TOULON-VERONA CONFERENCE
Annual International Meeting
A think-tank on
EXCELLENCE IN SERVICES

10th TOULON - VERONA CONFERENCE

QUALITY IN SERVICES

HIGHER EDUCATION; HEALTH CARE; LOCAL GOVERNMENT; TOURISM; LOGISTICS

PROCEEDINGS

Aristotle University, Department of Economics
Thessaloniki - Greece, 3-4 September 2007

Aristotle University, Department of Economics

3-4 September 2007

PROCEEDINGS

In memory of Prof. Michel Weill

ISBN : 978-960-243-642-4

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CRM AND E-GOVERNMENT AS ENABLERS OF BETTER PUBLIC SERVICES[6]

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1. INTRODUCTION

The e-Economy has dramatically transformed the expectations of individuals and organizations towards service delivery. One-to-one, 24x7, cross-organizational, multichannel services, shaped by leading-edge customer service organizations, are now expected to be made available in a range of contexts, including interactions with Governments.

Governments worldwide are responding to these expectations of customer service through developing rich e-Government programs.

e-Government has been defined in various ways. Drawing on global sources, definitions of e-Government range from «utilizing the Internet and the world-wide web for delivering government information and services to citizens» [10] to «the use by governments agencies of information technology (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses and other arms of government» [11]. In a more comprehensive way, the OECD defines e-Government as «the use of information and communication technologies, and particularly the Internet, as a tool to achieve better government (...) by enabling better policy outcomes, higher quality services, greater engagement with the citizens and by improving other key inputs identified» [12]. Also, the Gartner Group refers to e-Government as «the continuous optimization of service delivery, constituency participation, and governance by transforming internal and external relationships through technology, the Internet and the new media» [13].

The common theme behind these definitions is that e-Government involves using new information and communication technologies (ICT's) to improve and increase the ways in which governments interact with their stakeholders.

It should also be noted that e-Government does not equate to e-Governance, since "governance", on the one hand, and "government", on the other, point to different aspects of the relationship between government and its stakeholders. Governance stresses the way in which decisions are made, while government stresses the way in which these decisions are carried out: delivery of a service is a function of government, while determining whether or not to provide a service relates to governance. Accordingly, e-Government relates to the provision of government information and transactions using electronic means, whereas e-Governance is «a technology-mediated relationship between citizens and their governments from the perspective of potential electronic deliberation over civic communication, over policy evolution, and in democratic expression of citizen will» [14].

e-Government initiatives fall into three categories relating to the main types of interactions it can be applied to, namely: Government-to-Citizens, Government-to-Business and Government-to-Government.

Not detracting from the importance of Government-to-Government and Government-to-Business, this paper will focus primarily on Government-to-Citizen applications of e-Government.

A major goal of e-Government initiatives worldwide is to improve the quality of service delivery to constituents. In order to achieve this goal, many governments have begun applying to their e-Government strategies the commercial concept commonly referred to as "Customer Relationship Management", thus generating a new field of knowledge and related applications.

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[6] Even though the paper is the result of joint efforts, sections 1, 2, 3, 4, 7.4, 8 were contributed by Vincenzo Scafarto, sections 5, 7.2, 7.3 by Andrea Moretta Tartaglione, sections 6, 7, 7.1 by Giuseppe Russo.

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[10] Cfr. UNITED NATIONS, *Global E-government Readiness Report 2005. From E-government to E-inclusion*, p. 14. Available at http://www.unpan.org/egovkb/.

[11] See http://www1.worldbank.org/publicsector/egov/definition.htm.

[12] OECD, *The e-Government Imperative*, OECD e-Government Studies, 2003, p.11. Available at http://webdomino1.oecd.org/COMNET/PUM/egovproweb.nsf.

[13] GARTNER GROUP, "Key Issues in E-Government Strategy and Management", *Research notes, Key issues*, 23 may 2000.

[14] Cfr. S. MARCHE, J.D. MCNIVEN, "E-Government and E-Governance: The Future Isn't What It Used To Be", *Canadian Journal of Administrative Science*, vol. 20, no. 1, Mar 2003, p. 75.

However, the adoption of CRM in (e)Government and understanding the resultant advantages is in its relative infancy. So, there is still much to be learned on the subject and it is indeed what drives the current research.

Research Objectives and Methodology

This research is conceptual in nature and aims to contributing to the current knowledge on the strategies that government organizations undergoing e-Transformations should develop in order to manage the impact of these initiatives on the relationship with their "customers". More specifically, the objective of this paper is to highlight the potential of e-Government, if coupled with a systematic and strategic customer relationship management process, to be an enabler of better service delivery.

The paper proceeds as follows: first, it reviews the existing literature on CRM; then discusses some of the key issues to implementing CRM within the context of an e-Government initiative; next relates the conceptual framework to a case-study dealing with the Italian Revenue Agency, which is developing a rich CRM program along with a ICT re-engineering process.

The data used in the case-study are drawn from a variety of sources. First and foremost, a series of focused interviews were conducted with the Director of the Office of Planning and Audit at the Italian Revenue Agency. The information gathered was supplemented with illustrative material issued by the Office of External Relations as well as a few quantitative data drawn on The Agency's on-line and off-line publications.

The paper will conclude by highlighting some possible insights to be gained from the research and making suggestions for future researches on the subject.

2. Applying CRM to e-Government

Prior to moving into a detailed discussion of CRM in e-Government, it is essential to trace the origin of the concept and its most common applications.

Customer Relationship Management (CRM) is a managerial concept currently sweeping businesses worldwide, especially among the professional service sector businesses. CRM is commonly referred to as the holistic process a business perform in order to identify, attract, differentiate and retain customers.

Put this way, CRM seems to be nothing but the practice of the old-fashioned marketing concept with a view to selecting and managing the most profitable customer relationships.

