



## Case Study

# Chile

## E-Gov Experiences and Lessons

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In the last decade, Chile has experienced strong economic growth, cut its poverty rate in half, and is striving to maintain its competitiveness in the global context. Chile is also deeply committed to strengthening its democratic processes and institutions. One way is through electronic government (e-Gov).

E-Gov can be defined as the public sector's use of technology, especially the Internet and World Wide Web, to improve its information, communication, and service delivery functions, as well as its constituents' access to such services.<sup>1</sup>

The Chilean experience with e-Government demonstrates how progress can occur even though it may be irregular and imperfect. The case study illustrates some of Chile's e-Gov experiences that may be relevant to other developing countries.

## Lessons

*The actual “implementation” of e-Gov is not as simple and clear cut as espoused by enthusiasts.* Even if a carefully conceived vision is adopted and then effectively translated into directives, action plans, and resources, actually “doing” e-Gov takes substantial time and effort by all involved. The processes involved in creating and implementing e-Gov can be complicated and slow.

*The government must assume a key role in leading the process, particularly in the early supply-driven and market-creation moments.* Historically, people’s expectations have been that the government would take care of social well-being and the common good, even in times of global market forces and concurrent market paradigms. While both the private sector and civil society entities are increasingly taking on many traditional government functions, the government still has an opportunity to exert leadership in steering society towards modernity. E-Gov can be key in this process especially where weak civil society and business conditions prevail. It is up to the government to create the initial demand for e-Gov. Government can do by providing the products, services, and the market creation for e-Gov itself, as well as the technological and societal conditions for it to advance. E-Gov starts as a supply-driven challenge.

*Progress toward e-Gov systems can be made even if enabling conditions in society are still absent or incipient.* The rationale for e-Gov is also global and not just internal. An e-Gov agenda also must work concurrently in providing, facilitating, or enabling the technological, social, and cultural-educational conditions that, in ideal terms, would precede the development of e-Gov solutions.

*E-Gov can be used as a tool for enhancing a country’s economic development and global competitiveness.* In Chile, a powerful argument for e-Gov has to do with the dynamics of economic globalization. Information and communication technology (ICT) and electronic networking (e-networking) provide key competencies for strengthening capabilities and conditions for competing in the global arena. E-Gov can serve as a catalyst for a whole-country commitment to strengthening technology capacity, which is increasingly essential for global competitiveness.

*The progress, sustainability, and success of e-Gov initiatives are contingent upon adequate demand for the information or services provided.* Demand generation may be weak or atypical at the beginning of e-Gov initiatives since pioneering agencies are very focused on the service they provide, such as taxes. Others may need to wait a while before their actual constituents develop an online presence. But ultimately, the initiative is judged by its actual reach and the quality of service it provides. Thus, even if the users and audiences are potential and hypothetical at the beginning, a citizen-oriented perspective must prevail in design and construction of web sites and e-services.

Also, it is better to have (constructive) criticisms and even negative evaluations later, when users are confronted with e-Gov offerings, than not to undertake the initiatives. The public needs to see an actual offering before they can imagine how it could be better. In this way, even early e-Gov ‘failures’ provide good lessons on how to create, sustain, and augment demand by citizens and businesses.

*A concerted effort involving all parties is needed, including the public sector, the private sector, and civil society at large; yet such initiatives may well be disjointed and erratic at times.* The government cannot manage all activities or conditions needed for e-Gov to succeed. Some are market-driven or correspond to private sector initiatives and investments. Others come from civil society and business contributions to creating a favorable climate, more demand, and better usage conditions, e.g., access points, training, content provision, and actual projects.

*The private sector needs government “signals” to advance on its own and forge alliances and partnerships towards electronic initiatives.* The government can send ‘signals’ to the private sector that encourage or discourage forays into electronic commerce. Examples of auspicious signals might include a loosening of state control of telecommunications, for example, or a drop in duties for imported computer equipment. In response, the private sector should be more proactive. There is a limit to what governments can do to enable concerted, nation-wide efforts, especially where enabling conditions are inadequate, inconsistent, or inequitable.

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In the 1990s, the early efforts and Internet presence were those of a few noted academicians and university departments, followed by a handful of public agencies and a few private pioneers. These and similar emerging actors eventually came together, formally, in mid-1998 via a Chilean Presidential Commission on ICTs and development.

