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New-Economy Sector Study

**Electronic Government and Governance:
Lessons for Argentina**

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Foreword

This study, prepared with financial assistance provided by the Government of Italy through the World Bank Italian Trust Fund for Consulting Services, is based on a thorough examination of current literature

on electronic government worldwide and on the findings of a March 2002 field mission to Argentina. The mission was headed by Roberto O. Panzardi (PREM) and composed of Carlo Calcopietro (Consultant – IDF, Inc.) and Enrique Fanta Ivanovic (Consultant – Government of Chile). Other World Bank staff from FPSI and the WBI also joined the mission later for a few days, to carry on their interviews on matters related to the rest of the components of the World Bank New Economy Sector Study in the Southern Cone.

The basic information contained in this study was primarily furnished by senior Government officials and private sector representatives with whom the World Bank Mission met in Buenos Aires and Mar del Plata. A list of all the interviewees is presented in the Annex.

The authors are grateful to all persons they have met and interviewed, and would like to acknowledge their sincere gratitude to all of them for their very kind help and cooperation. Special thanks are also for Alain Colliou (LCOQE), who assembled a prominent team of international experts for a Quality Enhancement Review of this study, and for Ronald e. Myers, Tania Gupta (PREM), Carl Dahlman, Peter Scherer (Consultant, WBI) and James Hanna, Marialisa Motta (FPSI), who provided valuable comments and contributions to the initial draft versions.

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1. E-Government: Concepts and Definitions

Background

The penetration of Information and Communication Technologies (ICT) in all facets of human existence is leading to changes in the way humans interact within the society and the way societies involve individuals in the evolution process.

Societies are increasingly getting transformed to “knowledge societies” and its inhabitants into knowledge “net-workers” who are more informed of the events happening locally and globally. Their actions are based on the strong foundation of knowledge, which is universal, objective, timely and triangulated from various sources. People are becoming more aware of their rights and opportunities that lie ahead of them and are developing capabilities to make an informed choice in all areas which influence them, including the sphere of Governance.¹

In this wired-up era, the inhabitants of the knowledge societies will have all the more freedom, flexibility and opportunities to decide how they would like to be governed and by whom. The underlying truth will become self-evident that – *it is not the leaders who govern people but it is the people who let the leaders govern them.*

Information and Governance

It is a well-acknowledged fact that access to information plays a critical role in setting up of Governance/ Control mechanisms. This process is founded on extraction and accumulation of information and using it to the effect, which creates hierarchal structures on which power gets unequally distributed. The skew in the distribution of the power is proportional to the critical information residing at each hierarchal level. Some facts pertinent to Information and Governance are:

- Access to Information and Knowledge forms the basis of decision-making and concerted action.
- Judicious and well-informed decision-making is dependent on the quality and timeliness of information.
- Circumscription of information and knowledge with a few levels opens up avenues for its manipulation for exploitative purposes.

ICT and Governance

ICT can influence the process of Governance in various ways and in varying degrees, from improving the current mechanisms of delivery of services to transforming the entire mechanism and the nature of services themselves. The role played by ICT could be:

- Purely *technical* in terms of automation of tedious tasks earlier done by humans;
- To a *facilitating / supportive* role leading to more participatory and all encompassing decision-making and implementation processes;

¹ See www.cddc.vt.edu/digitalgov/gov-menu.html. Digital Governance - Building and Sustaining Democratic and Accountable Governance Structures using ICT.

- To a completely *innovative* role which involves new services and new mechanisms to deliver these services.

What is E-Government?

E-government is a label that has been used to describe a wide range of applications and objectives. It is the pragmatic use of the most innovative information and communication technologies, like the Internet, to deliver efficient and cost effective Government services, information and knowledge. It is also an unequivocal commitment by decision makers to strengthening the partnership between private citizens and the public sector.

E-government refers to the use by government agencies of information technology tools, such as Wide Area Networks (WANs), the Internet, and mobile computing, that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, and citizen empowerment through access to information, or more efficient government management. The resulting benefits of e-government can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions.

The World Bank has defined e-government as “*government-owned or operated systems of information and communications technologies (ICTs) that transform relations with citizens, the private sector and/or other government agencies so as to promote citizen empowerment, improve service delivery, strengthen accountability, increase transparency, or improve government efficiency*”.²

Traditionally, the interaction between a citizen or business and a government agency took place in a government office. With emerging ICTs, it is possible to locate service centers closer to the clients. Such centers may consist of an unattended kiosk in the government agency, a service kiosk located close to the client, or the use of a personal computer in the home or office. Although today, in most countries, e-government is mostly restricted to downloading forms to print out and mail in, and searching websites for information, tomorrow it could also involve:

- Delivering government services directly to citizens in their homes.
- Using the web to purchase necessary products and services in a more timely and cost-effective manner.
- Conducting virtual town hall meetings to allow representatives to communicate with their constituencies.
- Using large national networks to link agencies and share information.
- Using electronic polling and voting.
- Creating intergovernmental networks to coordinate global issues.

Countries have begun to recognize the emergence of e-government as a potential to reshape the public sector and build relationships between citizens and the government. E-government differs from the basic tenets of ICT (computerization and connectivity) by adding an element of interaction with citizens or the private sector, enhancing transparency, and providing “voice” for those outside the government.

Principles for Success

² World Bank, LAC PREM – “Issues Note: E-Government and The World Bank”. November 5, 2001

In order to ensure that countries avoid creating a digital divide and create conditions to ensure that growth of the knowledge economy contributes to carrying out a democratic process of efficient, equitable and sustainable development, expanded dialogue and new patterns of cooperation among public, private and civil society organizations are needed. This is why some principles should be followed whenever any layer of government engages in networking its services:

- *Use technology as an enabler.* Public sector modernization objectives must be the starting point, using ICT as an enabler and not an end in itself. It is not of use to improve the efficiency of functions that the public sector should not be performing.
- *Take into account current realities.* Electronic government projects must show sensitivity to the realities of the countries and local communities with respect to their culture, values, structures and infrastructure.
- *Participative process.* It should focus on a participative process involving key stakeholders (users, operators, beneficiaries) to increase chances of success.
- *Keep it simple.* Networking government services must advance step by step.

The Roles of Government

The multiple roles of government, at all levels, must be recognized and understood if it is to be effective in this partnership involving access to information and communication technology. In effect, government

- Uses information and information/communication technology provided by the private sector for public administration;
- Produces public information to which citizens must have access;
- Has the authority to establish marketplace rules and establish regulatory structures that ensure that everyone participates and benefits from growth of the knowledge economy.

There is an inextricable relationship between the government role as a user of information and communication technology, and its capacity to formulate public policy for the knowledge economy. Governments that learn how to use these technologies to operate more efficiently and improve public services are more likely to effectively stimulate and contribute to the knowledge economy public policy debate. Online delivery of services benefits both government and its constituents as well as it lowers costs and make services more accessible.

Potential Clients in an e-Government System

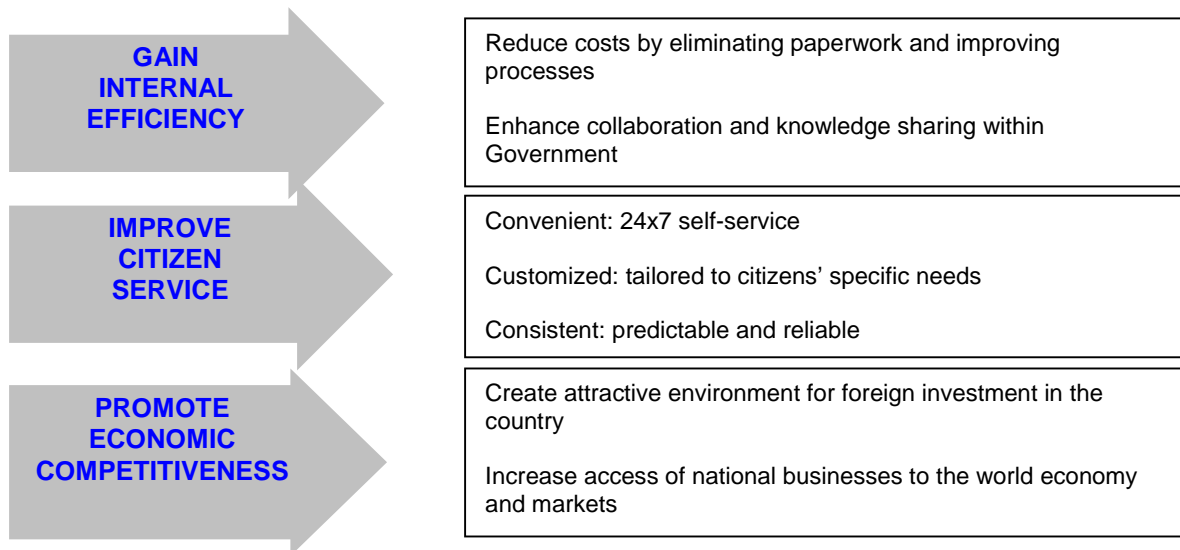
Analogous to e-commerce, which allows businesses to transact with each other more efficiently (B2B) and brings customers closer to businesses (B2C), e-government aims to make the interaction between government and citizens (G2C), government and business enterprises (G2B), government and its employees (G2E) and inter-agency relationships (G2G) more friendly, convenient, transparent, and inexpensive.

E-commerce has evolved already through four stages: 1) publishing, 2) interactivity, 3) completing transactions, and 4) delivery. To date, most e-government activity has centered on publishing and there are vast differences among countries in the maturity of their e-government effort. One of the most promising aspects of e-government is its ability to bring citizens closer to their governments. While the technology to facilitate this connection is widely available, many government sites have not taken full advantage of its benefits in developing countries. Hence, at least, governments could get involved in:

- Information and services in two ways – G2C and C2G;
- Regulation of information networks, certification and taxation networks;
- Activities related to government oversight, transparency and monitoring;
- Distance learning and digital literacy;
- Dissemination of culture and expanded appreciation of local identities;
- E-procurement; and
- Fostering e-business.

Figure 1

Countries worldwide have embraced e-government to achieve three distinct goals



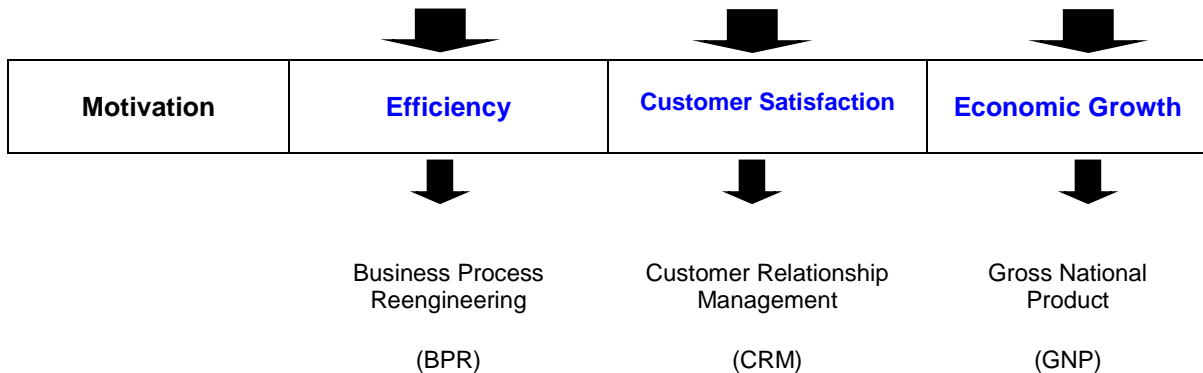
Source: World Bank – LAC PREM – October 18, 2001 – Power Point Presentation “E-Government for Development Countries, by Booz, Allen & Hamilton.

Figure 2

Governments must develop a framework to target the right opportunities & maximize impact

Traditional Government Functions	G2G Ministry to Ministry	G2C Ministry to Citizen	G2B Ministry to Business
<i>Commerce</i>	Central Purchase Direct	Online Consumer	Central E-Payment

	System	Complaint	System
<i>Education</i>	Online Computer Training Registration System	Online Academic	Online Business Development
<i>Finance & Treasury</i>	Online Financial Record Database	E-Filing of Taxes	Online Competitive Bid Processing System
<i>Labor</i>	Online Job Applications Network	Interactive Employer-Employee	Online Visa Renewal System
<i>Transportation</i>	Mass Transit Database	Online Road Conditions System	Online Toll & Fare Database
<i>Health & Human Services</i>	Online Compensation	Online Welfare and Social Security	Online Demographic Databases



Source: World Bank – LAC PREM – October 18, 2001 – Power Point Presentation “E-Government for Development Countries, by Booz, Allen & Hamilton.

