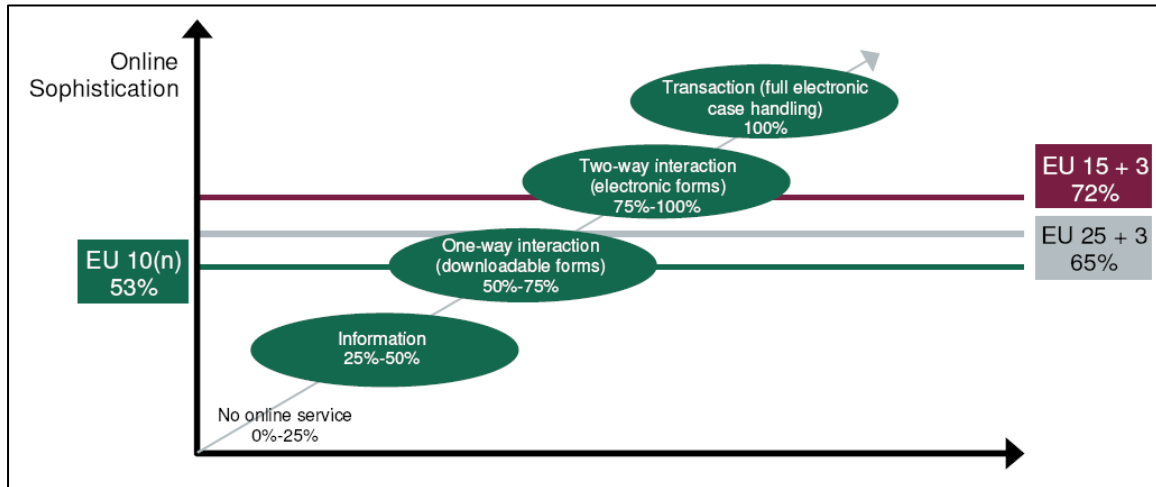


Figure 2: EU online sophistication of public service delivery [9]: 15.

A recent study on electronic public services in the European Union (EU) draws a contradictory picture than that proposed by many governments regarding their eGovernment success. According to the study more G2B than G2C services are online and the evolution of fully available citizen services is slowing down [9]. While there are various factors influencing this development, better ICT preparedness of businesses and the high complexity of non-income generating citizen related services are pointed out. The latter also relating to difficulties of crossing vertical and horizontal organizational boundaries. Similar findings are presented by the United Nations annual eGovernment report. It concludes that not many countries utilize the full potential of eGovernment to provide information and services to their citizens [39], [38] and that electronic systems have been large electronic reproductions of existing institutional patterns and relations [37]. Factors such as political ideology, economic and social systems, level of development, resource availability, human and technological infrastructure, institutional framework and cultural patterns all have a bearing on the level of e-government.

In order to innovate, public administrations have to move beyond automating (“e”) manual processes. What makes a difference will be outlined through the case of 311, CITISTAT and the City of Baltimore. Alas, many eGovernment studies/rankings derive their results from looking at the web presence and not the underlying organisational changes which would allow for identification and diffusion of those innovations.

2.1 eGovernment and developing countries

Mature transactional and shared online services remain limited to mostly developed countries. While this seems logical to the extent that network infrastructure, internet, electricity and PC penetration is extremely low in many developing countries, wireless/mobile network infrastructures and government optimized call centers offer alternatives to tackle the digital and illiterate divide. Let’s take Africa for example. Here, 50% of telephone lines are in major cities and 90% of Africa’s overall telephone network is located in South Africa. Mobile phone penetration is now about 9% compared to an internet penetration of 2.6% [25]. Morocco’s mobile phone penetration was 24 per 100 inhabitants in 2004, while fixed line penetration remained unchanged at its 1995 level (4 per 100 inhabitants) [35]. Indeed, Researchers of London Business School found that, in a typical developing country, a rise of ten mobile phones per 100 people boosts GDP growth by 0.6 percentage points [15].

So it might be m- rather than e-Government which offers quicker and broader benefits to citizens, businesses and governments in developing countries.

2.2 eGovernment initiative costs and benefits

Betty Fung, Deputy CIO at the Office of Hong Kong’s Government Chief Information Officer, admitted “The e-channel just became an additional service option, in parallel to our conventional channels, thereby increasing operating costs and reducing tangible benefits [...].This was clearly unsustainable.” in recent interview for PSTM magazine [34]. With the exception of a few highly popular services, most of Hong Kong’s eGovernment services had low usage rates. Hong Kong is now trying to lead citizens and business to use lower cost channels through various measures (i.e. changing office hours or closing down contact points). Mrs. Fung elaborates further that that government departments previously viewed IT as a means of reducing costs – but not as a means to transforming their processes and reform inter-agency issues. Nevertheless, besides better service provision, administrative leaders are very interested in the costs saving component of eGovernment.