At this time, a low competency level of human resources was evident despite a good ICT infrastructure. At least 30 governmental web sites were online, and most public agencies reported some sort of intranet, though email and the Internet were restricted to higher authorities.

In January 1999, the Presidential Commission on ICTs presented its report to President Eduardo Frei. The report delineated a country strategy for ICTs, overall, and not merely e-Gov (which was not the top priority then, though the Commission set high standards for government's role). Its purpose was to open a debate, search for a broad consensus, and advance specific proposals.

Among related actions, a Presidential Instructive on Public Sector Management followed. About 70 public agency web sites were reported, though Internet usage was still quite low. Some pioneering initiatives were underway, which later will be shown to be exemplary, e.g., taxes and e-procurement.

The top ICT news in 2000 was Ricardo Lagos' Inaugural Presidential Address to Congress, which emphasized the importance of the Internet and new technologies. The President stated that Chile could be at the vanguard of using ICTs for development. Though most families could not access them yet, the conditions were in place.

An Inter Ministerial Committee for ICTs was created, and the President subsequently headed a joint public-private working mission to Silicon Valley and Microsoft. (Later, a donation from The Gates Foundation was received).

A Presidential Instructive on Citizen Participation, aimed at public services, focused on tools to bring government closer to civil society. Ministries committed to targets to be achieved, nearly a third of which were directly related to e-platforms for government-citizen interaction.

In May 2001, the Presidential Instructive on e-Gov was released, focusing on three areas: Service to Citizens (including Businesses), Good Government, and Democratic Development. The Instructive put forth orienting guidelines and detailed task guidelines that public service agency heads must follow to achieve objectives in the three key areas. Each agency prepared plans within the next six months.

A new Presidential Instructive dealt with Infocenter development. At the time, over 300 government web sites were online from Ministries and selected public services, plus another 100 developed by State enterprises & Embassies. The "Trámites" Portal (citizens' transactions with governmental agencies) was started, and the Government portal was entirely redesigned.

In early 2002, 98% of public agencies had portals or web sites. Three key portals were defined and operating: information and gateway (main portal), services (tramites), and topical or sectoral portals/sites, e.g., enterprises, SMEs, and major Ministries. Services to citizens increased (35 services online were expected by 2003), and quantity of information had increased.

The Government's e-Agenda 2002-05 began, as did the first public debates about direction and progress, including what else the government, the private sector, and civil society needed to do. After what seemed like a hiatus, e-Gov and e-society seemed to be moving quickly again with multiple initiatives addressing both supply and demand factors.

Even where the State, the private sector, and civil society share a vision of their country's "electronic-enabling," E-gov tends to advance in irregular ways. Overall, however, it is a synergic process, with multiple and heterogeneous initiatives mushrooming, at times even conflicting or short-lived. While strategic integration of e-Gov and e-country initiatives is desirable, the trend may be that, at times, they are short-lived, ad hoc, or even conflicting. Indeed, it is likely that things will not proceed so smoothly or coherently. Thus, a continued observation and analysis of trends, events, and the multiplicity of projects is needed, as is continued dialogue among all involved parties.

*E-Gov progress, in terms of governmental accountability, must be in consonance with broader government principles, agendas, and programs, particularly good governance and service to all citizens.*

E-Gov initiatives—such as making information publicly available or enabling electronic filing of forms—start to impact the public sector's own processes and structures early on. The initial changes in work processes to accommodate online service provision, for example, are apparent almost immediately. Yet the deeper impact on public sector machinery, organization, and "culture," as well as the institution or agency as a whole, take time. Sound principles and leadership are needed for this transition, though the opportunity for innovation and reform exist from the moment the agency goes online. Good governance provides the rationale for the changes the public sector needs to really transform itself.

**Ultimately, the move to e-Government tends to promote ICT usage in society**

As the government integrates e-Gov processes, structures, products, and services into its system, it sends a message and sets a course for society as a whole. The public sector's move into electronic functioning can spark a similar move by other sectors, thereby heralding the country's entrance into the global "information society" arena. A forward-looking government that has embarked upon the e-Gov path is not only engaged in e-Gov but also in promoting ICT usage in society generally.