Stages of Development

Enabling conversation between citizens and government is not the only way to bring citizens and government closer together. Making government more easily accessible is another component of this endeavor. There are few features that make this possible. One of them is the ability to search a particular web site. Another is to offer live broadcast of important speeches through the web. Another way is by enabling citizens to cater available information to their particular interest.

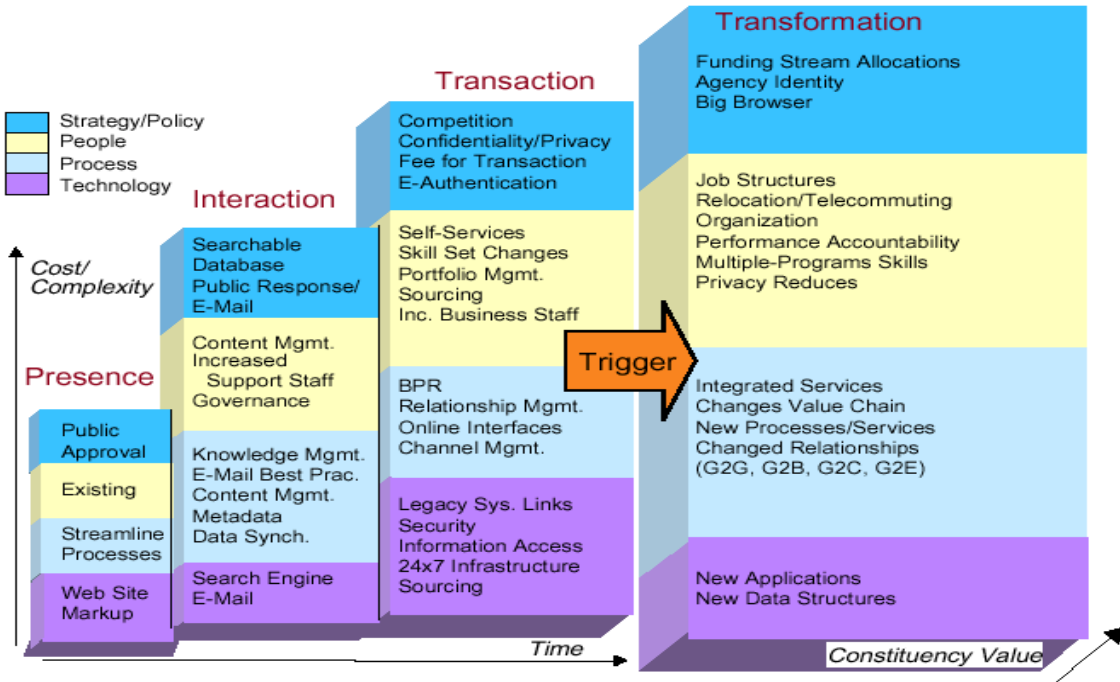
A country’s Internet presence can range from “emerging” with a few autonomous ministry or agency web sites to “fully integrated” where a country provides all online services through a single access portal. Technology allows that progression to be swift, dynamic and not necessarily in a specified order. Since e-government is driven by new technologies, its process is continuous, transforming daily. There is no fixed development timeline or “shelf-life”. However, a comprehensive e-government initiative should involve all the following stages:

- Information reengineering
- Training strategy
- Public e-learning policy
- Creation of sites with the purpose of disseminating information.
- Sites receive information, suggestions and complaints from citizens, companies and other non-governmental organs.

- Sites provide on-line services and receive payment for bills and taxes.
- Single portal – users access a single government site using a special password and registry; Standardization of different National e-government policies, meaning standardization of data and meta-data allows the exchange of information among various departments.

Figure 3

Phases of E-Government



Source: World Bank – LAC PREM – October 18, 2001 – Power Point Presentation “E-Government for Development Countries, by Booz, Allen & Hamilton.

2. E-Governance, Democracy, Federalism and Development

Introducing the Concept of E-Governance

The concept of “e-governance”, also known as “e-democracy” or “digital governance”, is beyond the scope of e-government.

Good governance rests on the pillars of knowledge and recognition of this set of knowledge by the decision-makers. Digitization of this entire set of knowledge within a network which links every individual including the decision-makers and gives democratic freedom to everyone to access and make use of this knowledge paves the way for e-governance. Introduction of e-governance is a way to ensure that common citizens have equal right to be a part of decision-making processes, which affect them directly or indirectly, and influence them in a manner that best improves their conditions and the quality of lives. The new form of governance will ensure that citizens are no longer passive consumers of services offered to them and would transform them to play a decisive role in deciding the kind of services they want and the structure which could best provide the same.

While e-government entails delivery of government services and information to the public using electronic means, e-governance allows direct participation of constituents in government activities. E-governance is not just about government web site and e-mail; about service delivery over the Internet; or about digital access to government information or electronic payments. *E-governance is intended to change the way that citizens relate to governments, how citizens relate to each other, and how the governments relate to citizens.*

To put it in simple terms, e-governance is the use of information and communication technologies to support good governance³. It moves beyond old “IT in government” models thanks to the new digital connections that ICT permits. These new connections strengthen existing relationships and build new partnerships within civil society. E-governance therefore embraces:

- *E-administration*: improving government processes by cutting costs, by managing performance, by making strategic connections within government, and by creating empowerment.
- *E-citizens and e-services*: connecting citizens to government by talking to citizens and supporting accountability, by listening to citizens and supporting democracy, and by improving public services.
- *E-society*: building interactions beyond the boundaries of government by working better with business, by developing communities, by building government partnerships, and by building civil society.

E-governance aims at bringing forth new concepts of citizenship, both in terms of needs and responsibilities; allowing citizens to communicate with government, participate in the governments’ policy-making and citizens to communicate each other; and permitting citizens to participate in the

³ Heeks, Richard: *Building e-Governance for Development: A Framework for National and Donor Action*. E-Government Working Paper Series – Working Paper No. 12 – Institute for Development Policy and Management. University of Manchester, Precinct Center, Manchester, 2001.

government decision-making process, reflecting their true needs and welfare by utilizing e-government as a tool.

ICT Adoption and Governance: Open Societies vs. Authoritarian Regimes

The horizontal and vertical interconnection of government bodies brings forth serious issues related to representation and responsibility. There are at least two questions that e-government raises in democratic societies: What are the risks involved in treating the citizen as a consumer and client of customized public services? What are the consequences that may result from this new form of mediation between the State and its citizens? The establishment of a peer-to-peer relationship between the State and the citizen or business when providing a public service by electronic means helps to improve accountability, transparency and trust. This is not only important at the national and regional level but should also be used locally, in transactions related to permits, tax collection or receipt of benefits. Through its ability to spread accurate and comprehensive information, e-government can be a powerful tool for social control. Nothing is more powerful in combating corruption than conducting transactions openly and with public knowledge of the rules and criteria to be applied.

The above may be true in open societies. But, have ICTs helped to democratize authoritarian societies? It is widely believed that the Internet poses an insurmountable threat to authoritarian rule. But political science scholarship has provided little support for this conventional wisdom, and a number of case studies from around the world show that authoritarian regimes are finding ways to control and counter the political impact of Internet use.⁴ While the long-term political impact of the Internet remains an open question, academic research argues that these strategies for control may continue to be viable in the short to medium term. Many authoritarian regimes translate a long and successful history of control over other information and communication technologies into strong control of Internet development within their borders. Potential challenges to the State may arise from Internet use in several areas such as the mass public, civil society, the economy, and the international community.

Authoritarian states will likely respond to these challenges with a variety of reactive measures: restricting Internet access, filtering content, monitoring on-line behavior, or even prohibiting Internet use entirely. In addition, such states seek to extend central control through proactive strategies, guiding the development of the medium to promote their own interests and priorities. Through a combination of reactive and proactive strategies, an authoritarian regime can counter the challenges posed by Internet use and even utilize the Internet to extend its reach and authority. The quoted research illustrates how two authoritarian regimes, China and Cuba, are maintaining control over the Internet's political impact through different combinations of reactive and proactive strategies. These cases illustrate that, contrary to assumptions, different types of authoritarian regimes may be able to control and profit from the Internet. Examining the experiences of these two countries may help to shed light on other authoritarian regimes' strategies for Internet development, as well as help to develop generalizable conclusions about the impact of the Internet on authoritarian rule.

4 Kalathil, Shanthi and Boas, Taylor C.: *The Internet and State Control in Authoritarian Regimes: China, Cuba, and the Counterrevolution*. Information Revolution and World Politics Project. Carnegie Endowment for International Peace Working Papers. Global Policy Program. Number 21. July 2001

E-Government in Federal States

The implementation of e-government in countries with large land areas and sparse populations involves logistical difficulties significantly different from those encountered in small countries. Some of the frequently cited examples of best practice, such as in the portal created in Singapore, are not appropriate references for developing countries of dimensions like Brazil and Argentina but also for advanced societies like Canada, Australia, and the United States.

Often, distant sparsely populated regions suffer from basic problems in infrastructure and telecommunications that make the issue of universal access much more complicated. Moreover, developing e-government in federations is vastly different from creating a program in unitary states. The problems encountered are not merely those related to significant regional, cultural and ethnic problems, but often involve legal and constitutional barriers to the vertical integration of government.

This point is especially relevant in Argentina, where provinces enjoy a large degree of autonomy guaranteed by the Constitution. As a new culture based on the Internet spreads, it becomes reasonable to expect growing calls from citizens and users for the development of government portals that are completely integrated both horizontally and vertically. It is not clear, however, if this would be possible, or even desirable, taken into consideration the current situation of Argentina, which is struggling to re-shaping the relationship between State and society.

On the one hand, the operational difficulties and costs involved in creating administrative links between the various levels of government could dramatically alter the structure of public spending assignment among the different levels of government, even if the principle of subsidiarity is maintained. Another factors that should not be overlooked are the complex political obstacles involved. Sub-national levels could become concerned with the loss of jurisdiction and resources. Finally, a serious problem emerges when too many federal and local agencies get involved in managing e-government strategies.

E-Government and Economic Development

The rules of globalization have set off a race to lay claim to knowledge. A global map of new technologies is being drawn up. The global gap between *haves* and *have-nots*, between *know* and *know-nots*, is widening. The market alone will make global citizens only of those who can afford it. At the same time, new technologies are opening new markets and giving rise to new actors. A strong proactive policy is required in order to allow small players to enter the global marketplace and political arena. This is a very crucial point of e-government agenda, which must always start with an education and training strategy to allow the citizens to understand the benefits of this policy and use this technologies as an empowering tool and not only as an information service.

3. International Examples of E-Government Services

A number of countries have established electronic service delivery (ESD) targets as part of their strategic plans for E-Government⁵. This is widely considered to be a “best practice” approach that was introduced by Australia and the UK. Other governments have subsequently recognized the value of establishing targets and have developed their own. Measurement of progress against ESD targets is a key activity, which not only helps to gauge the level of development of services but also reaffirms commitment to achieving e-government. Table 1 highlights those ESD targets that have been established by OECD countries and also identifies any associated measurement programs. There are subtle differences in the meaning of targets in each country. For example, the UK target is for 100% of services to be available across a range of electronic media, whereas the Australian target is more “aspirational”, focusing on appropriate services to be delivered via the Internet. In effect, many of the OECD countries have not set definitive high-level ESD targets at all. There are also wide variations in the level and frequency of monitoring progress against those targets that do exist.

Table 1
ESD Targets in OECD Countries

Country	ESD Target	Measurement
Australia	All appropriate Federal Government services capable of being delivered electronically via the Internet by 2001	ANAO report on progress (Nov 1999). OGO six monthly monitoring program commencing June 2000.
Canada	All key government services fully on-line by 2004	
Finland	A significant proportion of forms & requests can be dealt with electronically by 2001	
France	All administrations to provide public access to government services and documents by the end of 2000	
Germany	No high level targets *	
Ireland	All but most complex of integrated services by end of 2001	Reported on annually
Italy	No high level targets	
Japan	All applications, registrations, and other administrative procedures between the people and the government will be available on-line using the Internet or other means by fiscal year 2003	
The Netherlands	25% of public services delivered electronically by 2002	ICT benchmark in development
Singapore	Where feasible all counter services available electronically by 2001	
Sweden	No high level targets *	
UK	100% of government services carried out electronically by 2005	Quantitative 6 monthly progress report
USA	Provide public access to government services and documents by 2003. Provide public with an option to submit	

⁵ Source: Office of the e-Envoy: *E-Government - Benchmarking Electronic Service Delivery*. London, July 2001. <http://www.e-envoy.gov.uk/publications/reports/benchmarkingV2/intl-rep.pdf>

	forms electronically	
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Figure 5
Advanced Developments in E-Government

<p><i>Demand</i> (Consultation with citizens and businesses)</p> <ul style="list-style-type: none"> • Singapore • UK • USA 	<p><i>Supply</i> (Electronic Government services)</p> <ul style="list-style-type: none"> • Australia • Canada • France • USA <p align="right">'Front office'</p>
<p><i>Change</i> (Commitment & drivers of change)</p> <ul style="list-style-type: none"> • Australia • UK 	<p><i>Capability</i> (Enabling Government infrastructure)</p> <ul style="list-style-type: none"> • Finland • Netherlands • Singapore • Sweden <p align="right">'Back office'</p>

This chapter reviews some examples of e-government services in three leading OECD countries, which could be taken as international benchmarks, and will complement this information with a presentation of the main programs in place in Brazil and Chile, countries with characteristics more akin to Argentina.