Costs have to be approached from different perspectives:

1. Budget resources / Finance models
2. Actual costs
 - a. Investments
 - b. Operational costs (fix, variable)
 - c. Channel mix costs
3. Organizational and political buy-in costs
4. Return on investments (ROI)
 - a. Direct savings
 - i. Cost savings
 - ii. Time savings
 - iii. Lowering administrative burdens
 - b. Indirect savings (i.e. in other agencies)
 - c. Revenue generating
 - d. Intangibles
 - i. Increased citizen satisfaction
 - ii. Improved citizen knowledge
 - iii. i.e. Society, Environment
 - iv. Improved information quality and supply

eGovernment initiatives require significant investments before they return expected savings. Table 3 Table 3 gives a rough overview of global eGovernment spending. Latest research by the European Commission's eGovernment Unit reported a ratio between total eGovernment ICT and organizational costs (Reorganisation, Change Management, Training) usually ranges from 55% (ICT) to 45% (Org) or 65% to 35% [16].

Many local public administrations are constrained by budget deficits (i.e. pensions, public debt) depend on models of financing their up-front and operational expenses. Inter-institutional funding, offering bonds, applying for federal/state grants, tapping into special projects budgets (i.e. Homeland Security, Emergency Management), introducing changes to legislation or public private partnerships are approaches taken by administrations to move forward.

Preliminary budgeting for complex eGovernment projects is difficult. Constant requirement changes and excessive customization from the contractor side are common reasons for budget overflows. Budgeting becomes even more difficult when end users are involved. New forms of service provision such as call centers or the internet can uncover latent or even create demand when satisfaction levels increase. Moreover end user behaviour can alter over time. Most governments now maintain at least four channels: counter/agency, mail, call center and online portal. Even when most transactions are processed through the online channel, savings are only realized if total channel-mix costs are lowered. This is mostly achieved through closing departments or cutting personnel which can be a two-edged sword. If one public servant has to process significantly more cases, efficiency and citizen satisfaction might be the same as before.

Countries / Region	Budget / Spendings	Source
EU 25	\$41 Bill (2004) (all levels)	eGEP
UK Germany Spain France Italy	\$ 0,828 (2004) – 1,2 Bill (08) \$ 0,985 (2004) – 1,4 Bill (08) \$ 0,200 (2004) – 300 (08) \$ 0,980 (2004) – 1,3 Bill (08) \$ 0,371 (2004) – 0,520 Bill (08)	IDC
Federal US Local / state US	\$4 Bill (2004) – 6 Bill (09) \$ 0,125 (2004) 0,150 (05) 0,175 (06) 0,300 (07) 0,575 Bill (08)	INPUT
Asia/Pacific	\$ 0,880 (2002) > 1,477 Bill (07)	IDC

Table 3: eGovernment spendings

To add even further complexity for public managers, political dynamics demand for clearly visible and quick results (6-12 months). Otherwise, loss of crucial political support can be the result. I define them as “organizational and political buy-in costs” and an intangible variable hard to measure. Since a second attempt might take years to initiate, successful administrations start small the first time, focusing on components that still have a major impact. Instead of trying to do everything at once a gradual approach allows for easier cost projection, customizing and reaching the organizational tipping point. That does not mean, however, to exclude communicating the end state right from the start. As Collin Powell once said, “no battle plan survives the first contact with the enemy”, so allowing for slight alterations as the project moves along and difficulties arise, decreases the risk for complete failure.

To diagnose the state of your agency and options from a birds eye view, I recommend using the Strategy Canvas recently introduced by Chan [11]. Looking at a scenario of a city wide work order management system I briefly introduce you to the concept’s basic ideas. First, try to identify major factors influencing your current status and alternative options available through technology and organizational change. Depending on the level of abstraction the strategy canvas allows for a broader or more detailed analysis. Drawing on the previous discussion, important factors are costs, implementation time, political capital (executive branch), organizational change (BPR), organizational change (HR), resistance, savings (costs, time, work burden, etc.), citizen value. Figure 3 allows for a comparison of the current status, the “all at once” and “gradual” approach. As you might have expected, the gradual approach offers the best ratio between costs and benefits.