The concept of IT-enabled CRM (also known as e-CRM) is relatively new, instead. It refers to the integration of sales, marketing, service, enterprise resource planning and supply chain management functions through business process automation, technology solutions and information resources such as to maximize the value of each customer interaction (Galbreath, Rogers; 1999; p. 162).

Information Technology is widely believed to be a critical enabler of CRM initiatives. Actually, CRM has many technologies at its core such as call centers, computer telephony integration, Internet storefronts, data warehouse, to name but a few [15]. CRM technologies are most commonly deployed in functional areas such as customer support and service, sales and marketing, in order to optimize profitability and revenue. Integration between CRM systems and Enterprise Resource Planning is also becoming common [16].

Some of the key benefits that CRM solutions may offer include: provide better customer service, cross sell products more effectively, help sale staff close deal faster and simplify marketing and sales process.

Though current CRM practices rely heavily on technology, CRM should not be viewed as a merely technological initiative (Kale, 2003, p. 44). Above all, CRM involves an organizational focus on the behaviour of, and communication with, the customer. It includes the harnessing of technology for mining data related to customer preference and behaviour. Ultimately, it focuses on effectively turning these data into intelligent business knowledge to more efficiently manage customer relationships. All that considered, CRM can be best referred to as a whole-of-business strategy that aligns the activities a business perform

[15] CRM applications are classified as either *operational* (e.g. for improving customer service, for online marketing and for automating the sales force), *analytical* (e.g. for building a CRM data warehouse, analyzing customer and sales data) and *collaborative* (e.g. for building Web and online communities, business to business customer exchanges and personalization service). Cfr. J. Karimi, T.M. Somers, Y.P. Gupta, "Impact of Information Technology Management Practices on Customer Service", *Journal of Management Information Systems*, vol. 17, no. 4, Spring 2001, p. 128.

[16] It is important to distinguish between enterprise resource planning (ERP) applications, that are designed to support back-office operations, and customer relationship management (CRM) applications that deal with front-office operations. CRM applications are highly visible to customers, besides they enable the integration of front-office information with back-office systems.

around customer needs and circumstances and involves using technology as an enabling tool of the processes required to turn strategy into business results.

CRM, or rather IT-enabled CRM, is a relatively recent phenomenon and so is the literature on the subject.

To date, attention has been paid primarily to CRM in the business environment. Yet, the current efforts by governments to improve the quality of service delivery through increasing their customer focus have made CRM a significant consideration in government, too.

Enhanced quality of service delivery has been a major component of public administration reform over the past two decades and the use of ICT's to generate improvements has been a primary driver for e-Government initiatives worldwide. Indeed, given the emphasis in both policies and in commentary, more generally on online service issue and online service targets, one might assume this to be the only objective of e-Government (OECD, 2003, p. 34).

In the early stages of e-Government, however, governments merely focused on putting as many services on line as possible, most of which were organized around their own organizational structures rather than around constituents' needs.

Presently, governments are no longer pursuing that approach to e-Government. Indeed, e-Government initiatives being implemented today are primarily aimed at improving the quality of service delivery through re-organizing services around constituents' needs. As a result, governments are now attempting to adopt many of the service delivery and customer relationship management capabilities most commonly found among leading-edge customer service businesses.

The above considerations all argue for the significance of exploring the current CRM practices performed by government organizations with a view to improving their e-Service delivery models.

The starting point of any critical study on the subject should be to consider what CRM means to government. It should be noted that most definitions of CRM that have been provided in literature refer to the business environment, while there are few specifically relating to CRM in the public sector.

A working-definition comes from Accenture (2003, p. 15):

«CRM is a capability that allows government to dramatically improve its relationship with its customers through reorganizing services around customer intentions [need and circumstances]. It allows agencies to create an integrated view of the customer and use this information to coordinate services across multiple channels. CRM provides government with a set of tools and techniques that enable intelligent interactions:

- Based on information/insight about the characteristics, needs and preferences of customers;
- Encompassing all channels of interaction;
- Embodying a comprehensive history of the previous interactions with each customer;
- Encouraging customers to use the most appropriate channel;
- Enabling agencies to meet their objectives of improving services, reducing costs and improving program effectiveness.

CRM constitutes a more comprehensive, methodical approach to providing services that traditionally have been pursued in separate, ad hoc ways».

To others, CRM is primarily a technology, a «class of software designed to provide governments with the ability to manage their constituent relationships consistently, effectively and through a variety of channels» (Kavanagh, 2001, p. 35).

Of the above definitions, this paper adopts the former as best describing the gist and the purpose of CRM in the public sector. True that the CRM technologies that are now being adapted to the public sector may be important enablers of modernized public services or e-Governments, but on the other hand technology by itself will not suffice for governments to achieve the goal of improved service delivery. In the absence of a whole-of-government approach that integrate technology, people and processes, the success of these initiatives is unlikely.

Dealing with CRM and e-Government in the brief space of this paper requires a very narrow focus. The next section focuses on some of the CRM capabilities governments should develop in order to improve their e-Service delivery models, namely: identifying and differentiating users, promoting take-up of e-Government, measuring the progress towards its stated objectives.

3. IDENTIFYING AND DIFFERENTIATING E-GOVERNMENT USERS

A basic CRM capability that is imperative for governments to develop is identifying what e-services need to be enabled, or improved, to what constituents, through what channels. This is quite similar to establishing product-market relationships in businesses, and may be viewed as the first key step to successfully implement e-Government initiatives.

At the very beginning, e-Government services were based on the structural characteristics of government agencies and civil servants, rather than on the needs of constituents. In such way, to access a service, constituents needed to know which agency provided it. This is hardly justifiable in modern government since it is entirely possible, by means of new information and communication technologies, to develop interfaces (most notably web-based interfaces) capable of shielding constituents from the machinery of government, while satisfying all the internal administrative concerns for completeness, timeliness and control (Marche, McNiven; 2003; p. 77).