The United Kingdom

The UK is currently the only country that has a well-established formal program in place to measure progress towards its ESD targets. This process is reviewed regularly to ensure that the most appropriate method is used to deliver the most meaningful results possible. For example, the basis of UK monitoring is set to alter in order to focus more clearly on the need to track the development of on-line services rather than transaction volumes of each service. The UK government is particularly advanced in its development of a program for 'change' to drive forward the e-government agenda and this is also widely recognized by counterparts around the world. It is also acknowledged to be leading developments in consultations with citizens and businesses on the development of e-government services. In particular, the People's Panel is recognized as a best practice approach to help ensure that future government services meet the needs of the public.

While the UK's 'back-office' capability to deliver citizen-focused and joined-up government services through the 'front office' is not yet as advanced as some other countries (Finland, Netherlands, Singapore, Sweden), it is in the process of establishing solid foundations for the future. The Government Secure Intranet and key framework policies, which underpin the e-government strategy, are set to help ensure that this capability is developed rapidly.

Similarly, there are already some leading examples of innovative and sophisticated 'front-office' services available over the Internet (tax filing - Inland Revenue, business registration - Companies House) and via the telephone (NHS Direct). There are also plans to introduce more sophisticated electronic services in the future that will be amongst the 'best in class'. For example, The UK Online portal and authentication Gateway will help ensure future services are accessible, secure and citizen-focused.

Australia

Australia is also widely recognized as one of the leading nations in the development of e-government services and has for a number of years, served as an exemplar for others to learn from. The Federal government had set up a target to have all appropriate government services capable of being delivered electronically via the Internet by 2001 and put in place a comprehensive set of e-government policies to support the achievement of this target. Australia is a best-practice example in key areas such as tax, employment and services to business. In addition to developments at the Federal level, innovative services are being introduced at State level. Most State and Territory Governments already offer a range of on-line services. Victoria State government was one of the first to move into the Information Age and as a result, is beginning to realize cost savings. For example, in the area of electronic tendering, savings of A\$1.3M have been made since introducing an electronic service in November 1998.

Electronic government services in Australia are popular with the public and take-up levels are increasing rapidly as a result of effective marketing and the relatively low cost of using the Internet. The National Office for the Information Economy (NOIE) was established in 1997 as Australia's lead Commonwealth agency for information economy issues. NOIE develops, coordinates and overviews broad policy, including the application of new technology to government service provision. NOIE is also tasked to raise public awareness about the benefits and issues in moving to an information economy.

Canada

Canada has long recognized the key role that technology plays in improving services and productivity, dating back to 1995 with their highly acclaimed Blueprint for renewing government services using technology and 1995-97 Information Highway Advisory Council reports. Currently, a number of key strategies and initiatives are in place which support the Connecting Canadians agenda. In particular, the Government of Canada aims to realize its e-government vision by building a strategic infrastructure comprising both shared departmental and government-wide components. Together, these are called the "federated architecture", and should be distinguished from the unique departmental components that departments build purely for their own business needs. It is anticipated that all departments will be able to rely on this architecture as a utility through which they can share information and provide services directly to Canadians. The following tasks are part of the proposed strategy for building this architecture:

- build an enhanced, secure Government of Canada Network (i.e. a secure electronic delivery channel across Canada);
- connect departmental networks to the Government of Canada network;
- centrally procure, manage, and fund the Government of Canada network;
- ensure departmental networks conform to Government of Canada standards ;
- assess the need for a multi-vendor network policy.

To cite an example of best practice in Canada, significant progress has been made to date on the development of Public Key Infrastructure (PKI) to ensure the security and confidentiality of on-line transactions. A Policy for PKI was completed in May, 1999. Contract work was concluded for a

centrally funded government-wide PKI license to enable secure internal to government transactions. Draft Cross-certification Methodology and Criteria are being applied and refined, and strategies for the roll-out of PKI to enable secure on-line services to business and citizens are being developed. There are already 17 PKI pathfinder projects and over 100 PKI pilot projects which are using the Internet and PKI to deliver services on-line.

Brazil

The Brazilian Federal Government already offers a wide range of services on the Internet. These services are, almost completely, integrated within the *Redegoverno* portal www.redegoverno.com.br. This offers more than 800 services and 4,800 types of information. However, the government's diagnosis is that there is a need for a wide-ranging, integrated policy to consolidate the achievements to date and move towards universal access to information technologies in general and to those services that are of interest to the general public⁶. The Brazilian Government's electronic information services are structured around various isolated networks. This means that these services are not as efficient or interactive as they could be; the interfaces are not very user-friendly; and different government offices show vastly different levels of performance when it comes to incorporation of information technologies. Intercommunication between the various systems is still very limited, given that they were conceived under now-obsolete technologies. The federal government's corporate administrative systems are unnecessarily centralized, lack integration and focus on the management of process rather than functions. A final problem is the lack of a legal framework to ensure the authenticity of electronic documents, particularly electronic payments to the government.

With the purpose of addressing the above shortcomings, current policies for communications and information technology within the public administration are aimed at improving organization, integration, efficiency and transparency through the use of new mechanisms of electronic inter-activity. The most comprehensive of them is the Information Society Program being led by the Ministry of Science and Technology (Socinfo/MCT). This program coordinates actions that are designed to make the Brazilian economy more competitive and extend general public access to the benefits of information technology. The actions involved in the Information Society Program seek greater involvement between government, business and the scientific and technological communities. The program promotes the following activities:

- Support implementation of e-commerce and the development of new methods of working, through intensive use of information and communication technologies;
- Stimulate new communication channels and community access to the Internet, so strengthening citizenship and social unity;
- Support the application of communication and information technology in formal education and in projects for distance learning, through the Internet or dedicated networks, by use of new educational technologies.
- Stimulate production of content and applications for artistic, cultural and historic preservation; together with scientific and technological research of interest to the cultural area.
- Promote the use by the public sector of information technologies; standardization of public sector software; the development of programs for government services and public dissemination of information.

⁶ Federal Republic of Brazil - Ministry of Planning - Secretariat for Logistics and Information Technology: *Brazilian Policy for Electronic Government*. Document presented in the Seminar Using Knowledge for Development - Brazil – India – China Forum. London, March 2001.

- Foster the development of strategic technologies; the implementation of pilot projects and human resource training.
- Implement a basic IT infrastructure in the country, integrating the various networks of the government sectors, private initiative and the scientific and technological communities.

Initiatives for reducing the digital divide receive funding from the telecommunications sector, under new mechanisms put in place with privatization. These resources constitute a fund to expand the telecommunications network in places and market segments that do not offer normal commercial viability. The National Telecommunications Agency – *Anatel*, along with other government agencies, has developed the Br@sil.gov Program to use these financial resources in the telecommunications network, particularly for remote communities.

Another important ongoing initiative is “*Brasil Transparente*”, an open government project, which promotes various projects and actions in the legal and administrative fields that seek to monitor the public sector. Here, the emphasis is on tools that promote public control of government.

The Federal Government has also developed a policy for management of information security. This is establishing standards for electronic certification and authentication (public key infrastructure – *ICP-gov*).

Many of the above-mentioned ongoing actions are brought together under the Electronic Government Program. Under the overall direction of the Presidency, there is an inter-ministerial committee that supervises the program. It seeks to develop the potential of information technology to promote reforms in public administration, particularly in the improvement of public services, access to information, cost reduction and social control over government actions. However, the program is not limited to technological aspects. The development of e-government also seeks to promote the *universalização* (extension to everybody) of access to government services; the integration between systems, networks and data within public administration; and the disclosure of information to the society through the Internet. The program will complement the actions of the Information Society Program. Together they are expected to generate positive synergy for the federal administration: the Information Society Program is directed principally to the private sector and the scientific and technological research sectors, while the Electronic Government Program will use its infrastructure and resources in support of the goal of *universalização* of access to IT, through the installation of electronic booths in distant locations.

The following are some of the most important Internet services already available for citizens and businesses in Brazil:

- *Comprasnet* – Electronic bidding and e-procurement in general (tender details for government purchases; register of government suppliers; etc.)
- *Siscomex* – Integrated system to operate external trade (including requirements of the Central Bank, the Internal Revenue Service, Customs and Ministry of Agriculture into one system)
- Income tax declaration;
- Tax payment certificates;
- Primary and secondary school enrollment;
- Follow-up of judicial processes;
- Access to economic and social indicators and to census data;
- Information on retirement funds and other social security benefits;
- Distance-learning programs;
- Email services at public booths; and
- Information on federal government programs.

Chile

Chile is one of the best examples of e-government in Latin America. Recognizing the potential benefits of IT, the Chilean Government established a Communications and Information Technology Unit (*UTIC*) in 1998. The *UTIC* was given the mandate of coordinating, promoting, and advising the Chilean Government on the development of IT in the areas of employment, information and communications. To date, the most successful e-government initiatives are in the area of government procurement, payment of taxes and provision of information needed to access public services (i.e. health and education services, procedures associated with mandatory electoral registration, motor vehicle registration, etc.).⁷

Chile's experience with e-procurement has made business opportunities with the Chilean Government more transparent, reduced firms' transaction costs, increased opportunities for feedback and cooperation between firms and public agencies, and sharply reduced opportunities for corruption. Under the government procurement e-system, companies that wish to do business with the public sector do not need to search through newspapers or the Web for information about bidding opportunities. Instead, they need only to register a single time in the areas in which they do business (e.g., office furniture, construction services, IT consulting, etc.). Whenever a public agency needs to purchase goods or contract a service, it will fill out a request in the electronic system, specifying the kind of operation and including all the documentation and information associated with the request. Automatically, the system sends an e-mail to all the private companies registered in that selected area, minimizing response time and providing an equal opportunity for all firms. The system also provides, on-line, all the information related to procurement operations, including the public organization's name, address, phone, e-mail, fax and position of the public officer in charge of the operation. Finally, at the conclusion of the bidding process, the e-system provides the results: who participated, the proposals, the economic and technical scores, and, lastly, who won the bid or obtained the contract. Historical information about the public organization's purchases and contracts is also made available.

Chile has also moved from a cumbersome and costly manual system for filing tax returns to a new system that allows taxpayers to file returns online and receive an assessment in 12 hours instead of several days, as was necessary under the earlier manual system. The site has won several awards including the "Technology Innovation Award" from the Chilean IT Association and a Government Management Innovation Award. The online tax service (<http://www.ssi.cl>) was conceived and implemented using Oracle's internet-based technology. The first phase was simply to place taxpayer information online. This knowledge base included help-yourself data on the tax structure, corporate topics, guidelines and procedures. It was a small beginning, but straightaway taxpayers got used to the idea of finding information online rather than visiting the nearest office or phoning for a printed document. In the next phase, the website was made interactive. Individuals were then able to check their tax status online. Less than a year later, electronic tax filing was added to the service. In filing their taxes online, taxpayers key-in and validate data themselves, thereby reducing queries and input errors.

Furthermore, Chile made one of the most significant forays into e-government in 1999 with the launch of the <http://tramitefacil.gob.cl> portal, which is a natural by-product of the process of state modernization. The portal is designed to provide the general public with step-by-step instructions on a wide array of procedures, ranging from online requests and processing of tax forms to information needed to access public services (i.e., health and education services, procedures associated with mandatory electoral registration, motor vehicle registration, etc.). The online transactions and forms are particularly useful and convenient for citizens who can then avoid long lines and a trip to the government office. Detailed

⁷ The World Bank: *Chilean Tax System Online* http://www1.worldbank.org/publicsector/egov/chile_taxcs.htm and *Chile's Government Procurement E-System* http://www1.worldbank.org/publicsector/egov/eprocurement_chile.htm

information about rules and processes are available on this portal, which also provides information on the rights of the Chilean citizenry and residents. More than 200 virtual info-centers have been created to promote public awareness and participation, both of which are lacking in the Chilean culture as a result of past authoritarian rule. The Government's objective in the medium term is to develop current technologies to the point that public institutions can process, in real time, all online requests and transactions requested by the citizenry. To date, there are several transactions that can be already processed online such as birth, death and civil marriage certificates; legal forms for consumers; motor vehicle certificates; tax and customs payments; export documents; labor consultations and claims; and housing forms. The search feature of the portal is well designed. Users can search by common subjects, namely work, health, education and culture, sports and recreation, economy and business, citizen life, citizen security and justice, Chileans abroad, infrastructure and transport, home and family. The user can also initiate a search ("what do I need to do?") by institution, transaction and service on line or by keywords.