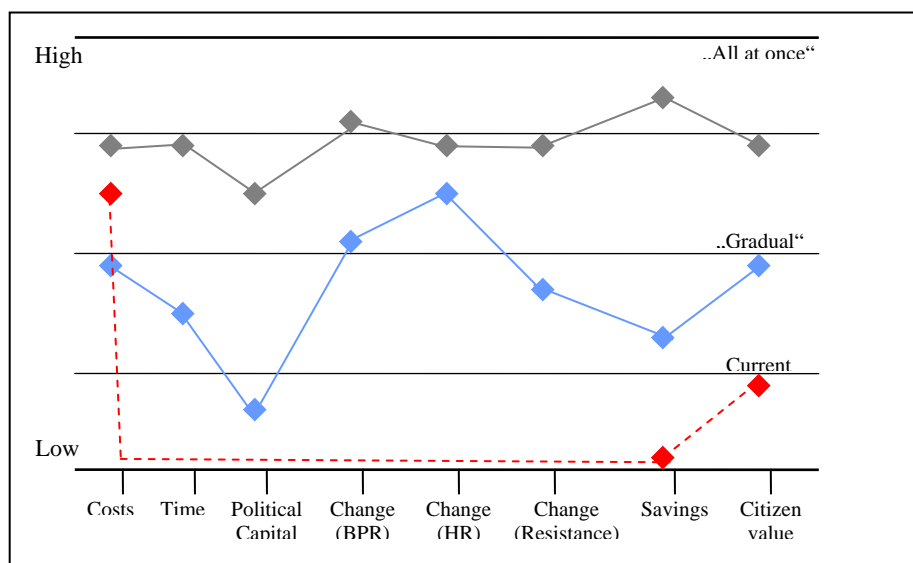


Figure 3: Strategy Canvas [11]: 25-44 example of a municipal “work order management” system

For further illustration of costs and savings, let's take a look at two cases. First, I examine how the internal use of ICT realized savings and provides the right infrastructure for further horizontal and vertical collaboration [32]. The second case examines how ICT in public service provision changed internal processes and external relationships [24].

Finland's Ministry of Labour has around 250 branches which include 15 labour market departments in employment and economic development centers, as well as 176 local job centers. The Ministry also operates a call center in the country's northernmost town. As the 7 year old system reached its volume limits the Ministry decided to upgrade to an improved system also taking advantage of Voice over IP (VoIP). Within 5 months the necessary infrastructure was set in place throughout the country. Employees in remote areas did not have to worry about their phone budget anymore when sharing information with colleagues in Helsinki as calls within the network are free, as well as long distance calls within the country are reduced to local calls. Just for annual phone charges potential savings in the range of 1.8 Mio Euro (USD 2.2 Mill) were realized. Such a standardized, high data volume network environment can be utilized by the Ministry of Labour to share enterprise wide software and information. Furthermore, the Ministry can develop new forms of work organisation as knowledge workers can easily contribute to the system without being constrained by distance as a cost driver.

The German City of Bremen was one of the winners of the federal competition MEDIA@Komm to promote the development of eGovernment. Bremen received 10 Million Euro (USD 12 Mill) in funds. Bremen Online Services (BOS), a PPP, was formed and inter alia developed "Governikus", enabling online transactions and payments for public services. BOS is owned 51% by the City of Bremen, the other 49% in stake are owned by companies (Deutsche Telekom, Sparkasse Bremen (local savings bank) and regional IT companies). A third partner is the University of Bremen. The companies matched necessary funds by the end of 2003. Interdisciplinary working groups and joint project leadership achieved involvement of key public administration officials. To take full advantage (full online transaction) of services citizens or businesses need to get electronic signatures. If they are not used, citizens need to authenticate themselves at the registry office. While citizen uptake has been rather moderate, the introduction a "Collection of outstanding liabilities" application to the Bremen legislative system has resulted in a shift of over 80% of all incoming requests to the online channel. Most of the requests are sent by major companies. Of the 12 positions dedicated to the relevant service four could be removed or transferred, resulting in savings of Euro 34.000 (USD 42.000) per person, totalling 140.000 Euro (USD 173.000) per annum. Further personnel on the phone channel were reduced by one

third. Per online transaction savings were reduced to roughly 7 Euros (USD 8.6). Therefore, the city saved 469.000 Euros (USD 578.000) in 2002 by introducing its online services for lawyers. In contrast with estimated development costs of 200.000 Euro (including project work and a share of the costs for developing the intermediary), break even was reached by 2003.