Governments have now come to recognize the need for their e-Government services to be (re)organized around users' needs with a view to rendering consistently differentiated and, wherever possible, personalized services [17]. This is commonly referred to as either "citizen-centric", "constituent-focused" or "user-focused" approach to public service delivery.

e-Government has the potential to be an enabler of such a shift in service delivery: without the constraints of physical locations, distinct workforces and long-standing culture barriers that have historically impeded service integration or re-organization, e-Services could be organized from a constituent-centric perspective far more easily than can be done in the offline world.

Taking a user-focused approach to e-Government involves, above all, understanding who users actually are and what they want (KOST, 2004, p. 1).

As different people have different needs and expect specific e-Services to be enabled appropriately, governments need to develop a detailed view of their customer (constituent) base through gathering and analysing information about constituents in order to gain insights into their needs and practices and (re)shape their e-service offerings accordingly.

Recent studies found that high-performance government organizations around the globe actively use customer information to shape their services, channels and operations (Linder, Brooks; 2004; p. 82). They actually organize teams to gather data from many sources, including transactions records, satisfaction surveys and outcome studies, to develop insights into client needs and practices. Then they use these insights to understand different client segments and to design and target services, as well as to tailor delivery channels, such as to maximize the overall value they deliver.

Leading governments are also making moves towards a model of *proactively* identifying what services may be useful to constituents by involving them in developing their policies and initiatives (Accenture, 2003, p. 22). In such model, government agencies actively seek customer inputs through surveys, focus groups, workshops, committees, user groups and similar panels. These consultations cover not only the services that are being offered but also the processes and the channels required to deliver them. This represents a significant shift in public service delivery strategies where agencies have traditionally sought feedback only after implementing a customer service program.

Despite the widespread commitment referred to above, however, many government agencies are still struggling to develop a customer knowledge base, that is an organized collection of customer information. The trouble is not as much gathering information – agencies have multiple methods of collecting information about their customers – as translate this information into business intelligence.

Indeed, e-Government global surveys (Accenture, 2003, p. 21) indicate that many agencies are not very effective at optimizing the use of data to improve service delivery, especially as regards grouping customers into different sets based on specific wants/needs, using insights from grouping to tailor services to specific customer needs and/or deliver through preferred channels. In such cases, a more refined segmentation of their customer base would be a key issue for agencies to address in order to further tailor and target electronic service delivery.

What is also critical to government agencies is the capability to share customer information with other agencies.

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[17] A recent OECD (2005) study brings forward evidence of a trend toward *personalization* in government, especially as regards governments' web portals. The concept is about developing personalized services based on available constituent data within a context of a particular time, whereby services and information change as certain life events occur. Personalization, if well implemented, has obvious benefits for constituents as they may obtain more appropriate services and receive more relevant information, which should drive greater satisfaction towards e-Government. Still, personalization has the potential to drive value for governments suggesting a better use of available constituent data to target e-Government service more accurately, thus improving the overall delivery strategy. The result should be an increased take-up.
The above trend, however, is recent and is not without challenges: first and foremost, the issue of privacy protection that results in legislative limits to how much personal information can be gathered. Cfr. *e-Government for better government*, OECD e-Government Studies, 2005, p. 36.

Governments have a general reputation of functional insularity, which is often called "silos" or "stove-piping". It refers to the inability to integrate customer information and service provision across government agencies. This is to be traced back to both deeply entrenched cultures and practices, supported by the tradition of ministerial accountability, and to the fact that it was administratively very difficult to integrate systems and practices between agencies.

The existing CRM technologies (e.g. data warehouse) that are now being adapted to the public sector can play an important role in enabling inter-agency data sharing and the assembly of customer information towards the creation of customer knowledge. Yet, CRM technological initiatives – in both public and private organizations – usually imply the implementation of a customer-centric business strategy, a redesign of functional activities and a re-engineering of work processes around all customer touch points using technology as an enabler (CROTEAU, LI; 2003; p. 32).

Instead, until very recently, many government agencies have focused more on the technological aspects of CRM and less on pairing technology upgrades with changes in business processes that would have fully exploited new system capabilities. As a result, agencies have not realized all the benefits expected from their initiatives and are still struggling with integration issues.

4. Promoting e-Government take-up

Also inherent in a holistic CRM process is promoting take-up of e-Government services as they become available.

Extensive researches into citizen-to-government interactions found that even in countries with high percentages of e-Government usage and Internet penetration the telephone continues to be the predominant means citizens use to communicate with government (Accenture, 2005, p. 28).

A major barrier to e-Government take-up is citizens' perception that e-channels are not as easy to use as traditional channels (e.g. telephone, post/mail, in person). Security and privacy also figure among barriers but not as prominently as the widespread perception that traditional channels are more convenient[18].

It should also be noted that people do not necessarily know how or where to access e-Government services. Many perceive government as complex and unconnected and their knowledge of e-Services can be quite limited. As a result, potential users are often unaware of the electronic services that have been made available.

The above considerations all point to the need for governments to raise public awareness about e-Services and, all the more important, to educate people to use them.

There is, however, evidence that some leading countries are beginning to apply effective methods to drive e-Government take-up (Accenture, 2006, p. 36), namely:

- Strong pressure or mandatory use of e-channels for some services (e.g. requiring agencies to accept only electronic invoices from suppliers);
- Incentives for online use to encourage people to take more advantage of self-service. This is particularly common among revenues agencies (e.g. promising earlier refunds or offering extension of filing deadline for those who file electronically). Approaches of the kind, however, are not always easy to apply, especially in those countries that value individualism or believe that all citizens must receive the same service advantages irrespective of their ICT's abilities. In such contexts, any approach that appears too heavy-handed by the government or implies favourite treatments for a particular group may cause trouble;
- Marketing pull. Leading governments are also using a broad range of marketing tools, from basic and *ad hoc* campaigns (e.g. running a public service announcement on television) to more innovative ones, such as direct e-mail, outbound calls and website ads.
- High-touch push. Many governments agencies are putting PC facilities and support in offices that offer counter services. Others arrange for road special shows or events staffed with personnel to help people use e-services. By providing people with means and support, they teach them how to get the most out of electronic service offerings, with a view to winning e-Government converts one by one.