4. E-Government in Argentina

The Context

How Argentina stands in terms of “e-society” and “e-governance”? Has the country established electronic service delivery (ESD) targets as part of a strategic plan for e-government? What can be said in terms of demand (consultation with citizens and business); supply (front office e-government services); capabilities (back office enabling government infrastructure); and a program for ‘change’ to drive forward the e-government agenda? What about the Government answers to the increasing request of transparency posed by citizens and the use of internet to communicate with each other? What about innovative services introduced at the provincial and municipal levels?

The civil society in Argentina has developed important instruments for the democratization and social use of ICTs (the demand for “e-governance” is very high), but their objectives, in most cases, could not be attained due to institutional weaknesses. This is specially true in terms of claims for more transparency in the public affairs. The Argentine society has also made progress in the adoption of ICTs to foster democracy and participation. The events of December 2001 demonstrated that a new form of organization emerged within the middle class thanks, in part, to their capacity to communicate via the internet. The site www.cacerolazo.org, which receives more than 400 daily mails, has received more than 413,110 visits and registered 1,743 citizens since its creation in December 2001.⁸

The Government, since the late 1990s, has embarked on some 30 different programs, most of them with multiple objectives, to use information technologies in the management of the public administration and provision of public services. However, as it stands in 2002, the central (federal) Government of Argentina does not have a comprehensive vision or strategic plan for e-government nor does it have an e-government plan in its political agenda. At the provincial and municipal level, some isolated examples demonstrate that, when political will and good management is present, local capabilities are such that enable local administrations to achieve results comparable with international standards.

The principal and overarching policy instrument for “e-society” is the *National Program for the Information Society* (PSI), which, by purpose and design, ranks among the most ambitious initiatives of its kind worldwide. It endows with an institutional and conceptual umbrella for a series of specific initiatives, which aim at facilitating general access to the internet, promotion of ICT applications in the public administration, development of e-commerce, creation of community technology centers and creation of a high speed communication network for university and research centers – all with the purpose of promoting equal access to and participation in ICT. PSI, currently under the aegis of the Secretary of Communications, was vested with the Secretary of Science and Technology in 2000 and part of 2001.

On “e-government” the key policy actor at the federal level is the *National Office for Information Technologies* (ONTI), which has consolidated two previously separate institutions with complementary tasks in the area of e-government into a single administrative body with a mandate for a broad action program. ONTI has been placed in the Chief Office of the Cabinet under the Secretary of Public Administration.

⁸ Information reported by www.cacerolazo.org in March 2002. Another website available to advance democratic participation in Argentina is www.quequeremos.com.ar.

The various federal-government programs that promote the adoption of ICTs in Argentina are grouped in Box 1, according to four operational objectives:

- improving government performance;
- enhancing economic competitiveness;
- strengthening participation of society; and
- building capacity of stakeholders.

The Government of Argentina in Internet

In general, the Argentine federal public administration does not count with minimum standards of functionality that typically are ascribed to e-governments. There is evidence of serious shortcomings in the government approach, its implementation and effectiveness. Hence, the effectiveness and impact of the various programs in place has been poor so far. A good number of public entities (projects, programs, commissions, etc.) have their own sites and define their dissemination of information strategies and modalities of service delivery in almost autonomous ways. This situation poses a warning about the lack of definition, or at least coordination, of a national policy oriented to harmonize knowledge management in the public administration.

A survey conducted by *ONTI*⁹ revealed that, currently, about 180 websites exist under the aegis of the Federal Administration. Out of them, the survey analyzed 145 sites, which were reviewed according to their *technical capacity; communicational content; institutional aspects; and services provided.*

Technically, it has been observed a low level of development of most of these sites:

- | | |
|-------------------------------|--------|
| • Use of an official pre-home | 23,61% |
| • Flash applications | 10,42% |
| • Discussion forums | 7,64% |
| • Videos | 4,86% |
| • Sound tracks | 3,47% |
| • Chats | 2,78% |
| • Web mail availability | 0,69% |

Almost all these sites (98.61%) have a 800X600 graphic resolution, while the remaining 1.39% have 640X480.

The *communicational* aspect revealed that there still is a widespread use of traditional technologies. The most used internet tool is the e-mail. The percentages of positive answers are as follows:

- | | |
|----------------------------------|--------|
| • Contact phone number available | 66,67% |
| • Free 800 line | 15,28% |
| • E-mail to ask questions | 84,72% |
| • Online forms | 27,08% |
| • Date of site update | 25,69% |
| • Newsletter | 11,81% |

⁹ "Instrumentos y avances en la Administración Pública Nacional para el desarrollo del Gobierno Electrónico".

Gustavo A. Vullo, Director of *Oficina Nacional de Tecnologías Informáticas, Subsecretaría de la Gestión Pública -Jefatura de Gabinete de Ministros*. Buenos Aires, March 2002.

Box 1: Objectives of Programs that Promote the Adoption of ICTs in Argentina

➤ Improve Government Performance

1. *Nacion.ar*: Increase public sector transparency and interaction with citizens; promote ICT applications in the public administration; connect public agencies through a mother portal.
2. *Gobiernoelectronico.ar*: Provide information on public services; facilitate access to online services; increase transparency of public transactions.
3. *Portal Cristal*: Inform the public about objectives and performance of the public administration, including the legality of government actions and fiscal relationships between the federal and provincial governments.
4. *Financial Disclosure Systems*: Create internet based registry and control system of sworn declaration of public officials detailing their holdings and assets.
5. *Technology Standards for the Public Administration (ETAP)*: Provide public sector organizations and institutions with instruments to rationalize and standardize the use of ICT.
6. *Electronic Procurement System*: Install electronic bidding and purchasing system, registry of accredited suppliers, data base on reference prices and purchase orders.
7. *Electronic Network of Municipalities*: Facilitate access of municipalities to the internet and strengthen capacity of content management and electronic interactions.
8. *Citizen Management and Participation Centers*: Intermediate with the Government on citizens' needs - limited to the City of Buenos Aires.
9. *Emergency Coordination of Telecommunication Networks (ArCert)*: Provide equal access of all public agencies to a security system for more reliable delivery of services to the public.

➤ Enhance Economic Competitiveness

10. *Digital Signature (PKI)*: Create institutional and legal infrastructure for electronic signature.
11. *SMEs on the Web*: Develop webpages for small and medium enterprises and promote electronic commerce.
12. *National Plan for Competitiveness*: Promote the development of the national software industry through tax and custom exemptions.
13. *Proyecto Consorcio.ar*: Promote university research in advanced software applications to catch up to best international standards.
14. *National Network for Science and Technology*: Create interconnection network for science and technology institutions to promote the exchange and creation of knowledge.

➤ Strengthen Participation of Society

15. *Community Technology Centers*: Provide ICT access to low income population in remote areas.
16. *Argentina Digital*: Facilitate the acquisition of computers and internet connectivity for low income families.
17. *Information Society without Borders*: Facilitate access of the handicapped to technology services provided by the Information Society.
18. *Law Dragan on the Free Use of Software*: Promote free software for social appropriation avoidance of stakeholder manipulation.
19. *National Network for Telemedicine*: Create an internet based network to provide new health services to the citizenry.
20. *Austral on-line Network for Medical Auditing and teleassistance*: Provide access to information of participating medical schools.
21. *Technology Centers 2000*: Install internet infrastructure in community centers and public libraries.

➤ Build Capacity of Stakeholders

22. *Educacion.ar*: Provide ICT infrastructure and internet connectivity, content and teacher training.
23. *Connectivity of Public Schools*: Connect public schools to the internet and provide ICT infrastructure.
24. *Virtual Law School*: Dissemination of innovative legal material and international experience through distance education to maintain high standards of legal professionals.
25. *Teacher Training in the Use of ICT*: Integrate ICT into teacher training systems and build capacity.
26. *Proyecto RedEs*: provide equal internet access, promote ICT applications and content development in the national education system.
27. *University Interconnection Network*: Create academic information network with operation centers in the principle universities and points of presence in other institutions of the university system.
28. *Connectivity of Public Libraries*: Upgrade information services of public libraries through internet connection and capacity building of staff.

Because the main objective of these sites is to provide basic information about the agency/service, there is a good development of their *institutional* aspects. However, no basic standards for the information contained in each site have been adopted. The percentages of compliance with a hypothetical common criteria are the following:

- List of authorities 61,11%
- Organizational structure 54,86%
- Description of functions 68,06%
- Action plans 21,53%
- Online budget 5,56%

Finally, the assistance offered by these sites is mainly related to the *digitalization of existing services*, which require low complexity regarding the use of ICTs. The services requiring a higher level of complexity have a low degree of development. The main tools available are:

- Navigation bar 60,11%
- Site map 15,28%
- Documents and publications 72,92%
- Statistics 49,31%
- News 54,86%
- Description of procedures 27,78%
- Search engine 22,92%
- Visit counter 20,83%
- Online procedures 13,19%
- Other services 61,11%

The survey results unveil the lack of a common portal for the Central Administration and there is no categorization of the existing sites without a clear definition of standards of information and services for all government bodies.

E-Government Projects

Out of the programs presented in Box 1, a number of ongoing initiatives are explicitly oriented towards the adoption of ICTs in the public administration hence constituting examples of e-government. The ONTI itself has direct responsibility over most of these projects while others are under the domain of PSI or specific agencies. The most relevant projects on e-government that this study had the chance to analyze are summarized in Table 2 and explained in the next sections of this chapter. An analysis of their impact and sustainability will be left for the last chapter (Conclusions and Recommendations).

Public Key Infrastructure (PKI)

The PKI e-government project is directly managed by ONTI. In 1998, Decree 427/98 established the regulatory framework the use of digital signatures within the Argentine Public Sector, for internal transactions which do not directly produce individual legal effects, establishing that this new technology has similar effects to those of handwritten signatures.

In 2001, Congress passed Law 25506, which granted to a digital document with a digital signature the same probative value as a signed paper document. The Law establishes the minimum requirements that

have to be accomplished to obtain the probative value. The infrastructure defined by the Law is the following:

- Application authority, vested in ONTI, at the Chief of Cabinet Office
- Advisory Committee for the PKI
- Licensing Body
- Public or private licensed certifying entities
- Audit system
- Subscribers of certificates

Table 2
Examples of E-Government Programs in Argentina – Year 2002

<p style="text-align: center;">G2G Government to Government</p>	<p style="text-align: center;">G2C Government to Citizen</p>	<p style="text-align: center;">G2B Government to Business</p>
<p>Technological Standards for the Public Administration (ETAPs)</p> <p>Coordination of Emergencies in the Information Networks of the Argentine Public Administration (ArCERT)</p>	<p>www.gobiernoelectronico.ar - www.info.gov.ar (Government Online)</p> <p>www.cristal.gov.ar (Transparency in the Public Administration)</p> <p>The www.nacion.ar Project</p> <p>Financial Disclosure Systems</p> <p>The Electronic Network of Municipalities</p> <p>Social and Fiscal National Identification System Program (SINTyS)</p> <p>Connectivity in the Legislative Branches: the Agora Platform</p>	<p><i>Firma Digital</i> – Public Key Infrastructure (PKI)</p> <p>The Federal E-procurement System</p>

To implement Law 25506, the application authority has to issue the regulatory procedures and establish the advisory committee and the licensing body. Additionally, articles 47 y 48 (referred to the obligation of the State to go digital or adopt paperless procedures) are still to be enforced. This will require the adoption of common applications and procedures according to the digitalization of State management. Finally, the infrastructure established by Decree 427/98 has to be updated in order to comply with the requirements of the new Law. A relevant aspect of this legislation is that it resulted from the analysis and coordination of seven different proposals submitted to Congress for approval. All these proposals involved consultations with representatives of the public administration, academia, professional associations, banks and sector chambers of commerce.

Currently, the Ministry of Economy is the Certifying Authority but other four entities are in the process of obtaining the license. Up to now, the project has awarded 1,500 mail certificates and has signed several agreements with various governmental agencies.