BOS is a good case to illustrate several characteristics of eGovernment and networked government. ICT was used for transactional online service delivery. Time, budget, human resources and environmental intangibles (i.e. no drive to the registrar’s office) could be saved. In this case, in a very short time period. As such it is eGovernment. Moreover, it is networked government. As an intermediary BOS helps crossing the boundary between 2 organizations: The registry office and the cash desk, thus “Governikus” lead to a stronger procedural integration of the two back-offices. Furthermore, as a PPP multiple actors are involved and new process responsibilities redefined.

As stated by John Rimmer, CEO of the Australian National Office for the Information Economy (NOIE), traditional ROI investment measures do not fully account for the value of eGovernment, since many of its benefits are non-financial and intangible and contribute to a greater social value than can currently be measured. Along these lines, the EU has recently published a measurement framework (eGEP – see Figure 4) trying to take this into consideration. It was strongly influenced by reviewing the Danish Signposts, the French Mareva, the German WiBe 4.0, the

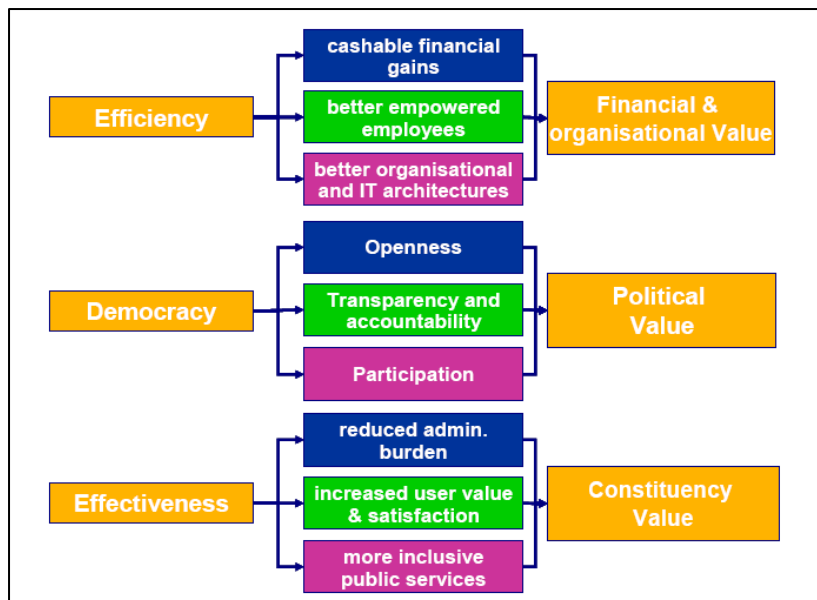


Figure 4: eGEP Measurement Framework analytical model

Dutch Monitor, the UK business case, US GSA, Australian NOIE and Canadian GOL measurement methodologies. eGEP focuses on the efficiency, effectiveness and democracy

dimensions [17]. Measurement frameworks are crucial to any ICT or non-ICT based initiative in the private and public sector. This is the only way of finding out whether expected benefits and outcomes are reached and delivered on a continuous basis.

3. Why the phone is still important

Average US landline/cell phone penetration is around 94% [4] compared to an average internet penetration of 68% in the US [40]. In rural or remote areas penetration is significantly lower and access to broadband (i.e. DSL, cable) is limited. According to the Telecommunications Industry Associations (TIA) overall landline penetration in Europe was 56% and 88% of the population had mobile phones in 2004, which makes it the most mature market in the world. In Germany the same trend is visible. While the number of landline subscribers is slightly stalling at 54,2% (54,7%(2004)) and “mobile-only” users are on the rise (~ 7-10%), over 76% of the population are now mobile subscribers [7]. Third generation (3G) wireless networks are also finally maturing in Europe. Asian countries like Japan or Korea remain the leaders in 3G. Therefore, landline phones and mobiles are much more pervasive than the internet and seemingly bridge the digital divide much better considering what I have said earlier about developments in Africa. In fact, as networks and mobile phones develop further, more people will be able to access the internet via their phone. Smartphone sales are soaring and Gartner, a market research and consultancy, predicts that 1 billion units will be sold annually by 2009. All in all, this will allow more people to use public online services and public service information centers (call centers) via the cell phone. As I will outline, the latter, although representing a rather costly delivery channel, is of key importance for citizens and indirectly for administrators and politicians.

What are channel preferences? In general, channel preferences of consumers or citizens are constantly changing, correlating with technological possibilities, social and economic developments. Preferences also depend on the stage in the transaction process, the nature of the product/service and the citizen with all its characteristics.