With these broad observations in mind, the timeline puts Chile's experience in context.<sup>2</sup>

## Vision and macro-strategy

In late 1998, the Presidential Commission on ICTs, SubCommission on Citizens and Equity, stated the following:

"Chile requires conviction from the State. Chile needs a Visionary State: a conviction that today's opportunities can decisively influence tomorrow's economy and society. An Enabler State: identify the required factors for ICT development by civil society and economic agents. An Implementer: The State must be a model in the adoption of ICTs."

It then proceeded to detail some strategic points for each of those roles. Irrespective of the key strategic initiatives each country may see as most pertinent, the tripartite role for the State is valuable as an integrative device for an e-agenda that advances both e-Gov specifically and some e-society enablers and interventions. Among such points, as noted by the Commission, are the following:

### Visionary

- Use e-networks as strategic for national development
- Adopt universal access as a Nation's Task
- Create a shared vision: equity and productivity as horizons
- Provide leadership in creating basic infrastructure for transition into a knowledge society

### Enabler

- Enact necessary laws and regulations to "incentivize" private effort and social equity
- Reinforce civil society and autonomous initiatives to develop tools and contents
- Provide funding for competitive proposals
- Address privacy concerns

### Implementer

- Must be done under state leadership and coordination. There is no other social or business actor that can achieve this mission.
- Modernizing the state implies introducing ICTs as fundamental tools, demanding also a redesign of its organizational culture.
- Develop ICT solutions to facilitate citizens access to information about government programs and benefits.
- Adopt ICTs as a management model within the State and in relation to its constituents.

- Create an empowered task force with immediate assessment and decision-making responsibilities to unblock government barriers and problems and to multiply government's technical and communicative assets.
- Identify real information demands and define target audiences.
- Develop flagship projects and communicate them vigorously.

The tasks for the State related not merely to e-Gov but to ICTs for the country's overall development. They were presented as inclusive, involving all social actors, with each contributing to the nation's effort. This underscores the fact that a vision for e-Gov is part of a broader vision for the role of ICTs in national development, as well as in congruence with good governance principles.

### Main programs and actions

This case study is not a comprehensive overview of Chile's e-Gov progress. Instead, it selects a few highlights to illustrate what a more comprehensive strategy, dealing with several aspects of e-Gov, might look like.

The ICT Presidential Commission reported in 1999 that its recommendations were a strategic wager for the future, with fast institutional adaptation needed. Eleven guidelines and 61 specific proposals were presented, under three main objectives:

- Universalization of access
- Development of competitive capabilities
- Modernization of the state in the service of citizenry

Subsequently, the e-Government agenda and implementation coordination were set up under the Ministry "Secretaria General de la Presidencia" and within "PryME," the overall State Reform and Modernization Program.

It is significant that e-Gov is part of PRyME, the government's agenda of key reforms. The goal is to create a democratic, efficient, and flexible state at the service of citizens. E-Gov is one of its main components, but other, concurrent elements include institutional and political reforms, public management modernization, decentralization, transparency, and participation.<sup>3</sup>

The e-Gov vision and principles are similar to those found elsewhere, that is, citizen-oriented, easy-to-use,

available for all, and transformative but evolutionary. The three areas are described below:

### Services to citizens:

- promote access to ICTs
- integrate official services
- aim at "single window" service enabling users to access complete information or items on one web page
- enact identity and security norms

### Modernize state (Good Government):

- redesign official processes with ICT help
- provide continuing education and training
- create supportive information systems
- promote networking and communications with ICTs
- devise standards
- monitor and evaluate progress and impacts
- aggregate government demand

### Advance democracy:

- provide good, quality information, general and specific
- develop a government gateway-portal
- achieve good, user-oriented web page development
- devise quality standards for contents
- take steps to ensure transparency
- elicit and listen to citizens' opinions and inputs

### Citizens and information

This section describes the use of the government's main portal as an information provider, with services offered to citizens and to businesses (some actually transactional), and some of the internal (or back-office) processes of e-Gov.

The Chilean experiences illustrate some of the conditions, enablers, and inhibitors to e-Gov development, as well the roles of the private sector and civil society as contributors.