To optimize the process of public awareness on digital signature technology, a laboratory has been implemented where the public in general, and particularly government officials and civil servants, can generate a pair of keys, obtain their own certificate and send signed electronic mail. A variety of information about this technology is also available. Nowadays the laboratory has been implemented with a new model for issuing certificates by means of Register Authorities and has already offered 120 courses for a total of 460 attendants from both the public and the private sector. In 2001, the project received more than 800 enquires via consultas@pki.gov.ar and the website www.pki.gov.ar receives at least 100 visits per day and 1,200 hits. The site counts with a list of new developments on digital signature technology and with international news on the subject. These lists have more than 1,000 subscribers who received information on advancements in digital signature on a weekly basis.

Technological Standards for the Public Administration (ETAP)

The ETAP is another program managed by *ONTI* and intends to harmonize the information solutions of the central administration. The publication of these standards helps public officials to know about the latest technologies and contributes to the transparency and neutrality of the procurement process.

The specific objectives of the ETAP are:

- Assist government bodies with the preparation of specifications through the utilization of standard codes for products that cover most of the needs of the public administration.
- Promote information and communications system integration in the public administration aiming at improving effectiveness and eliminating redundancies.
- Ensure the acquisition of technologies adequate to the real needs in terms of information systems and promote the adoption of shared systems in the public administration.
- Provide guidelines for the exchange of information and adoption of technology in the public administration.
- Define a shared methodology for the strategic planning of ICTs.

The ETAPs are divided into:

- **Technologies:** include the technical fundamentals for the standardization criteria and constitute a guide for those officials in charge of preparing tender documents.
- **Specifications:** for equipment, peripherals, devices, etc., to be tendered, which are identified with codes to precisely identify each of them.
- **Models to prepare tender documents:** include the criteria of standardization that have been followed to prepare tender documents.

ONTI reported that, in 2001, it received 494 requests from different government entities to purchase new information technologies and that 83% of these requests were answered, on average, within 11 days from their reception. Up to date, ONTI has published seven editions of the ETAPs. A recent survey on the new technologies has revealed that a new version of ETAP has to be prepared soon, to update information on desktop computers, network servers and active elements of communications. Additionally, the agency is conducting research to include interoperability standards in the future.

Coordination of Emergencies in the Information Networks of the Argentine Public Administration (ArCERT)

ArCERT is a rapid response group that centralizes in ONTI all efforts aimed at counteracting incidents that may occur within the public administration networks. It aims at providing information to government agencies for their own neutralization of such incidents, both in a preventive and corrective manners, and at training the technical staff involved with information systems.

ArCERT centralizes reports on security incidents within the public administration and facilitates the exchange of information to solve these problems. Its specialists conduct research on network incidents, hacking, protection tools, etc. These staff are skilled on information technologies, firewalls, internet and intranet security, detection and expulsion of intruders, security policies and procedures, and risk management.

From inception, ArCERT has assisted 28 entities with the analysis of network architecture and the evaluation of alternative solutions. Its web page www.arcert.gov.ar receives 1,500 monthly visits on average. Its main products are a free firewall, coordination and analysis of logs, a security toolkit, an intrusion test, and the ArCERT laboratory.

Portal www.gobiernoelectronico.ar - www.info.gov.ar (Government Online)

This project, also managed by ONTI, has the scope of developing a central portal, which should permit easy access to all websites of the public administration, to online services provided by government agencies and to all nodes of public information. The project aims not only at the central administration but also expects to facilitate access to information sites posted by the legislative and judicial branches of the State as well as to provinces and municipalities.

This portal was developed after the usual international model for the public administration with the purpose that every individual or institution with internet access, both within the country or abroad, could access online to information and services provided by the government without knowing in advance which specific entity has to contact. This service is available 24 hours a day and 7 days a week.

This web page is available since July 1999 and has as its precedent the “*Indice de la Administración Pública Nacional*”, which had been created through Resolution SFP 97/97. This only contained a list of all websites of the central administration.

The products and results of www.info.gov.ar to date are the following:

- Structure of the Central Administration, with indications about address, telephone, website, etc., for all depending entities.
- Access to websites of the Legislative and Judicial branches of government, as well as to provinces and municipalities.
- Answer to questions posed by the citizenry about public administration issues, which is forwarded to the corresponding depending agency when needed.
- Access to online procedures
- Other Argentine portals
- International Organizations
- Universities, Museum, Libraries, NGOs

- Provincial Constitutions
- Argentine newspapers
- Weather forecasts
- Information on tourism and culture

By and large, the portal comprises 120 websites of the public administration, 24 provinces, 100 municipalities, and 61 links to portals of other countries. It also concentrates 127 online procedures. During the year 2001, it received, on average, 50 daily visits. As of February 2002 the statistical data show a total of 56,591 visits with 522,017 hits and 109,210 pages visited. The most visited sites are those related to local newspapers, the central administration, the ministries, the provinces and the legislative branch of government.

Portal www.cristal.gov.ar (Transparency in the Public Administration)

The mission of the *Cristal* initiative, also managed by ONTI, is to disseminate online, and in an easily understood format, all information concerning the use of public funds in Argentina. This includes information not only about the money devoted to different programs, but also how these funds are administered. The *Cristal* website was specifically created to fulfill the mandate established under Article 8 of the Fiscal Responsibility Law 25152/99, which mandates that the State avail “to whatever institution or interested person” the following information related to the administration of public funds:

- execution of budgets
- purchase orders and public contracts
- payment orders submitted to and issued by the National Treasury and other treasuries of the public administration
- financial and employment data concerning permanent and contracted staff, and those working for projects financed by multilateral organizations
- a list of retirees and pensioners of the armed forces and security forces
- an account of the public debt, including terms, guarantees, interest costs, etc.
- inventory of plant and equipment and financial investments
- outstanding tax and customs obligations of Argentine companies and people
- regulations governing the provision of public services, and the regulatory organizations themselves
- all information necessary for the control of social expenditure by the community

It is a primary goal of the *Cristal* program to create a better informed citizenry and to exercise more effective control over their political representatives, hence constituting a clear attempt of introducing an “e-governance” tool in Argentina. While the content of the website is directed to all citizens, journalists are a particularly important audience for the site, as newspapers and television enable a much wider dissemination of its contents. The information of the *Cristal* site is organized around three thematic areas:

- “The State Within Reach of All”: explains how public monies are redistributed between the national government and provinces
- “Goals and Results”: gathers information on all national policies to evaluate their management and the manner in which public funds are assigned
- “Accountability of Representatives”: consolidates information related to the control of corruption, both in governmental and the non-governmental sectors

- The site is audited externally by *Foro Transparencia*, a body made up of 15 non-governmental organizations concerned with government transparency.

Cristal was launched in February 2000. It was then heavily advertised, promising content that it did not actually contain at that time. This generated false expectations and a loss of confidence on the part of the public. In August 2000 the site was re-launched, but without fanfare. The new version of the site adopted much easier navigation, a more attractive design, and better information. Since then, the average number of visitors to the site each month has risen steadily, increasing by nearly 200%. A new version of the site was released on March 20, 2001. The website was maintained in ONTI, until March 2002, by a team of three content specialists and a designer. Website staff is supposed to respond to a user's question within 24 hours. To date, most user comments are critical of the quality of information available, and many include suggestions for further improvements.

The Nacion.Ar Project

This portal has been implemented and is currently managed by the PSI. This project provides all the necessary technological tools to the different layers of the public administration to promote the digitalization of their businesses and increase the interaction and transparency vis a vis the citizenry. The main tools of the project are:

- Portal *Nacion* www.nacion.ar
- *Solución Civitas* www.civitas.gov.ar

The portal was created as the main access to more than 400 public administration websites, structured either by thematic indexes or through the functional structure of the State. The functionality of *Nacion.ar* is provided through a dynamic environment that allows access to all available public sector information. The portal makes available to the citizen a number of information technology services that add value to the tasks of the governmental bodies. To this end, the portal has developed audio and video systems that enable the citizen to attend parliamentary sessions in both chambers of Congress. The *Supernova* FM Radio has worldwide access through this portal as well as the most updated information provided by the National Weather Forecast Service.

The *Civitas* tool is oriented towards the development and management of municipal portals in Internet. It consists of a software solution based on internet, which consents creating websites through online content generation and updates. This solution does not require previous knowledge of programming or internet. It is an application that allows the introduction of services in stages. In other words, this solution is a content maker that enables the introduction of information and images to the website through editors, news, events, sections and links. The available services for each site are:

- E-mail with 4 accounts per Municipality.
- Weather forecast.
- Information about personalized phone numbers and addresses.
- Chat.
- Discussion forums.
- Tenders.
- Online procedures.

The statistics collected until mid-2001 show that 300 municipalities have developed a website out of a total of 2,114 in all the country. *Civitas* has contributed to develop 50 of them, serving a population of

about 2,358,000. Additionally, there are pilot projects aimed at other bodies of the government and NGOs.

The Federal E-Government Procurement System

In Argentina, the legal framework for government e-procurement is Decree 436/00 and the regulations for the regime are included in Decree 1023/01. The government body responsible to implement the legislation on e-procurement is the *Oficina Nacional de Contrataciones – ONC*, in the previous administration under the aegis of the Ministry of Economy but now an organ of the Under-secretariat for Public Management (SGP) – Office of the Chief of Cabinet. *ONC* coordinates its work with ONTI, which must be part of the technological development, implementation, harmonization and integration of the system solutions.

The current status of the system's development is at the level of digitalization, classification, and publication of the available information for its consultation by goods and services providers but also by the general public. To now, the online information includes about 4,000 tender documents; 2,000 awards/sales; 6,000 purchase orders; and more than 60,000 items in the single catalogue of goods and services. All these data can be accessed from the site www.onc.mecon.gov.ar.

The system also provides, on-line, all the information related to procurement operations, including the public organization's name, address, phone, e-mail, fax and position of the public officer in charge of the operation. There is also a list of reference prices and purchase orders. Finally, at the conclusion of the bidding process, the e-system provides the results: who participated, the proposals submitted, the economic and technical scores, and, lastly, who won the bid or obtained the contract.

Financial Disclosure Systems

Financial disclosure systems serve two main purposes. The first is to monitor changes over time in the economic situation of public officials. The second is to detect and prevent potential conflict of interests between public officials and the private sector. Argentina had an established system of financial information for public officials.¹⁰ It mandated high-level public officials to submit information on their financial situation. Public officials were required to complete a short form when entering office and again at the time they left. However, public access to this information was severely restricted: only a judge presiding over a formal accusation could obtain access. Although a few cases of alleged illicit enrichment by public officials were tried, records fail to demonstrate a single instance where the judiciary submitted such a request.

In 1999, Decree 41 introduced the first reform to this system. It ordered a new model of financial disclosure forms and made the information available to the public. Two major obstacles kept the reformed system from delivering acceptable results. The first effectively limited the access of citizens to the available information. Rather than creating a "friendly" procedure to allow interested parties to access and review the financial disclosure forms, the system maintained a number of checkpoints. First, interested citizens were required to submit a written request to *Oficina Nacional de Etica Pública (ONEP)*, the agency responsible for administering the system. Second, *ONEP* evaluated the sufficiency of the request. Third, *ONEP* mailed the citizen a denial or the requested document. Due to this cumbersome and discretion-laden process, a limited number of requests were authorized and only 13

¹⁰ The system began in 1998 with ratification of the Inter-American Convention.

petitions eventually answered.¹¹ Under the specifications of Decree 41/99, completing the forms required producing several hand-filled pages, including separate forms for the spouse and children. Soon after the system was functioning, it became obvious that it would be unmanageable and expensive to operate.

Administering this system meant dedicating a large number of agents to the routine task of verifying whether the public official had filled in all of the required “boxes” contained in the forms. If there were blanks, the forms had to be returned to the public official for completion. An estimated cost of US\$70 per financial disclosure form was required for administrative personnel to process the documents without analyzing the substance of the information

The Department of Transparency Policies of the Anticorruption Office addressed these issues by implementing a new system using information technology.¹² The Anticorruption Office had to confront two pitfalls in using information technology to redesign the financial disclosure system in Argentina. First, designing a system too sophisticated for the existing technological capacity of the public sector. Second, designing a system too simplistic to capture and deliver useful information. Prior to designing the software, the Office conducted a brief diagnostic of the technological capabilities of the 158 different agencies in which public officials are requested to complete these forms. The Office also conducted a diagnostic of hierarchical profile of the more than 25,000 employees requested by law to complete the forms. The diagnostic revealed that the agencies differ significantly in size, technological capacity and level of decentralization. The technological capabilities of the workforce varied greatly as well.