In Italy a study conducted by the Center for Social Studies and Policies (Censis) revealed that 26% of respondents want more call centers, 14% more services webTV services, and 13% an increase in the number of web-based services. Interview-NSS, a Dutch market research company, found that channel B2C preferences vary for the type of transaction conducted. Especially for complex issues like purchases or reporting an incident consumers prefer direct contact to a person in a shop or call center. The same applies for citizens as reported in another global benchmarking eGovernment study [2]. While developed countries lean more towards call centers, the population of developing countries favours the agency counter. However, there seems to be a paradox between the preference for the phone channel and its perceived ease of use. Reasons are complex. Waiting times, IVR, transfers, call taker courtesy and structure of the interaction process have a direct impact on citizen's service experience. Indirectly, back-end process integration and cross-agency collaboration are key to successful government contact call center operations.

3.1 Citizen Contact Centers and 311

Utilizing call centers, a single phone number (i.e. 311 (US), 3939 (France), 115 (Germany)), parallel process reengineering and organisational change towards the citizen is sometimes referred to as Citizen Relationship Management (CiRM). The term Citizen or Constituent Relationship Management is derived from Customer Relationship Management [28] and is a cluster of management practices, communication channels and technological solutions to handle issues, problems, concerns, and demands of the citizen. Among the goals of CiRM is improving citizen orientation, enhancing accountability and changing the citizen government relationship [30]. Major differences to the private sector concept exist, as government is mostly incident, location and not product based. Locations are in many instances more important (i.e. report of a downed stop sign) than the caller as well as the beneficiary of a service might be somebody else than the caller. CiRM is capable of providing eGovernment with a clearer customer strategy.

By now, I mostly talked about the benefits for the citizen government relationship. Administrators told us that consolidated contact centers equipped with the latest Global

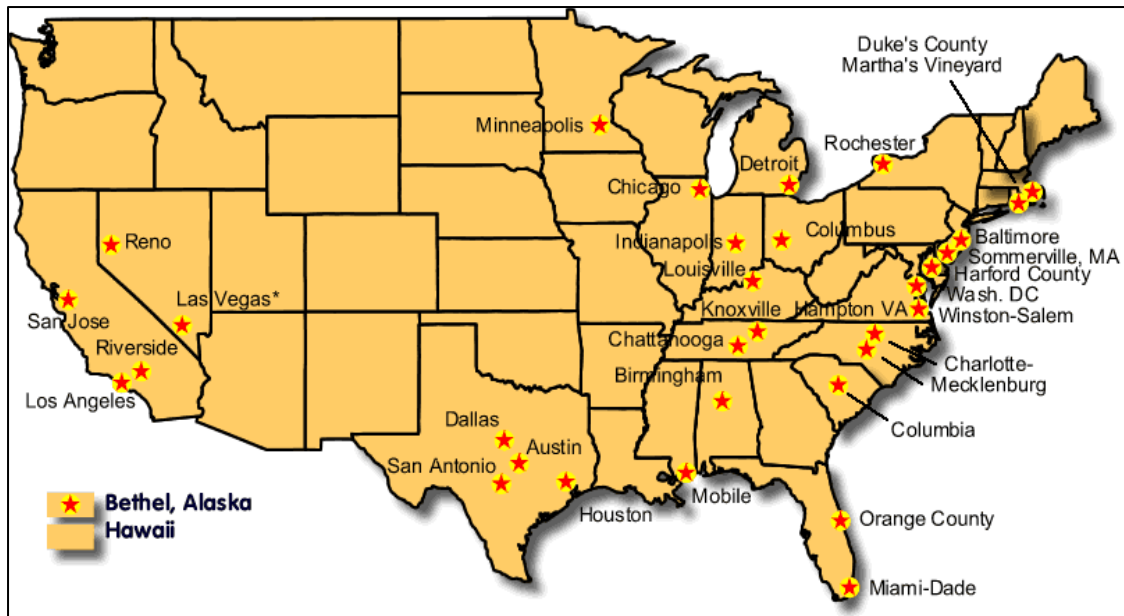


Figure 5: 311 contact centers in the US

Information System (GIS) technology, a knowledge base, agency applications and combined with an easy to remember number, uncovered significant latent demand once more and more citizens learned about it. They respectfully called this “opening the flood gates”. Citizens are also literally shocked when government returns their calls checking satisfaction levels of services. Of course this helps improving internal accountability and performance management initiatives.

One of the FFC’s (Federal Communication Commission) main intentions when approving 311 in 1997, was to relief 911 from its immense call burden produced by many rather non-emergency calls. As it turns out, 311 citizen contact centers not only achieved that but now play an important role in emergency management.