What is also proving effective is the development of a single e-Government "brand" and a consistent way for users to navigate among e-Government services with a common look and feel (OECD, 2005, p.

[18] See also Accenture, *e-Government Leadership: High Performance, Maximum Value*, The Government Executive Series, 2004, p. 27.

38). A few governments, for instance, have created a single brand for web and DiTV based services, and besides are using it as the electronic response route in all government advertising.

Clearly, promoting take-up of e-Government is taking hold as a priority and, yet, many governments still find themselves confronted with the problem of a relatively low usage.

It goes without saying that the potential value gained from e-Government – in terms of improved public services, greater efficiency and cost savings – will not be realized if e-Government usage remains low. Not to mention that is costly to provide both traditional and electronic channels delivering the same content.

Actually, governments find themselves in a competitive situation, that is their traditional channels are competing with the new electronic channels. Such competitive environment is foreign to the prescriptive service delivery approach traditionally used in government. No wonder, then, if governments struggle with developing the business processes and the "products" needed to prompt a sizable migration to e-services.

Yet, achieving this migration is increasingly important for governments to control the overall cost of e-Government.

The challenge stems at least in part from governments' relative inexperience with marketing, which has never been part of their organizational mind-set.

As noted earlier, government agencies are not always able to use customer data to create effective segmentation and, as a result, they fail to target the right message to various customer groups using the most effective communication and marketing techniques.

Improved customer segmentation is, again, what will deliver the customer insights required to developing and promoting the e-Services specific customer groups are more likely to use. This will create a higher value for those customers, thus stimulating their migration to e-Services, which in turn will increase agencies' return on investment.

5. Evaluating e-Government

A final CRM issue to be addressed in the course of any e-Government program is evaluating the effectiveness of the program in meeting its service delivery objectives.

In the past, the imperative issue for governments worldwide was to put as many services and information on line as possible, moving from the assumption that simply getting services on line would undoubtedly deliver benefits both to governments and constituency. As a result, e-Government evaluations were largely based on availability targets (i.e. the number of government services being made available online).

Such simplistic approach to developing and evaluating e-Government programs no longer applies in the current e-Government landscape where governments have reached the point of having at least some aspects of all their services on line (although few have achieved a widespread adoption of such services). The challenge now facing governments is increasing e-Services uptake by making them more and more user-focused, which in turn relies, to a large extent, on governments' capability to properly evaluate the existing e-Service offerings so as to identify areas needing improvements.

The gap between what e-Government programs provide and the way people view and actually use these programs points to a problem governments have historically had in evaluating their performance. That is, government organizations tend to measure their performance in terms of inputs and outputs rather than on results constituents actually value.

True that the matter of value is complex both to public and private sector organizations. In the private sector, however, there are at least generally accepted ways of measuring it – such as shareholder value analysis – while no such measure exists to guide public managers. The reason for this is fairly clear: in the private sector, shareholder value is consistently measured in the same financial terms regardless of the industry, whereas the "constituent value" is going to vary depending on the service being delivered.

As to e-Government services, finding appropriate measures is particularly difficult when it comes to evaluating issues such as service quality or savings of user time rather than the more simple service availability.

Yet, such evaluations are far more important than measurements of provision, as the real value of e-Government is that it may help governments deliver improved customer service and make government operations more efficient. Governments have now come to recognize that truth and, as a result, they are beginning to measure the success of their e-Government programs less by simply service availability on line than by more value-added measures.

Particular stress is put on measuring service quality, as most governments regard the improvement of the quality of public services as a major goal of e-Government programs.

The quality of e-Government services is often assessed as customer satisfaction, most commonly measured through surveys or online questionnaires. The frequency of these surveys is key to monitoring the changes under way in users' needs and practices and thereby making continuous improvements to service offerings. Results from these surveys may also be used to update quality standards.

Other measures commonly used (in a call center environment) include average time taken to resolve requests, number of calls handled per day, call center abandon rates, percentage of requests resolved in first contact and the like.

Also, successful delivery of e-Government can be measured by users' take-up of e-Government services. Besides traditional metrics (e.g. Web sites hits and page impressions), monitoring and analysing patterns of usage, attitudes towards data use, seasonal variation, audience breakdown and use of search terms are all effective ways of understanding how and to what extent users consume electronic services.

It is self-evident that the above measurements should not be a one-time event, as users' expectations and habits are evolving rapidly in a changing service environment. Their increasing shills in using technology and their experience of interacting with the online commercial sector will inform their views on the quality and usefulness of e-Government services. It is, therefore, essential to implement an ongoing evaluation process of e-Services and use its findings to inform changes to the e-Government program. Such findings should also inform the development of government agencies' overall business objectives with a view to making total service delivery more user-focused rather than simply enlarged through the introduction of new channels/services.

6. Barriers and challenges to implementing CRM in e-Government

Though inherently a managerial concept, CRM is largely believed to be applicable to government, considering that governments have the largest customer base than any other organization in the world and, therefore, have much to gain from an improved understanding of their customers. In particular, some say that CRM is a natural part of governments' broader focus on e-Government, given that the latter implies the transformation of public sector internal and external relationships through net-enabled operations, IT and communications, to improve government service delivery (Bittinger, 2001, p. 2).