The Anticorruption Office designed and implemented a new system of financial disclosure forms using software that provides a user-friendly design for public officials to complete the electronic form. The software can be downloaded from the web or copied from a compact disk.¹³ Once the form is completed, the software generates a secured document and sends it via Internet to a server located at the Anticorruption Office. The transmission cannot take place unless the public official submits all the required data, thus avoiding the omissions of the paper-based model. After the electronic document is sent, the user immediately receives a printed certificate of the transmission, plus a printed copy of the full document. The system will only transmit via Internet information from the form that does not infringe privacy. Furthermore, the software incorporates a set of safety devices that are standard operational procedure for the transmission of information using the Internet.¹⁴ To minimize errors in completing the forms, the program is designed to perform only if all the required information has been completed. This has yielded a drastic reduction in the number of forms rejected due to formal errors or incomplete information. At the same time, it has significantly added to the consistency and integrity of the available information.

The new system has basically eliminated the printing and distribution of paper forms. Given that the law ultimately requires a “paper document”, the software automatically prints the form at the end of the Internet transmission, reducing it to a minimum. The centralization of electronic data allows decentralizing the custody of paper forms. The Anticorruption Office maintains the records of only the highest-ranking public officials. This reduced the number of forms in custody from over 30,000 to less than 1,500. It also permitted the Office to concentrate monitoring and control efforts on critical levels of the Administration.

¹¹ No reliable date exists on the turn-around time.

¹² By the time the Anticorruption Office started implementing the new electronic system, Congress had passed Law 25.188, regulating ethical duties for public employees and making into law the financial disclosure system using the paper-based model.

¹³ The system can be downloaded from www.jus.gov.ar, *Oficina Anticorrupción*. The largest agency is the *Administración Federal de Ingresos Públicos* (revenues, taxes and customs), with over 9,400 employees under the duty of complying with this financial disclosure legislation.

¹⁴ The level of protection for the information is similar to the one for the database of the Revenue Service.

Even before the new system was established, the Anticorruption Office introduced an optional Internet-based system to allow citizens to request the review of a financial disclosure form. This equipped the average citizen with the tools to play a monitoring role. Whereas under the old system established by decree 41/99 only sixty-six financial disclosure forms were made public in response to a total of thirteen different petitions, under the new system, six hundred and fifteen financial disclosure forms were made public, in response to over two hundred and eighty different requests. Under the current system, the average processing time to obtain a copy of a financial disclosure form is less than forty-eight hours.

The Anticorruption Office is currently developing new software to improve its capacity to analyze the contents of the financial disclosure forms. This software is intended to identify patterns, cases and situation that call for more in-depth investigation. Eventually, the software will integrate different databases to maximize the use of available information. The Anticorruption Office is working to establish operational links with other controlling agencies. Technological, legal and economic obstacles within the public administration make this a significant task.

The majority of cases brought to court by the Anticorruption Office based on the analysis of financial disclosure forms will also include petitions to prosecute for tax evasion and falsifying public documents. These allegations are easier to prove than allegations of illegal enrichment. The effect of such prosecutions on the perception of the financial disclosure system will have to be studied.

The Electronic Network of Municipalities

This initiative is being managed by the Under-secretariat for Municipal Affairs – Ministry of the Interior, with financial assistance provided by the IADB, under Project 1164/OC AR – *Programa de Reformas y Desarrollo de los Municipios Argentinos*. The objectives of this project are:

- Establish the institutional framework to assist the sustainable development of 200 municipalities in Argentina.
- Promote institutional reforms, action plans and public works tending to improve the efficiency and competitiveness of the local administrations.
- Provide incentives to local fiscal efforts through reform and investment plans
- Contribute to the improvement of service efficiency aiming at attracting new economic activities.

Among its activities, this initiative intends to digitalize the participating municipalities, train the public officials, provide management applications, and include the municipalities in internet. The project started in December 1998 and is expected to be concluded by December 2004.

At the time the mission visited Argentina (March 2002), the officials appointed at ONTI by the Duhalde administration had not established working contacts with this project. They see this initiative as overlapping with the *Civitas* component of PSI. One individual project on municipal digitalization (*Mar del Plata Ciudad Digital*), which expects to receive support from this initiative, will be reviewed in detail in the next chapter of this study.

Social and Fiscal National Identification System Program (SINTyS)

The Social and Fiscal National Identification System (SINTyS) was created on July 13, 1998, with a view to its eventual institutionalization. It will introduce the use of a single national identifier for people and legal entities, based on the three main existing identifiers: the social security identifier (CUIL), the tax administration identifier (CUIT) and the national identifier (DNI). With a World Bank US\$54M loan, the

Government launched the first phase of the project in 1999. Its object is to identify social and/or fiscal attributes of physical and legal persons in Argentina, through a sustainable information exchange system, aimed at improving the efficiency, effectiveness and impact of social services and fiscal programs at all levels of government in Argentina. Upon completion of the project in eight years, barriers to information exchange among participating agencies will have disappeared as information gathered separately becomes available, when and where needed and legally available, through a shared information exchange network, enabling Government to offer “one-stop” delivery of multiple value-added and more equitable services. Other actions supported by the project would include a number of legal framework provisions. There is already in Argentina’s Congress a proposed overall confidentiality and privacy of information law, which would fit in very well with SINTyS’ needs. It is expected that SINTyS will participate in its regulation. In addition, legal provisions will be needed to govern the interchange of data by participating agencies, the legitimization of SINTyS for facilitating its functioning, oversee its regulation, and to set standards for and conduct verification of its quality and performance. In Phase III, provisions would be made for SINTyS’ long term institutionalization.

The project’s expected benefits are improved targeting of programs to the socially disadvantaged segments of society; reduction in social expenditures through more efficient delivery of services; increases in social security contributions; increases in revenues due to more efficient and effective tax evasion detection and fraud mitigation; provision of value-added services through the institutional framework and infrastructure, including better information for decision- and policy-making and for program planning.

The direct beneficiaries of the project in the first instance would be program managers and government officials in charge of social programs and tax, health, judicial and pension administration at federal and provincial levels, for whom the project would be an instrument to improve the management and effectiveness of their respective programs via better targeting and/or the reduction of fraud and leakage’s. The indirect beneficiary of the project is in general the public through fairer tax burdens because of reduced tax evasion and potential future increases in social and other public programs. In particular, beneficiaries would be those who should be covered by social programs but are not. This would have a positive impact in terms of poverty alleviation, although no estimate exists of this potential effect. It should be noted that women and children are likely to account for a significant share of the poor who should qualify for social programs but do not at present receive assistance.

The Agora Platform and Other Sources of Information to Legislation

The Argentine Chamber of Deputies is currently developing the Agora connectivity project, which aims at providing safe, private and permanent communications to the various bodies of Congress through a high-speed network that will enable digital traffic of data, audio and images among its users. Additionally, it will act as a network with Internet. The scheme will register all events occurred in the Chamber, permitting the auditing of the legislative process by the citizenry. The internet connection will be protected with a Firewall/Proxy security scheme. This will allow citizen scrutiny of parliamentary life but the external access will be restricted to avoid interference by intruders.

Other than the Agora project, there have been in Argentina other initiatives that enabled the development of websites with legislative information. These are:

- **Infoleg** (*Ministerio de Economía*)- <http://infoleg.mecon.gov.ar/>. It is a free site that allows to the citizen access to the current legislation.
- **SAIJ** (*Ministerio de Justicia y Derechos Humanos*)- <http://www.saij.jus.gov.ar/>. It has two different services. One is free, and includes basic legal information, access to relevant headings

of the current legislation, and a limited access to a database. The other, is a service available for a variable fee, which completes the legal databases, and establishes the charges according to the kind of information and details requested.

- **Boletín Oficial** (*Ministerio de Justicia y Derechos Humanos*) – <http://www.boletin.jus.gov.ar/>. It allows free access to a summary of the Official Gazette. Lawyers and other users that pay a monthly fee, have also access to the full text of the Gazette for a limited period of time in a month.
- **Honorable Cámara de Diputados de la Nación** – <http://www.diputados.gov.ar/>. Provides free information on the legislative activity of the House, the work of the commissions, subjects active in the front office, and projects under discussion.
- **Honorable Senado de la Nación** - <http://www.saij.jus.gov.ar/>. Provides free information about the projects under discussion and the latest news on the bills passed by the Senate.

5. Selected Examples of E-Government at the Provincial and Local Level

The Province of Buenos Aires: Centralized Connectivity, Dossier Tracking and E-Procurement for SMEs

The Government of the Province of Buenos Aires is currently consolidating two agencies (*Dirección Provincial de Informática – Dirección Provincial de Comunicaciones*) into a single entity that should help to simplify the bureaucracy and modernize the services offered to the citizenry through an increased use of ICTs. The objectives of the current administration include the development and implementation of an e-government project and the promotion of PKI use within the provincial administration. The main achievements of the provincial e-government initiatives so far are the adoption of an efficient system of connectivity and the development of an electronic tracking system of dossiers.

The legal framework for the promotion of e-government in the Province of Buenos Aires is provided by Decree 1489/2000, which designs the Provincial Directorate for Informatics as the focal point for all initiatives in this field and as the authorizing agency for all technological development and procurement of equipment and services. The Province of Buenos Aires intranet is the most important coordinated communications network available in Argentina at the provincial level. It was established in 1993 with Decree 2272 that mandated centralized coordination of programs and actions of all directorates and agencies, and of all data transmission through a single satellite link for all the provincial public administration. This is a very important aspect of the system since it helps avoiding redundancies and keeps the communications costs contained. The main characteristics this intranet are:

- **Topology:** The WAN network has its focal point in the Governor's building in the capital city of La Plata and its extremes in the agencies and ministries located both in La Plata and in all the municipalities through a frame relay configuration. In some municipalities there are last-mile links that connect representations of ministries (Health, Economy, Education) and the Police. At the same time, the WAN is connected to the LAN of the Governor's building and to the LAN of the main servers of the network. It has access to Internet through a dedicated link of 4Mbps. The network utilizes exclusive TCP/IP standard protocols, with complete routing in each of its nodes.
- **Central Servers:** The information flow is administered by a pool of 5 internal central servers, 2 external central servers and 1 firewall (it administers access rules between the external and internal segments). The 5 internal servers centralize all email flow, with an integrated anti virus control. Additionally, these servers manage internet access via web through 3 proxies/cache with access lists by content; two interconnected IRC servers for communication with sub-centers in the municipalities; and 3 mirrored WWW servers which host the site www.gba.gov.ar, two other sites, email services for all domains without own server and primary and secondary DNS of the internal network. The 2 external servers manage the primary and secondary DNS of Internet and receive all email routed to *gba.gov.ar* and its sub-domains.
- **Standards:** All central and municipal servers, which are centrally administered, use Linux as the operating system, with Sendmail as the email agent and Apache as the web server. In the municipalities, Apache acts as a proxy, while in the central servers such a role is played by a network of interconnected Squids. In those cases where the administration of domain is delegated, the compatible technology to be adopted is determined by the local data processing center.
- **Value added:** In addition to the basic network services, the intranet has a system that allows access to files/dossiers via web and through proprietary clients on TCP/IP. Some agencies have

already developed electronic files. Through this system, the Government intends to keep updated information about movement, status and actual location of all files/dossiers processed by the different agencies of the provincial administration. The system has adopted a single database ASE 11.5.1 for Windows NT Server. The programming language client/server is Power Builder Enterprise 5.0.3 and the language for the development of the web application is EAServer 3.5. The agencies that use this service are the General Secretariat of the Governor, the Scientific Research Commission, and the Directorate for Official Vehicles and Vessels. Other agencies with own databases are the Ministry of Justice and Security, Medical Services and General Advisory Services of the Province. There are also other online services such as a system for the publication of procurement tenders, a system to make enquires about legislation, a system to register organ donors, and a guide of procedures at the Ministry of Economy.

The most important websites of the Province of Buenos Aires are:

- Dossier Tracking System: <http://www.gba.gov.ar/html/expedientes.htm>
- Public Tenders: <http://secgen.gba.gov.ar/secgen/contrataciones/principal.htm>
- Provincial and municipal legislation: <http://www.gob.gba.gov.ar>
- Provincial Registry for Persons:
<http://www.gob.gba.gov.ar/2001/gobierno/gobi2000/sgobi/dprp/guia.html>
- CUCAIBA – Register for organ donors: <http://www.cucaiba.gba.gov.ar/>
- Procedural Guide – Ministry of Economy
<http://www.ec.gba.gov.ar/Servicios/GuiaTramites/Principal.htm>

In terms of e-procurement, in 2000, the Province of Buenos Aires, through its financial arm (*Banco Provincia de Buenos Aires – BAPRO*) launched a program aiming at providing a market place for small and medium-sized enterprises (SMEs). It included an integral portal with information and services from the Province. *BAPRO* invested around US\$90M in *Ciudad Internet (Grupo Clarin)* to acquire a small percentage of this group. *Ciudad Internet* is a portal plus ISP (one of the largest in Argentina). The original idea was to use *Ciudad Internet* to develop, maintain and marketing this portal, but, as of today, this project has not been implemented.