The flagship for the information function is the government's portal at [www.gobiernodechile.cl](http://www.gobiernodechile.cl). At a general level, it is an expression of transparency, as well as the current step in advancing democracy and citizen participation. Designed as an informational portal and a gateway to government ministries, agencies, news and information, it was relaunched to add additional features to the original



1. Chile's e-government portal; 2. Chile's website for Education; 3. Chile's website for Health; 4. Chile's website for telecommunications; 5. Citizen-government communication; 6. e-government site for procurement; 7. Chilean site for paying taxes.

portal, [www.estado.cl](http://www.estado.cl). The new portal establishes a quality standard, and, while not all other government web sites are identical in design, at least the government's unique logo or corporate identity is present in all of them.

Given the size and complexity of the public sector, the portal is a welcome improvement for governments' online presence. However, a portal by itself would not be as indicative of a government's commitment to e-Gov unless the major public sector ministries or agencies also were progressing in developing their own specialized portals. In Chile (and elsewhere), it is interesting to look at sectoral web sites, too, and gauge their degree of development vis-à-vis the portal yardstick.

### Services to citizens

#### Portal Trámite Facil (“easy transaction”)

Trámites are the usually undesired but necessary interactions and relationships citizens have to conduct in any government office anywhere. Push papers, come back next week, you forgot this document, now go to the next office or agency, and so on. By 2001, the portal intended to facilitate those inevitable “trámites” had provided online information for around 700 of them. Of those, 32 could be done online. By early 2002, e-Gov had advanced to 70 online trámites, and the portal had new information for about 1,400 procedures. It received some 30,000 visits per month.

#### Paying Taxes Can be Fun — The SII Portal

One particular Chilean web site has captured worldwide attention. The Internal Taxation Service (“Servicio de Impuestos Internos” at [www.sii.cl](http://www.sii.cl)) has been a pioneer in developing transactional e-services and has had tremendous success in attracting potential taxpaying citizens (and businesses) to online filing. Started in 1998 by providing taxpayer information online, the site then went interactive and progressed to online filing in 1999. The number of people filing taxes online is impressive, and the site is a comprehensive, authoritative, and friendly portal providing other interactive features to users as well.

By the May 2002 deadline, online filing had surpassed paper-based filing—over 1.1 million (or 55%) filed online, compared with 925,000 not doing so. The 2002 e-filing represented a 45% increase

from 2001 (788,000 filings, or 41%). Previously, in 2000 and 1999, 26% and 5% of taxpayers had used the online procedure, respectively.

It must be noted as a lesson that the SII actually helps taxpayers pay. Of the 2002 online declarations, 43% had been prepared by SII and accepted or amended by those receiving them. Thirty seven percent of taxpayers chose to prepare their own using the electronic form in the SII portal, and the final 20% used commercial software that SII authorized.

Incentives are used to help comply with and switch to online filing—for example, e-payers were provided with a few extra days to submit. Not only did people report the system to be trustworthy, safe, and fast, but the “back-office” performed well, too. The system could handle the last hour rush, literally, processing over 9,000 returns received in the final hour. Still, the agency is not satisfied. It complains that 300,000 taxpayers chose not to use the prepared tax document and thus missed the opportunity for a faster, neater, and less error-prone procedure.<sup>4</sup>

### Services for business

#### Towards e-procurement

Though several Chilean government portals and web sites are emerging to serve businesses in general<sup>5</sup>, the most well known site deals with government purchases. A much-cited and referenced document synthesizes the purpose and origins of this “public procurement e-system,” as of January 2001.<sup>6</sup>

Historically, the government's main buyer was DAE (Dirección de Aprovechamiento del Estado, or State Purchasing/Procurement Directorate, at [www.dae.cl](http://www.dae.cl)). Due to its rapidly aging set-up, however, several agencies developed their own systems. As part of a Public Management Modernization plan, public procurement was set up for substantial overhaul, leading to a Government Procurement Act in October 1999 and a pilot of the then [www.compraschile.cl](http://www.compraschile.cl) site, later redone and revamped as [www.chilecompra.cl](http://www.chilecompra.cl).