There are, however, a number of factors that may act as barrier or deterrent to implementing CRM in government. Firstly, the dynamism associated with a wide-ranging diversity of customers is unique to the public sector and, therefore, it complicates the matter of gaining insights into customer needs and practices (PAN, TAN, LIM; 2006; p. 240). Moreover, within the civil service, citizens are compulsory members of these public agencies regardless of their business value. In fact, when applied to the private sector, CRM aims at targeting the most valuable customer in terms of potential profit, whereas in government everyone needs to be treated equitably.

Other major challenges governments are faced with are the digital divide and citizen privacy concerns. The former is commonly referred to as the gap between those who have access to, and the capability to use, ICT and the Internet, in particular, and those who don't. Because of that gap, many will not be able to benefit from CRM initiatives such as the web delivery of public services. Governments, in partnership with private industry, need to bridge this technology gap and provide a playing field for everyone.

As to privacy concerns, it is has been noted that some CRM technologies such as the cookies give the government too much monitoring capability (PANG, NORRIS; 2002; p. 44). For instance, some people are concerned that monitoring a taxpayer's visits to the Revenue Agency web pages about tax deductions might lead to audits.

In general, however, the privacy, security and confidentiality of users' records need to be maintained. To address this issue, many countries are currently enacting privacy acts covering use of personal information in private sector and by web site operators (Kannabiran, Xavier, Anantharaaj; 2004; p. 238).

Last, but not least, CRM requires an investment in technology and the business case for this investment is not easily made by government organizations, given that the main drivers of CRM in the private sector (i.e. customer retention and profitability) are foreign to the public sector. Yet, governments can leverage CRM technological initiatives through targeting routine and high-volume services, not least because of the efficiency gains that can stem from driving the manual processing out of them. This in turn would allow them to refocus resources on higher value activities such as handling nonroutine requests or introducing new services, thus delivering an improved experience to users.

That is particularly the case of Revenue Agencies that have historically been among the first government agencies to deploy new technologies, because of the relative ease of establishing a business case for faster revenue collection and increased compliance.

On the basis of such considerations, the next section discusses the case of the Italian Revenue Agency, which is developing a rich CRM program as a corollary of its e-Government initiative.

7 Case-Study: The Italian Revenue Agency

Constituted in 1999, the Italian Revenue Agency has been operating since January 1st, 2001.

The Italian Revenue Agency carries out all the functions regarding the management, assessment, litigation and collection of taxes.

The Italian Revenue Agency is a non-profit public body acting under the supervision of the Minister of the Economy and Finance that maintains control over policy orientation. As such, the Agency takes full managerial and operational charge of its affairs and is autonomous as regards regulations, management, assets, organization, accounting and finance. However, its internal general directives must be submitted to the Minister for approval, both in legitimacy and merits.

The creation of the Revenue Agency has marked the beginning of profound changes in the Italian Tax Administration; before that, it was a process of the classic hierarchical bureaucracy, both time-consuming and not very efficient.

The avowed purpose of the Agency is indeed to ensure the highest level of tax compliance, through initiatives aimed at:

- simplifying relationships with tax-payers;
- improving help and information services;
- increasing its action against tax evasion.

Also, the Agency aims at achieving the peak efficiency by innovative schemes of organization and planning.

Among the most prominent changes brought about with the creation of the Agency has been the implementation of the "Fisco telematico" project (Electronic Tax Service), which has led within the last few years to a broad range of e-Services now available for individuals and organizations to fulfill their tax duties.

The project has not been conceived as a merely technological initiative but has also been accompanied with a systematic and strategic customer relationship management (CRM) process to govern the repercussions of e-Transformation on the relationships with taxpayers. Particular attention has been paid to making e-Services user-friendly, to promoting them through proper communication and education activities and, finally, to setting appropriate measures of success, and the associated monitoring mechanisms, that accurately reflect what drives user satisfaction towards such services.

Apart from the project, CRM has increasingly become an essential element of the Agency's overall service delivery policy, to the point of making a formal pledge (the "Service Charter") to provide taxpayers with services that are more and more focused on their needs, continuously improved – notably, through seeking feedback from taxpayers – and, not least, delivered and coordinated through various channels of interactions (local offices, the Internet, contact centers, home delivery). All that with a view to improving the relationship with taxpayers by putting them firmly at the centre of the Agency's thinking and action.

Properly managed relationships with taxpayers are, however, all the more demanding when it comes to rendering services electronically, which requires specific issues to be addressed such as the digital divide, privacy concerns or the more simple public unawareness of e-Services.

The sections below trace the main features of the Agency's e-Service system, with particular stress on the CRM practices being performed to ease its usability, promote take-up and evaluate its progress against the Agency's service delivery objectives.

7.1 The e-Service system

The e-Services currently being provided by the Italian Revenue Agency fall into two categories [19]:

- the services for the use of small enterprises and every other taxpayer, accessible via the Internet, that made up the "Fisconline" service;

[19] To be exact, there is a third category of e-Services currently being provided by the Revenue Agency, namely the "Siatel" channel that allows (only) the State-owned agencies – such as the municipalities, provinces, regions, universities, consortium of municipalities in mountain areas, Local Health Authorities – to access the Tax Register.

- the services specifically designed for medium and large companies and intermediaries (e.g. consultants, professionals, CAAF, banks and post offices), that can be accessed through the "Entratel" network [20];

Among the most significant services delivered through Entratel and Fisconline are:

- e-Filing of income tax returns;
- online payments;
- cadastral services;
- request of tax refunds;
- assignment of the VAT registration number;
- fulfilments (registrations and payments) related to real estate contracts.

Besides, visitors to the Agency's web site (www.agenziaentrate.it) can access to tax information (particular attention has been paid to making the site easy accessible to disabled); interact with contact center operators; consult the "Tax Documentation" online databank containing all tax regulations as well as circulars and decisions issued by the Agency; calculate road tax; find out tax deadlines; book an appointment at local offices; get the tax code.