The Government of the Autonomous City of Buenos Aires: E-Procurement

The Autonomous City of Buenos Aires is the Federal District of Argentina. It has an area of 200 Km² and a population of 3M, which represents 8% of the entire population of Argentina. The city provides jobs to about 2.2M people, most of them commuters, both in the public and private sectors. These jobs constitute the 17% of total employment in Argentina. The unemployment rate is about 10.4% (end of 2001), which means half of the official unemployment rate in the country. The mortality rate is of 9.0 ‰ and life expectancy is 72.7 years. These data is just a sample that demonstrates that the Federal Capital of Buenos Aires has living standards much higher than the average of Argentina.

Since its establishment as an autonomous government entity as a consequence of the Constitutional Reform of 1994, the city administration has shown signs of good economic management and fiscal discipline. As part of its policies towards the modernization of the public administration, it has launched a project aimed at strengthening the Procurement and Contracting Directorate through the introduction of new e-commerce technologies for the creation of an e-procurement system. The new system has the following characteristics:

- Creation of a single register for suppliers

- Registration of all contracts between GCBA and other parties
- Creation of an e-procurement internet site with free access for all citizens
- Introduction of open purchase orders, a system of consolidated contracting and turn key contracting
- Promotion of SME participation in tenders
- Adoption of transparency principles
- Publication of all transactions in the Official Gazette
- “Buy National” preference

In 2001, all procurement transactions of the GCBA totaled US\$884M. Currently, the GCBA does not have a consolidated suppliers’ database and the procurement processes are usually delayed. The current procurement system means that the GCBA demand is not synchronized and usually erratic, without automatic and rationalized controls of stocks and replacements. With the introduction of the e-procurement system, the GCBA expects, on average, a 10 – 20% reduction of prices in goods and services, a reduction of 40 – 70% in the supplying cycle, and a reduction of 25% of inventories.

The pilot project already in place involves the following steps:

- Design of the solution to be adopted, including formalization of the Norms and Procedures Manual and the goods and services to be included in the pilot phase.
- Inventory of the suppliers’ products to be selected.
- Configuration of the solution.
- Integration of the solution with the existing management systems and online help for its users.
- Selection of areas and suppliers.
- Implementation of unitary and integral tests.
- Training for users and suppliers.
- Data conversion and initiation of production.
- Inclusion of more sites and data.
- Integration of more suppliers.

A Municipal E-Government Project: *Mar del Plata Ciudad Inteligente*

Mar del Plata is the fifth city of Argentina by population (about 600,000 inhabitants), and the most important urban center of the Province of Buenos Aires outside the metropolitan area. Historically the most important tourist resort and fishing port of Argentina, shows today one of the highest rates of open unemployment in the whole country (more than 25%). “*Mar del Plata Ciudad Inteligente*” is an endeavor that intends, through the use of information technology, delivering public services at the municipal level in a much more convenient, customer-oriented and cost-effective way, as well as improving internal processes and employees’ skills and teamwork. The first phase of the project was executed between November 2001 and March 2002, with funding provided by the private telecommunications firm Telefonica Argentina. The second and third phases are expected to be executed during 2002 and 2003 and where supposed to be funded with an IADB loan (Project 1164/OC AR - *Programa de Reformas y Desarrollo de los Municipios Argentinos*).

The main goals of this e-government project are:

- Cost cutting and efficiency improvement
- Improvement of the relationship between the citizen and the Municipality
- Meeting citizen expectations

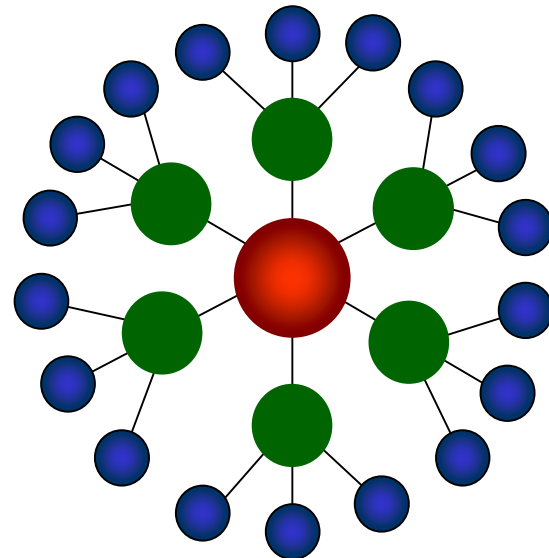
- Giving transparency to the municipal administration

The underlying project principles are:

- All information and services online
- Citizen access to services 24 hours a day – 7 days a week
- Employee and citizen participation
- Public-private partnership
- New economy development
- Integration and harmonization of systems – every input must be done just once
- Transparency of all municipal transactions
- Promotion of on line relationships with suppliers, organizations and other government agencies.

This Project includes G2C, G2B and G2G services to benefit citizens, taxpayers, enterprises, suppliers, municipal employees and officials. For project execution, an incremental approach was chosen – starting with concrete and small actions to realize fast results, which will help to obtain support from politicians, employees and citizens for future phases.

Process Redesign. As one of the core actions performed during phase one, teamwork of 63 municipal employees specially trained diagnosed 120 out of more than 1,000 municipal procedures, in order to formalize them, define normative and organizational improvement patterns and implement all necessary corrections. Priority was given to the most frequent citizen-oriented processes according to citizens’ opinion as discussed in the forums. Based upon phase one methodology and extending the teamwork net, process redesign will continue during phases two and three until every step is reformulated. This work net will require decisive support by the Mayor and his cabinet to fulfill its objectives. Otherwise, the work is likely to be interrupted by other urgent tasks as usually happen. Process redesign is an essential prerequisite to define and implement a new step management and tracking information system and to improve the municipal website with transactional services such as filling and submitting forms online, tracking initiated steps online, etc.



- 3 General Coordinators
- 6 Team Coordinators
- 18 Work teams (3 people each)

The Municipal Website. www.mardelplata.gov.ar was redesigned during phase one. New content and a style guide were defined in order to be progressively applied to all municipal websites, given the fact that each municipal agency (tourism, sport, culture, education, social welfare, statistics, etc.) has its own website with both own “look&feel” and structure. The new website displays a citizen-oriented approach, so that it’s not necessary to know in advance about the municipal internal organization to find information.¹⁵ The first version of the new website focuses on supplying information about where and

¹⁵ Telefonica recommended this approach, after the model adopted in Spain by the City of Madrid and other municipalities (see www.admnistracion.es).

how to conduct business with the municipality (processes and steps). Each piece of data is automatically taken from the municipal information systems where employees update information in a decentralized manner. Future versions, as process redesign progresses, will include submission of online forms and step/dossier tracking, public accounts access and e-procurement transactions. The municipal autonomous Agency for Tourism, Culture and Sport (*EMTUR*) redesigned website was the first to include access to accounts and dynamic interesting information. Website sections (administration, social welfare, education, business and tourism) and topics per section were selected according to the opinions provided by different sectors of the society, as they were sensed in 6 forums with the participation of 60 citizens each. During the period October/November 2001, the municipal website received more than 55,000 hits, specially its search engine and its statistics sections.

New Mar del Plata Website Home Page



Internet Public Centers. In order to provide all Mar del Plata citizens with Internet access, the Municipality is installing Internet Public Centers (IPC) at different city locations. The first IPCs will operate in 30 municipal libraries, where the employees will be specially trained to support citizens in using Internet and accessing the municipal website. Each IPC consists of one to three multimedia computers with broadband Internet access.

Citizen Support Center (CSC). This service will allow citizen access to the Municipality by telephone and email, avoiding them to go to municipal offices and providing a more efficient service. Also the CSC will be used to contact citizens when needed. During phase one, the CSC will have only 8 front office and 4 back office positions, all staffed specially selected and trained municipal employees. This will be a pilot CSC and will mainly respond to claims related to different municipal services (lighting, transit, street and road condition, traffic lights, etc.). As there isn't an integral dossier-tracking information system yet, the back office team will initially track claims received at the CSC. As new information systems and process redesign advance, CSC will cover new steps and services, back office positions will decrease and front positions will increase.

Information Systems' Harmonization/Improvement. Historically, municipal agencies had problems with data management such as high maintenance costs, data integrity and outdated information. The lack of homogeneous information systems was the main cause of these shortcomings. In 2001, two autonomous agencies (*EMTUR* and *Dirección Municipal de Vialidad*), implemented actions to harmonize information systems for procurement, bookkeeping, treasury, human resources and tax administration. The new information systems are Client Server and share a single data model defined and maintained by the Municipality, following a competition scheme – different software applications compete over one unified and cooperative data model. Data integrity is guaranteed at DBMS level and data input is decentralized, being each area responsible for the information it manages. A web module allows budget publication on the municipal website, taking information directly from bookkeeping and acquisitions systems. This module also manages some procurement process tasks such as receiving suppliers offerings, tracking purchases and payments as well as acquisitions and prices.

Pending Actions. Having a unified goods and services catalog, an official land register and a taxpayer census is fundamental for any e-government project. A unified municipal goods and services catalog was defined in order to have better budget and acquisitions control. This catalog will be read by all municipal budget and acquisitions information systems, and only goods and services from this catalog will be taken as valid. A working commission was already designed for catalog definition and its continuous update. On the official land register unification and actualization, it must be said that, today, different municipal dependencies have different official land databases individually updated and not integrated among them. On the other hand, the official register database used for municipal tax generation is outdated and this causes lower tax assessment and collection. Through a commission that will be integrated by municipal employees related to different official land registers, these databases will be unified and updated in order to improve tax collection and land related information services. Concerning the taxpayer census unification, up to now, taxpayers aren't uniquely identified at municipal databases and the same taxpayer is referenced in different ways through different information systems. This situation complicates taxpayer status tracking and improvement of tax collection. Ought to this situation, a centralized and unified Municipal database (taxpayers, suppliers, etc.) will be created and updated periodically. Agreements will be signed with different organizations and companies that offer information crossing.

Related URLs: www.mardelplata.gov.ar is the current municipal website, which has not been updated yet and. The link "*Turismo*" leads to the *EMTUR* website).¹⁶

¹⁶ Other sites related to Mar del Plata are:

- www.administracion.es (National Spanish citizen website. See link "ciudadano") - www.bcn.es (Ajuntament de Barcelona) - www.cityofsydney.nsw.gov.au (City of Sydney – The Official Site) - www.BerlinOnline.de/homepage (Berlin Online) - www.london.gov.uk (London Website) - www.city.toronto.on.ca (Official Web Site of The City of Toronto) - www.amsterdam.nl/e_index.html (Amsterdam Website) - www.comune.milano.it/hp.html (Comune de Milano – Il portale ufficiale della città de Milano) - www.ci.boston.ma.us (City of Boston)

6. Conclusions and Recommendations to Advance E-Government in Argentina

General Observations

Critical conditions for the success of the e-government programs in place in Argentina are still missing. Chief among them are:

- real commitment at the political apex and buy-in at the cabinet, possibly for lack of a concrete understanding of the benefits and requirements of electronic government, and because of economic and institutional decentralization pressures;
- willingness of government agencies to cooperate in the formulation of common policies and discipline in implementing them instead of fighting for turf and resources; and
- enforcement of rules and standards through incentives and penalties in the budget process, which was not tied operationally to the e-government initiatives.

As a consequence, there has been a proliferation of different architectures, systems and applications; high cost disparate and low volume purchasing practices; absence of standards for service quality and content; and little if any follow-up to ensure effective results. This assessment has been recognized by the Government officials interviewed by the Mission and has been confirmed by private sector representatives.

There is a presumption, while obviously doing injustice to many of the initiators, that individual agency programs appear more a grab for resources and turf than a commitment to results. While program objectives invariably are desirable and meaningful, they rarely are unbundled operationally into effective action programs. Specific target setting – output rather than input – is virtually absent among government programs. As a corollary, there is little accountability. Getting more mileage out of present agency-centric programs, i.e. creating economies of scale and scope, would be to subject program funding to a functional unbundling of its various elements (which typically would comprise infrastructure, equipment, connectivity, training, content, operation, usage, monitoring/evaluation) and corresponding matching with budget resources. Such a procedure would allow breaking down silos, assessing competencies and comparing costs across agencies. The present predominant silo configuration of programs is an obstacle to efficiency – each and every institution wants to have knowledge economy attributes and demonstrate that it is playing a leading encompassing role. The following sections of this chapter detail some examples that confirm these general observations.

ONTI: The Driver of E-Government?

ONTI has not been effective so far as the government's designated lead agency to drive the move to e-government. The overload from the combination of both planning and implementing responsibilities, and the placement as an office at the lower end of the administrative hierarchy overtaxed its capacity and its ability to deliver on its demanding mandate.