Natural disasters usually have dramatic effects on wide geographic areas, millions of people and are complex to manage. Successful disaster management depends on local, state, and federal government’s capacity to deal with such events. DHS Secretary Michael Chertoff acknowledged while testifying before Congress, "In Katrina, FEMA faced challenges in having full situational awareness of where the needs were greatest, getting supplies into affected areas and tracking shipments of supplies to ensure that they reach the people who need them [...]" [14].

In addition, I know that cell phone use now dominates during and after emergencies. In areas directly affected by Hurricane Katrina wireless networks were the only functional form of basic communication. Furthermore, while phone services were not available due to jammed or damaged cells over time, text messaging continues to work. Difficulties also exist with VoIP



Figure 6: Miami-Dade County 311 - Hurricane Wilma, GIS “Roof Damage”

users. They might not be able to connect to 311, 911 or when connected, not be localized. On the contrary, Miami-Dade County’s 311 answer center and portal environment was able to provide decision makers, including FEMA representatives, with a real-time situational report, provided by citizens and county employees acting as “eyes-and-ears on the ground” during and after Hurricane Wilma in 2005. Help efforts and supply points were organized based on recognizable patterns and hotspots. As the Director of Miami-Dade’s Office of Emergency Management notes, “We work closely with them (> 311) in getting, [...] the up to date information both ways. One, that we can provide them the information [...] to tell the people who call, and two is that based on the types of calls and inquiries they’re getting, [...] we could use that information to determine what other information should go out say in a media release [...]. So it, it gives us, as close as possible to a real time pulse on what’s going on.”

New York City's 311, the largest in the world, with a call volume of over 14 Million incoming calls a year, also utilizes its contact centers to strategically gain situational awareness and inform constituents accordingly. When New York experienced a huge power outage in summer 2003, citizens calls revealed something emergency planners did not consider: What do you do with the insulin in warming refrigerators?

After all, elected officials can as well benefit from government contact centers. Their staff members have more chance to go directly to the community instead of answering phones, as the government contact center helps constituents navigating through the daily complexity of public administration and adding accountability to service provision. Furthermore, call center citizen data combined with agency specific data (i.e. budget, backlogs) allows politicians to better understand their district and administrative performance (Figure 7).

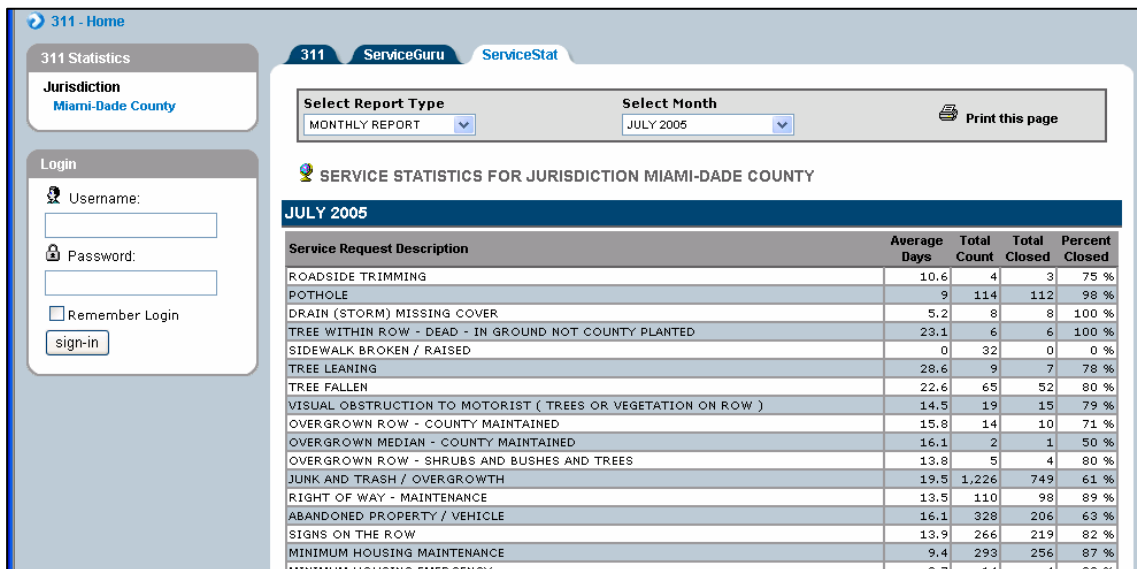


Figure 7: Miami-Dade County: Servicestat agency performance sheet

Once more, New York City can serve as an example. Mayor Bloomberg uses 311 data as a management tool, now to be found in the Mayor's Management report. Based on the fact that noise complaints were a top nuisance for New Yorkers, Bloomberg proposed an ordinance reducing barking dogs or loud air conditioners. So, the citizens influenced local government policy decisions through 311 data and at the same time allowed Bloomberg to utilize this data in his campaign to run a second term as Mayor of New York City..