Serving as the e-meeting place for buyers and sellers, the web site represents a G2B2G (government to business to government)<sup>7</sup> interaction. Despite current limitations on going to full scale and engaging in actual e-procurement, the site offers businesses working with government a number of benefits, as

well as important savings for government agencies—above and beyond contributing to the critical matter of public transparency. In addition, the site is an interesting example of a public function operated by a private company, Sonda.

Currently, the site is called the Information System for Public Sector Purchasing and Contracting. The user may proceed to Acquisitions (what), Requesters (buyers), Providers (registration), Reports, or Data. The site publicizes procurement and provides transparency.<sup>8</sup>

The web site is still in progress as an enabling portal for procurement. Currently, it is a contact site only, with online completion of transactions awaiting passage of a law still under discussion. As it stands today, the site has registered about 12,000 potential providers, and many are SMEs. In its role as contact point, registered providers offer their products, public agencies post requests, and the e-system matches them and sends an email to potential vendors. Transaction is completed offline.<sup>9</sup>

One expert points out that e-procurement can be strategic. From a purely informative use, the expert explained, it could evolve “into a government privileged tool to stimulate SMEs to use e-commerce,” adding that when government starts using e-purchasing, it forces providers to modernize, too. And cost reductions are significant.<sup>10</sup>

### Assessment of government’s web presence

An evaluation of 162 government web sites<sup>11</sup> concluded that contents are not user-oriented and that user-focus and service vis a vis design, navigation, functionality, and interactivity are poor. But what matters is that these web sites had to be developed before they could be assessed—though certainly pre-launch testing is essential—and that people learn and correct the initial mistakes. To assist the process, standards and “web design clinics” are in progress nowadays. What also matters is that moving from what a public agency deems worth communicating on its own terms to what a citizen or simple-user needs and can interact with usefully is not easy. This is especially true when e-Gov sites make the difficult transition from information provision only to service delivery as well.

### Modernizing the State

A government online, as in a portal and web sites, does not exhaust e-Gov at all. It is a necessary first

step, since it sends a signal of commitment and unleashes processes. Meanwhile, the usual public sector management challenges continue, plus all the ‘within government back-office’ work that accompanies and makes e-Gov’s most visible expressions possible.

In Chile, the Presidential Instructive on e-Government (May 2001) quickly produced its first results: 85 Implementation Plans expressed in some 300 projects, of which half dealt with internal management. (Egana and PryME, 5/01). Many of these go unnoticed yet are essential to developing e-Gov and improving services to citizens, even if they are unaware of or do not interact via e-Gov channels.

The heart of the matter, and the lesson, is that citizens may be better served by intra-government modernization as aided by ICTs and a web site may not be needed for such purposes. This is not to say that there should not be government web sites. Rather, it simply argues that e-Gov has more than one route to move along, and “webification” is not the only one.

Back-office developments for e-Gov include, in the current Chilean case, a number of cross agency projects as well as some high-impact, focused sectoral projects. Among them:

- Expanding Intranet usage
- Professional Development & Training
- Consolidated, full IT resources inventory
- ICT Management Units strengthening and enhancement
- ICTs for Financial Management
- Territorial Information System
- Five intra-service and three inter-service processes automated (relieving the citizen from moving papers from agency to agency)

One specific illustration of back-office improvements with ICTs concerns budget preparation. With the government’s Budgetary Office and Microsoft’s cooperation, the 2002 budget was moved along mostly via Internet. The Finance Ministry received 114 out of the 141 budgetary formulations for 2002 through the Internet. (Diario La Tercera, 28 ene 2002)

Progress on the long-term objective of the Single Window, however, has been slower. The *Ventanilla Unica* involves citizen-to-government interactions and transactions, and several public agencies may be involved in any one citizen request. It is far more of a

back-office effort than a web site e-meeting point between citizens and the public sector. Some 20 public services do some online transactions already, but they are not integrated as the single window concept predicates. Nevertheless, to date there are *ventanillas únicas* that simplify (one step, one place) some transactions that previously required several steps and processes.

Some critics point out that management improvements have proceeded far better and faster than organizational readjustments and that a few star projects obscure the fact that other services are not progressing fast enough.

### Conditions and enablers for take-off

Not all of the following conditions had been satisfactorily met or even partially achieved when Chile began its e-Gov efforts, whether as pilots, innovative projects, or in a more integrated fashion. The lesson is to proceed anyway and not wait until all e-ready conditions are met. Careful assessments can guide the priorities and pace of the process.