One example is provided by the project to set Technology Standards for the Public Administration (ETAP) exemplifies the problem. Intended to set rules and regulations for the acquisition of information technology equipment and services by the public sector, the Division in ONTI responsible for ETAP did not have the power to enforce them, leaving it up entirely to the various government organizations to proceed as they deem fit. As a consequence, disparate systems and applications developed, raising costs and causing problems of interoperability. An efficient ETAP would make sense not only to reinvigorate the task of setting standards for the procurement of ITC equipment and services in the public sector but to extend it to other areas, including standards for (i) information security, (ii) system interoperability and eventually common architecture; (iii) metadata; (iv) format and content of public websites; and (vi) digital signatures.

Similarly, ONTI was given a mandate to develop the regulations for digital signature (PKI), based on pertinent legislation in 2001. This initiative was intended to lead to a significant acceleration in inserting Argentina into the global information society and new economy. While ONTI has elaborated a detailed technical framework and regulations, in a consultative process with representatives of industry and civic society, lack of agreement on the norms for digital billing are holding back the usage of digital signatures.

Turf Battles to Control E-Society Programs

Furthermore, the PSI is an example of fallacious first best attempts under conditions of administrative weakness. By placing this ambitious program under a single agency, the government doomed it to failure at the outset. Wrangling among agencies for leadership, and shifts back and forth depending on the influence of individual ministers in frequently changing administrations, complicated implementation of initiatives and made the intended management oversight impossible. A telling example is the largely effective effort of the Secretary of Communication to block funding for PSI, when it laid claim to the program while it was vested with the Secretary of Science and Technology in 2000 and part of 2001.

Two “Single” Portals with Overlapping Functions

Two initiatives of the Government for improving governance and public services (*Nacion.ar* and *Gobiernoelectronico*) have clearly failed to accomplish their service objectives. While the two web platforms reportedly have adequate technical functionality, they do not offer the information or interactivity for which they were built. The overriding shortcoming of the Government’s approach was to focus merely on the enabling functions of ICT applications without taking on the hard tasks of political coordination, content management and back office reengineering. Furthermore, these programs have distinctly overlapping if not identical objectives. There is no obvious reason why they could not have been consolidated or coordinated, at the minimum. As such, the intent of creating a ‘one window’ access to the administration was practically undermined at the very start. Different institutions developed both portals independently of each other, with virtually no participation of clients and upstream agencies. Failure to demonstrate to pertinent public agencies the opportunities to perform better their respective responsibilities, and ever-present administrative jealousies prevented effective content development and portal connectivity.

The portal *Nacion.ar* has functionality for an exchange to post job vacancies in the public administration. However, this feature has not been put into practice because the Ministry of Labor did not cooperate. Similar lack of cooperation from other ministries has limited the offerings on the two portals to brochure ware type information, in some cases a mere listing of agencies rather than services. While the portals have inquiry functions, their response capability is sharply limited and they cannot perform transactions.

By developing two portals with similar functionality, the government is creating a high-cost architectural platform for electronic public sector interactions. Instead of agency driven initiatives, the Government should have been seeking a complete solution for a common scalable and expandable web platform of the administration. This would have allowed efficiency gains in the development of web application tools, system integration, and web and data server management.

Strengthening Transparency through E-Government – Not Much to Show

Aware of the importance of improving transparency of public affairs as prerequisites to stimulating economic growth and engendering public confidence, three major initiatives were taken by the Government:

- Inclusion of transparency as a priority in the National Plan for the Modernization of the State;
- Creation of an office of anticorruption in the Ministry of Justice to be managed by an authority not linked to the government party; and
- Enactment of the law of fiscal responsibility. Passed in 1999, it mandates the improvement of public administration through increased openness and creates, in this context, the *crystal.gov.ar* portal as the site of public transparency of the Argentine State.

The results have fallen far short of expectations. The Plan for the Modernization of the State is a transparent shell; it does not establish concrete actions or obligations to promote a major transparency in the functioning of the administration and judiciary. Meanwhile, the Anticorruption Office has given itself a mandate to probe officials of previous administrations without apparent concerns for the performance of officials in office. The fiscal responsibility law is without teeth in that it does not establish an obligation or enforcing mechanism to comply with the mandate of transparency. Hence, actions to improve transparency have been left to the discretion of individual political decision makers and civil servants.

The *crystal.gov.ar* is a portal based initiative to promote the transparency of the public administration and was designed to inform about objectives and results of the public administration, legality of government actions and fiscal relations between the federal and provincial governments. This is to include, among others, information on the execution of the public budget, purchase orders, public debt, and employment and salaries of public officials. The portal would draw on contributions from NGOs on issues of governance and be audited by the ‘Transparency Forum’. It represents an ambitious, and fundamentally well designed, effort to involve citizens in overseeing the conduct of public functions and thus improve governance and increase transparency. The assignment of important functions to NGOs is a notable feature of this program. The portal has been included in a World Bank reference of international practices in the area of transparency and anticorruption. However, reality on the ground does not conform to intent or initial kudos.

In effect, *crystal.gov.ar* has been atrophied to presenting largely irrelevant and mainly outdated information. It is a telling example of how a laudable intent will fail because of incomplete initial analysis of conditions for success, haphazard implementation and lack of political will to intervene when the going gets tough. The main causes of the shortfalls of *crystal.gov.ar* are:

- unwillingness of respective agencies to provide pertinent and updated information;
- inability to create official links to the responsible ministries and to connect interested users;
- lack of sustained financing; and, perhaps most importantly,
- resignation of the NOGs, which eventually withdrew from the portal.

The government reportedly did not extend the agreement with the NGOs and had them vacate their site at the portal, even though there was no cost implied in the former and little effort in the latter. At last count, staff of the portal has dwindled to one employee and it reportedly has ceased to produce and function. A serious effort would have required, from the start, an organizational charter akin to a regulatory agency with a clear mandate, autonomous functions, independent budget, legitimacy to request information and oversight by distinguished Argentine personalities. In the absence of these conditions, *crystal.gov.ar* constitutes an opportunity waiting to be reinvigorated and properly structured. At present count, it has generated a placebo effect at best.

Recommendations

Beyond the menu of desirables, in Argentina, at least, there is a need for:

- a clear plan of enforcement and decision rules;
- realistic budgeting;
- adjustment to implementation capacity;
- accountability of managers for concrete results;
- predominant operational and less conceptual orientation;
- incentives for performance;
- change of mindset from control of resources to delivery of results;
- feedback loop to reallocate resources in line with actual performance.

The following would be among the prerequisites that Argentina should follow for an effective e-government effort:

- engender political leadership by making a convincing case of the benefits of information technology applications, while outlining realistically the requirements for successful implementation;
- develop a prioritized operational strategy, based on realistic cost benefit assessments that would lead to system interoperability (in the short term) and common architecture (in the medium term); eliminate redundancies and overlays; and harness gains from economies of scale through common standards and pooling of purchases;
- promote buy-in and commitment through early substantial involvement of stakeholders, prominently including civic society representatives, to avoid the ultimately self-defeating agency centric approach;
- separate planning and monitoring functions from implementation functions in order to avoid the 'super charged authority' syndrome and conflict of interest problem;
- enforce compliance through suitably structured budget processes that provide incentives for good and deficient performance;
- institute a monitoring and evaluation system as a feedback loop into the budget and public information process;
- build an effective planning and monitoring agency.

Both institutional and functional changes in the set-up to promote e-government would be necessary to meet the above prerequisites. In order to avoid the present gridlock of responsibilities and authority, consideration should be given to separate planning and monitoring from implementing and coordination functions. Conflicts of interest should be avoided and the coordinating oversight authority should be placed at the top of the institutional hierarchy. This may imply, among various possible options:

- changing ONTI's present line position into an administrative arms length ad hoc charter, under mixed public private supervision, to help to insulate this body somewhat from the endemic intra government turf fights, and to upgrade the prestige and visibility needed for preparing a vision and strategic plan for e-government, while at the same time allowing it to be a neutral auditor of the effectiveness of program implementation;
- assigning specific implementing functions to the line agencies according to their mandates in order to align closely responsibilities, authority and accountability. This would provide incentives to agencies to pursue their core functions instead of branching out into lateral and invariably into high cost--low effect activities;
- vesting responsibility and authority for inter-agency coordination in a body with line functions at the cabinet apex, i.e. the Chief Cabinet Office. This body would also have responsibility for vetting the e-government vision and strategic plan, and it would have a consultative mandate in the budget planning process in order to ensure performance based funding. As such, the newly configured ONTI would submit its plans and audits to this body.

Under present difficult political and financial circumstances, any steps towards e-government will have to be limited yet concrete. Innovation pilots with high visibility albeit low cost that would be building on operable start-up initiatives of capable and committed public officials, appear to be the best way to go in the short term in order to build credibility with the public and to create the momentum for subsequent large scale programs.

This approach should be seen also in the context of international support for administrative reform and corresponding ICT applications. Largely silo-based programs in narrowly agency defined contexts have been fragmented and ineffective. A first order priority would be to create a coherent framework that would show the interrelationships of individual agency programs and determine the key parameters that would govern these programs. Creation of a coherent framework to show the interrelationships of individual agency programs and determine the key parameters to govern these programs would be a first order of priority. Attempts to create islands of effectiveness and efficiency, say the Ministry of Health, will not succeed, as has been shown, unless they are placed in a common framework.

Annex

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REFERENCES

- American Society for Public Administration (ASPA): Jim Melitski's article on *The World of E-government and E-governance* at <http://www.aspanet.org/solutions/egov.html>
- De Michele, Roberto: *Harnessing Information Technology to Increase Transparency and Control - The Financial Disclosure System in Argentina*. Global Forum against Corruption and Safeguarding Integrity. The Hague, 2001.
- Federal Republic of Brazil - Ministry of Planning - Secretariat for Logistics and Information Technology: *Brazilian Policy for Electronic Government*. Document presented in the Seminar Using Knowledge for Development - Brazil – India – China Forum. London, March 2001.
- Gobierno de la Provincia de Buenos Aires: *Análisis de Situación actual de la Red Provincial*. Dirección Provincial de Informática y Comunicaciones. La Plata, March 2002.
- Heeks, Richard: *Building e-Governance for Development: A Framework for National and Donor Action*. Working Paper No. 12. Institute for Development Policy and Management – University of Manchester, Manchester, 2001.
- Inter-American Development Bank: - <http://www.iadb.org/regions/re1/ar/imp/ar1164imp.pdf> - Municipal Reform and Development Program.
- Kalathil, Shanthi and Boas, Taylor C.: *The Internet and State Control in Authoritarian Regimes: China, Cuba, and the Counterrevolution*. Information Revolution and World Politics Project. Global Policy Program. Carnegie Endowment for International Peace Working Papers. Number 21. July 2001
- Office of the e-Envoy: *E-Government - Benchmarking Electronic Service Delivery*. London, July 2001. <http://www.e-envoy.gov.uk/publications/reports/benchmarkingV2/intl-rep.pdf>.
- Osorio, C., Orrego, C. and Mardones, R. *"Technological innovation in public sector reform: Chile's public procurement e-system"*, PREM notes, The World Bank, number 50, January 2001. (PDF version)
- Pesce, Miguel Angel: *Proyecto de Modernización Tecnológica del Gobierno de la Ciudad Autónoma de Buenos Aires* – Power Point Presentation – IADB Seminar on E-Procurement – Washington, DC, February 2002.
- Piatt, William and Segura, Jorge, from Booz, Allen & Hamilton, Inc.: *E-Government Strategies for Developing Countries* – Power Point Presentation – The World Bank, LAC PREM, October 18, 2001.
- Rossello, Renato: *Recomendaciones para plan de acción 2002 de la Dirección General de Informática y Telecomunicaciones de la MGP*. Mar del Plata, December 2001
- The World Bank: *Chilean Tax System Online* – http://www1.worldbank.org/publicsector/egov/chile_taxcs.htm
- The World Bank: *Chile's Government Procurement E-System* – http://www1.worldbank.org/publicsector/egov/eprocurement_chile.htm
- UNPAN (United Nations Online Network in Public Administration and Finance) – <http://www.unpan.org/egovgovernment.asp#wbegovernment>
- Vikas, Nath: *Networking Networks for Empowerment and Governance*. Global Development Network 2000, World Bank, Japan (under publication and copyrighted) – www.cddc.vt.edu/digitalgov/gov-menu.html
- Vullo, Gustavo A.: *Instrumentos y Avances en la Administración Pública Nacional para el Desarrollo del Gobierno Electrónico*. Oficina Nacional de Tecnologías Informáticas, Subsecretaría de la Gestión Pública – Jefatura de Gabinete de Ministros. Buenos Aires, March 2002.