3.2 Conclusion

Therefore, I conclude that citizen contact centers are different than government call centers of the past. Key characteristics are:

A citizen contact center improves accessibility to information and government services. Information is centralized and integrated seamlessly throughout the different channels and levels of government. So a single, easy to remember number facilitates contact with government and crosses the digital divide.

A citizen contact center provides timely access to continuously updated information and services for the public and government entities. This is two-fold. Information can be adapted to external situational changes or issues raised by the public. Government bodies also get real time feedback and insights into the public's needs which is an advantage in disasters. In addition, based on the scalability of modern contact center technology, government agencies are able to manage continuous rise in information demand. Volume and nature of calls shift as disasters approach, strike and depart.

Contact center data enables deeper insights into the public needs and mind. This allows for a broader retrospective analysis when combined with data from other entities for continuous improvement.

Contact center data combined with other internal and external sources of information gives administrative leaders the opportunity to continuously shape their government organization. New York City, Chicago or Baltimore all use the contact center data as a key variable in their performance management programs to create a more accountable and transparent government. Furthermore, while some agencies might lose budget and staff through uncovering inefficiencies, others have hard facts (citizen data) when lobbying for support.

When contact centers are realized in a multi-jurisdictional environment (i.e. County level) it is important to start initiatives (i.e. 311 Florida State Coalition) that foster centralized contact center initiatives in all neighbouring jurisdictions or throughout a state. Citizens are usually not aware of jurisdictional boundaries. Differing service options will ultimately lead to unsatisfied constituents.

4. Innovation beyond technology

Compared to the City of Chicago which was the first to implement 311 in the US, the City of Baltimore is well known for Citistat. Utilizing 311 and a contact center was also part of the City's larger emphasis on improving public services. Citistat was modelled after Compstat developed by New York's Police Department. While Compstat mapped crimes and a variety of performance measures for police precincts, Citistat tracks many functions and data of municipal government. Citistat is not only an executive information and decision making system. Every week the Citistat team, the mayor and other executive members of his staff, meet with departments in a specially designed room in City Hall. There, department heads have to present their progress, are confronted with questions regarding their performance data (i.e. Why do you have such a high backlog in tree trimming?) and get various feedback on ways of improvement. The data collected from the 311 contact center serves as a crucial component of the citizens perspective on city government's performance. It is called "Cititrak" as callers can track their service requests, while the city can track trends and agencies performance. Once Mayor O'Malley decided for Citistat, a team from city hall worked with representatives from all city departments to determine which what processes and resources should be measured. Within two years sixteen departments were included into Citistat. The raw data submitted by agencies and through Cititrak is analyzed and prepared by the Citistat team before each meeting. The bi-weekly meetings improve accountability, agency collaboration or uncover inefficiencies. Citistat also takes a leading role in coordination of cross-departmental initiatives. According to the City of Baltimore, the setup resulted in over \$40 million in cost savings and improvement of public services.

Again, Citistat started small by incorporating one department (Bureau of Solid Waste within Public works) and gradually added all other departments and issues over a three year period. The set-up was not standardized but rather custom fitted for every new agency, thus taking government heterogeneous depth into consideration. Even though it was started in times of a budget crisis, Citistat had and still has full high-level political support and first focused on highly visible areas to citizens. Citistat analysts become experts on a departments business and overlapping responsibilities. They help clarifying jurisdictions. When it came to dead animals on the street, four agencies were responsible depending on the type or location. As this was uncovered, responsibility was rerouted to one agency and its budget rose accordingly.

Technology is a key enabler in Citistat but it is not about technology. It changed the way politics interacted with public administration. Decisions are now grounded more in hard facts that come from the data. The contact center added a true citizen perspective and the idea of performance oriented management is drilled down deep into all hierarchies. The impact up to today is significant.

5. Crossing the boundary

Cross-boundary collaboration can basically be described as a condition of two or more entities interacting with each other. If full transactions were the final step in eGovernment, shared services, information and responsibility are the next logical step beyond that stage.