A very innovative online service is the "tax mail box". This allows taxpayers to check information on their own tax position (e.g. tax returns submitted, payments, personal assets).

Finally, taxpayers can make inquiries by using the Agency's "Web Mail" services. A Contact Centre automatically acknowledges receipt of all e-mails sent and provides the relating answers.

7.2 The e-Filing system

Not decrying the importance of the other e-Services, the e-Filing is indeed the most significant change to the tax administration process brought about by the ICT re-engineering effort.

To consider the e-Filing process takes on particular importance for the purposes of this paper. From that it can be gathered, at least in part, how the Agency has managed the impact of e-Transformation on the relationship with taxpayers.

To begin with, users are requested to make an application for accessing the e-Filing service. The access code is issued via the Internet or by the Agency's local offices as for the "Fisconline" and "Entratel" services, respectively.

The drawing up of the documents (e.g. income tax return, VAT declaration) itself is computer-aided, thanks to specialized software distributed by the Agency gratis. The Agency also makes available application programs which allow to check that the documents have been drawn up in accordance with the required specifications. The use of these programs is not mandatory, rather they are conceived to be a help for users to detect the presence of errors that will impede the acceptance of the documents, once they are sent.

The Agency has also enabled an e-Filing Helpline, active Mondays to Fridays from 9 am to 5 pm. With the filing deadline approaching, the Helpline is active from 8 am to 7 pm and the number of operators is increased accordingly. Besides that, web pages are available to users (on the Agency's site) that collect answers to frequently asked questions (FAQ). The information available on such pages are the result of a systematic analysis on the data gathered through the help desk, with a view to giving answers to problems of the same kind. Finally, there is a fax number specifically designed for solving problems related to the access codes and passwords.

Another feature unique to the e-filing process is the authentication of the documents, aimed at establishing the identity of the e-filer who is responsible for the referential data integrity. That requires users to enter their PIN number or generating the authentication codes through an application software (as for "Fisconline" and "Entratel", respectively).

Once the documents are sent, a receipt is given within 1 day to the "Fisconline" and 5 days to the "Entratel" users.

As for the documents taxpayers file through intermediaries, a pre-notification is sent electronically to the latter in event of irregularities, given that in some cases irregularities can be removed through enlightening on purely formal elements (e.g. payments made but not included in the filed documents). That is aimed at saving, wherever possible, the taxpayer from a notification of irregularity.

It is self-evident from the above account that the e-Filing service is far from being the electronic version of the traditional filing methods, as it implies a number of CRM technologies, and the underlying

[20] That is a restricted network that can be accessed through a toll-free number or via the Internet at https://entratel.agenziaentrate.it. An access code, issued by the Revenue Agency, is required.

business processes, that have actually engineered a turnaround from obsolete, bureaucratic procedures to more efficient, customer-centric ones. That is all the more significant for those who want to e-file without the assistance of intermediaries, that are now provided with a range of software utilities and customer service such that they are very likely to succeed in their object.

The most valuable benefits that accrue to taxpayers from such customer managed process can be summarized as follows: lower risk of mistakes in filing documents, greater awareness of filing correctly, fewer notifications of irregularity from the tax administration (when one is assisted by intermediaries).

Obviously, the e-Filing system yields benefits for the Revenue Agency, too. First and foremost, the reduced number of mistakes compared to those founded in the documents filed in the traditional manner. This way, some of the resources focused on traditional service delivery methods can be directed elsewhere and, eventually, cost savings can occur.

7.3 Promoting e-Services through marketing, communication and education

Since the launch of its e-Service program, the Italian Revenue Agency has been performing an ever-increasing number of marketing, communication and education activities, with a view to stimulating the migration of taxpayers to the electronic environment.

Indeed, the Agency has been using a range of marketing means including Ad campaigns on radio, television and press, media interviews, special events and customer service personnel at branches. Most notably, the Agency is present with its own stand space at several trade fairs where visitors are shown how to use, and can actually use, e-Services (e.g. tax return filing, assignment of tax identification number, Tax Mail Box).

Initiatives of the kind are also performed by the Agency through arranging for special road shows or being present at national conferences. Moreover, with the filing deadline approaching, customer service personnel is made available in a few Italian municipalities, those which are a long way from the Agency's local offices, to help people to file electronically.

In the same line of action, the Agency is committed to informing taxpayers of any new e-Service that becomes available to them. That information is actually delivered through a variety of means, such as press releases, press conferences and its own magazines [21].

On the education front, a far-reaching initiative currently being developed by the Agency is the "Fisco e Scuola" project, which is more generally aimed at spreading knowledge of taxation in schools. Besides teaching students the rudiments of the subject, it includes training courses in the use of the electronic tax services, to be set in the Agency's local offices or/and in schools.

The above list of the Agency's communication and education activities is far from complete, as describing them all would go well beyond this scope of this paper. It is clear, however, that these activities are an integral part of the Agency's organizational mindset, thus concurring with the current e-Government best practices. Indeed, among governments worldwide there is a growing recognition of the need for marketing, communication and education to achieve a sizable uptake of e-Government services.

That understanding is all the more important with tax services that have big personal implications for citizens or perceived negative ramifications if used improperly.

7.4 Evaluating e-Services

The Italian Revenue Agency is steadily engaged in evaluating its e-Service offerings – most notably through seeking feedback from users – so as to identify areas needing improvements, set priorities and update quality standards.

Since 2004, the Agency has been carrying out customer satisfaction surveys with regard to the "Fisconline" and "Entratel" services [22]. That is meant as a tool for listening to users and gaining insights into their needs, expectations and satisfaction with the services, information and assistance they are provided with.

The interviews are carried out electronically by means of questionnaires accessible from the home pages of "Fisconline" and "Entratel".

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[21] Among the magazines published by the Italian Revenue Agency is "Fiscooggi.it", the Agency's online magazine. It is an officially registered publication that integrates the documentation contained on www.agenziaentrate.it with real time updates on the activities of the Italian Revenue Agency and its central and peripheral offices, as well as with comments on tax regulations and laws.

[22] It should be noted, however, that analogous evaluations are carried out with regard to all the other service delivery channels (i.e. the Agency's local offices, contact centers not specifically designed for e-filers).

Respondents are segmented into categories, namely: business, self-employed worker, employee, pensioner and others, as to "Fisconline"; professionals, experts, CAAF, labour unions, tax consultants, companies and other, as to "Entratel". That answers the need to gain insights into the requirements, expectations and practices of specific groups of users so as to tailor the respective e-Service offerings accordingly.

The interviews look into many aspects of the e-Services, including: easiness of navigating and applying for information from the site, clearness of instructions, easiness of service usage, service reliability, certainty of tax fulfilments, capability to simplify tax fulfilments and detect mistakes, timeliness in resolving disservices.

Also significant are the evaluations of the online assistance and call centers (those which are specifically designed for Fisconline and Entratel users). As especially regards the latter, the customer satisfaction is measured in terms of completeness of answers, politeness, percentage of requests resolved in first contact, waiting time and appropriateness of the servicing hours.

Finally, customer satisfaction is measured in overall terms with reference to each of the above groups of users.

Also, the Agency is careful to monitoring the levels of e-Services usage.

Actually, in the last few years there has been a widespread rise in the e-Services usage, which reflects a growing acceptance of such services on the part of taxpayers (see Table 1).

Table 1

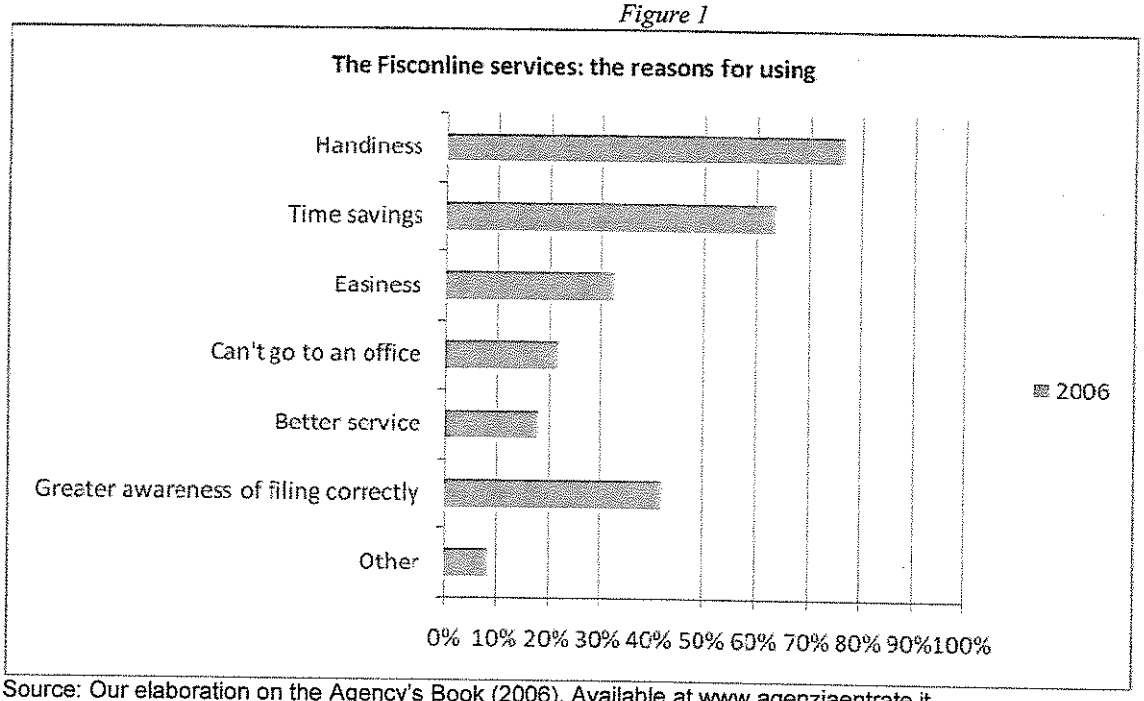
The Agency's e-Services usage	2005	2004	2003	2002	2001	2000
Individual Unico forms (Personal Income Tax) sent via the Internet by taxpayers	149.738	147.000	142.829	131.618	112.300	55.000
Individual Unico forms sent via the Internet by offices	806.988	831.820	767.081	507.625	260.300	60.000
Individual Unico forms sent via the Internet by banks and post offices	2.393.814	2.851.182				
Other documents filed via the Internet	6.943.919	43.543.612	268.252	370.719		
Number of taxpayers registered using on-line "Tax Box"	1.062.708	523.793	307.534			
Number of online registrations and payments concerning real estate contracts (selling or renting)	4.153.325	3.333.700	1.929.829			
On-line payments	2.254.410	2.272.759	1.360.131	206.736		

Source: Our elaboration on the Agency's Books (2006-1999). Available at www.agenziaentrate.it

Of particular importance is the increasing number of individuals who e-file their tax returns (Personal Income Tax) without the assistance of intermediaries. This is arguably due to the variety of information service and aids (e.g. contact centers, software utilities, web pages) the Agency has made available to individuals in the last few years, thus enabling them to get the most out of e-Services.

That observation is corroborated by the answers returned to the questions about the reasons for using the "Fisconline" services. Of the reasons respondents cited, the handiness of these services is the greatest perceived benefit, closely followed by time savings and a greater awareness of filing correctly (see Figure 1).