In every single case study, co-operation between governments and/or other organisations in the service chain has been a critical change strategy to achieve a more efficient use of ICT. Sharing data between organisations through advanced networks can improve services, especially in terms of process time and customer satisfaction. Due to the digitisation of workflows and information in network environments sharing of information is possible. As agencies are virtually more intertwined, coordination becomes even more important than in the past and represents one of the biggest challenges of cross-boundary collaboration. In general, better cooperation leads to a better informed government, standardisation of procedures, reduction of time delays, simplification of information transfer, reduction of errors. In all cases, the effect of a better co-operation between back and front offices is a higher rationalisation of the information household: information sources grow, they are better connected and better accessible. New approaches to an increased knowledge exchange between citizens and public administrations are only implemented when the latter has been partly achieved. Back office functions are concentrated or centralised. These centralised units take up tasks that were previously performed by the individual organisations. A lot of the time these units help coordinating standardization, cutting costs and with BPR instead of taking over operations. I define this condition as decentralized centralization and it an innovation in government.

However, as a participant in dissertation on knowledge sharing in eGovernment projects by Binz-Scharf [5] mentioned, “one of the challenges with digital government from the very beginning [...] is that there are no mechanisms, there are no organizational structures that foster cross-agency collaboration and integration. Budgets are agency specific, and statutes and regulations are agency specific. There are statutes and regulations that actually prohibit data

sharing across agencies, probably for a lot of good reasons but sometimes for not-very-good reasons, just because of territoriality. [...] So that's the constant struggle, just how to get that horizontal view when everything is pointing to a very vertical view". Furthermore, "integration of agencies across government runs against the interest of many agencies, who "actively try to keep their own system running and fend everything that might challenge their hierarchy and their right to exist". That's another reason why additional units are created that work as collaboration facilitators.

6. Recommendation for practitioners

To be successful I recommend considering the following hints based on other administrative leaders and practitioners experience:

Choose the right person to lead your cross-boundary efforts. The person not only needs a broad network throughout government but also needs to be well respected by various agency senior and executive level representatives. Someone even called for the CNO, the Chief Network Officer once.

Research on public sector change processes has found out that managers prefer surrounding themselves with those who are in favour new initiatives. In fact, I rather recommend spending more time with your critics.

Get the buy-in from as many stakeholders as possible. Project teams in my presented cases many times involved representatives from all relevant parties to ensure sustainable support.

Communicate continuously, openly and set clear objectives – in short, manage expectations. Miami-Dade County's 311 contact center team did hundreds of tours for departments, municipalities and elected officials. Furthermore, create awareness within the public as it is a powerful driver of support. Consumer research found that people accept to wait for services, even when that might be a couple of weeks. However, they will only do so without being unsatisfied when they are told.

Choose areas of high-political exposure for as initial pilots to start off with a success story. The more success stories to tell, the more positive support you can win throughout the organization and in politics. Those organizational units that are already struggling with the most problems have usually nothing to loose and might have the biggest potential and openness to radical change.

Political support is crucial as turf is the number one factor for failure. Baltimore and New York City both implemented their contact centers and Citistat initiative in times of a budget crisis. Because there were a strong mayors and relentless commitment on achieving the goals any opposition was not able to stop the projects.

Thoroughly analyze the complete organizations processes, responsibilities and structures. What is the volume? Where are responsibility overlaps? Where is collaboration potential? Which areas offer benefits for all stakeholders when changed? Where will you meet the strongest opposition and support? Choose projects that can allow for the best tangible and intangible return on investment.

Look for best practices around you. Many public administrations around the world face the same challenges you do. Some might have found new approaches. Invite them to share their experience and knowledge with the whole organization. An outside perspective and hands on results can convince even strong oppositions.

Do not expect that technology offers you're a direct return on investments. Cost savings opportunities are generated through its transparency and data.

Think out of the box. Don't accept organizational structures, processes and locations as the way to always do operations. In a cross-boundary environment legislative process and oversight will be different and require more openness of everybody to collaborate. Again, communication is important. Talk to older members of your organization and ask about past reform ideas. That way you avoid making mistakes twice. At the same time you can win a lot of rich information.

When making executive level decisions, always consider the changes implied to the lowest hierarchy level to estimate the amount of change your organisation has to endure. The more change, the more opposition to expect and the more communication to do.

Let your members take ownership. Nothing is more motivating than seeing ones ideas being part of a successfully designed policy.

Once you have decided for a project, move forward decisively and quickly. The longer it takes, the odds will rise that you are getting lost in the project.

Technology will shape opportunity and your operations but it will only be as successful as the leadership behind it. The environment in which technology exists is all about management and politics which is the key domain of a public leader.

Cross-boundary collaboration and technology implementation has many obstacles to overcome. Drawbacks are unavoidable. Be patient and take one step at a time. Incremental change will lead to big change over time.

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