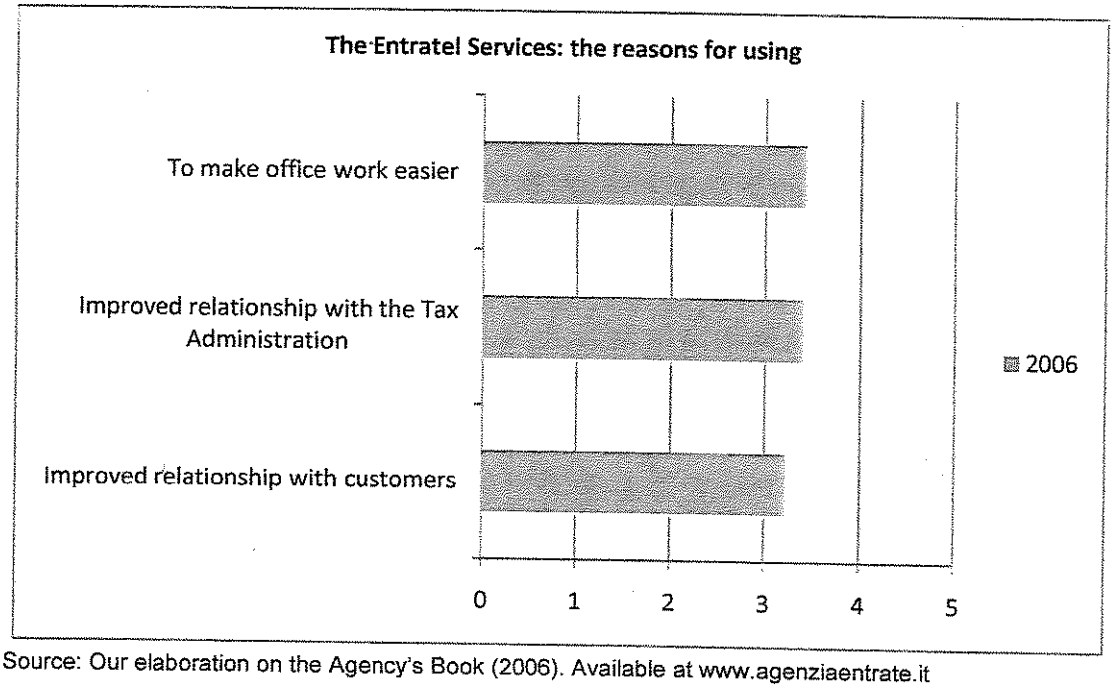
Figure 1



Source: Our elaboration on the Agency's Book (2006). Available at www.agenziaentrate.it

Equally significant, however, are the perceived benefits of the e-Transformation to intermediaries (see Figure 2).

Figure 2



Source: Our elaboration on the Agency's Book (2006). Available at www.agenziaentrate.it

8 Summary and Conclusions

This paper has explored how the business strategy commonly referred to as Customer Relationship Management (CRM) can be adopted by government organizations while developing e-Government initiatives. In doing that, the research has highlighted some of the CRM capabilities that are essential for

governments to get the most out of these initiatives in terms of improved service delivery, greater efficiency and potential cost savings.

Most notably, what has emerged from our studying is that a well-conceived plan of marketing, education and evaluation activities is key to increasing the acceptance of the new IT-enabled service delivery methods on the part of constituency. The need for these activities is quite understandable considering that the targeted benefits of e-Government can only materialize in so far that e-Government services become preferred by a critical mass of users. Until then, traditional service delivery channels still need to be maintained and, as result, governments do not realize the potential benefits of e-Transformation to the full.

Yet, achieving a higher take-up will require a better understanding of different user requirements than has traditionally been the case, so as to developing and promoting the electronic services specific user groups are most likely to use. This is not without challenges for governments because of their relative inexperience with marketing and performance evaluation.

Besides, user-focused e-Government requires the employment of specially devised technologies (e.g computer telephony integration, customer self-service websites, data warehouse) and the business case for these investments needs to be built on well-founded prospects of usage. With that understanding, governments had better focus their e-Transformation efforts on routine and high-volume services which are excellent candidates for electronic delivery, because of the efficiency gains that can stem from driving the manual processing out of them. This in turn would allow to redirect resources toward higher value activities such as handling non-routine requests or introducing new services, thus delivering an improved experience to users.

It is no accident that Revenue Agencies have historically been among the first in the public sector to deploy new technologies, because of the relative ease of establishing a business case for faster revenue collection and increased compliance.

In corroboration of the conceptual framework, this paper has studied the case of The Italian Revenue Agency, which typifies the journey of a public agency in implementing an e-Government initiative in conjunction with a systematic and strategic customer relationship management process.

While that case counts as empirical evidence of the notion that e-Government implementation should be accompanied by e-Transformation management through coherent marketing, communication and evaluation activities, we acknowledge the limitations of a single case-study in providing significant generalization.

Even so, our analysis has provided an unprejudiced account of the experiences and potential lessons gained from the transformation of the Italian Tax Administration, once a typical bureaucratic process, into one that possesses many of the CRM capabilities required to succeed in e-Transformation as well as any other reform initiative. In particular, what has proved effective in that case is the range of information and customer service enabled to make people familiar with e-Services, not to mention the attention paid to informing users of any new service being e-enabled and involving them in service improvement. Thus, the above limitations notwithstanding, our case-study provides at least some possible insights useful to identify similar practices in other organizations undergoing e-Transformations, so that they can be compared and benchmarked.

For future studies on the subject, three specific areas of research may be indicated to deepen the current knowledge of CRM strategies in e-Government. First, in-depth studies should be carried out on the subject of Marketing in government [23]. Also, particular attention should be paid to considering how government organizations can best evaluate the effectiveness of their e-Government programs in meeting their service delivery objectives. Finally, additional investigation is needed to ascertain to what extent the insights gained by private sector organizations, as to how CRM has been strategized within the context of e-Transformation, can be adapted to government organizations.

Acknowledgements

We are grateful to the Italian Revenue Agency for their generous support in this study.

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