Some lessons emerging from the Chilean experience follow.

**Country infrastructure.** Both the country's ICT and networking infrastructure and the government's deserve careful attention. ICT systems may appear to be invisible if well-designed and delivering faultless performance, but, ultimately, ICTs, networks, and e-services are not virtual. They are supported by real, physical, technological equipment and competence. While market processes may help in rapidly developing and advancing the nation's ICTs, government must take special care in procuring or updating its own ICT systems.

Utreras notes that by mid-1998, one could observe "uncoordinated public services." Many had their own national network, all of them ad-hoc. It is time to have a Government Network." He adds that such a network is not about building an infrastructure but about a better use of resources and improvement of contents.

Most developing countries will find themselves in the same predicament. Many, as was the case with Chile, do not even know, systematically, what infrastructure and ancillary ICT resources they have, and an integrated inventory might be needed to discover what is available.

Though Chile had a relatively good ICT infrastructure, it was and still is unequal, socially and territorially. Therefore, some initial e-Gov initiatives were aimed at advancing the agenda where it was feasible, while better conditions obtained. It is only more recently, when infrastructure and access inequities were less pronounced, that a number of web sites geared to less favored social organizations and agents have appeared.

Another lesson is that one may in fact do nothing and simply wait for the infrastructure to improve itself, thus providing better ICT foundations over time. While this is not the best way to frame it, what is true is that ICT advances are extremely rapid, and some prior barriers and seemingly insurmountable infrastructural impediments have become non-problems with the passage of time.

**Access expansion.** Until recently, most estimates indicated that only 10 percent of the Chilean population had access to the Internet. Then, in 1999, the ICT Presidential Commission prioritized universal access at reasonable costs. Since then, national economic development and market forces, along with the government's enabling regulatory conditions, have produced substantial gains in access to ICTs and particularly to the Internet. In addition, targeted governmental interventions have been implemented to increase equity of access.

By mid-2002, 34% of Chileans had cell phones, which were widely used. Over a six year period, costs of cellular calls and Internet charges decreased by a third. (La Tercera, 6/02) Today there are five million cellular phone users and three million estimated Internet users, up from 300,000 as recently as 1999. Internet dial-ups are now 650,000, and there are 59,000 dedicated line connections serving 20% of the population.

Among government initiatives to increase equity in access are:

- The *Enlaces* Project, which establishes a virtual education community of teachers and students using a computer-mediated communications network linking all primary and secondary schools in Chile. Operating since 1992, *Enlaces* is now on the verge of reaching universal school coverage. A recently launched *Enlaces* extension is opening the first 500 schools to community members. Soon, at least half a million persons will have been trained for Internet use.

- The Telecommunications Undersecretariat ([www.subtel.cl](http://www.subtel.cl)) coordinates the National Program for Infocenters, implemented by several agencies (such as the Poverty Reduction Fund). It also manages FDT, the Fund for Telecommunications Development, originally aimed at rural telephony and expanded since to telecenters. After the pilots, 83 telecenter subsidy funds were awarded to successful proposals, and an additional 253 subsidies are in competition.
- Special Infocenters for SMEs are operating and will grow to over 100, as will a public-private partnership providing recycled computers to social organizations.
- With a US\$9 million donation from The Gates Foundation and a similar amount from the Government, 368 libraries will be equipped and networked by 2003. Installation and training is already underway.

As these initiatives illustrate, access can be increased by several means. SubTel estimates that by the end of 2003, 1,500 infocenters of all sorts will be operating, providing at least 6,000 public access points (4 PCs per site) to the Internet throughout the country.

**e-literacy.** Ultimately, e-literacy is not just for public servants but for the population as a whole. One cannot expect e-Gov to evolve into a demand-driven, service- and citizen-oriented program if there is no adequate e-literacy to drive it. In the long run, educational programs such as *Enlaces* will generate e-literate graduates. Meanwhile, however, the adult, out-of-school, and workforce population that lacks ICT and Internet skills cannot use e-Gov information and services.

Moreover, since most current and regular users of e-Gov services and information are already literate in ICTs and network navigation, they become the de facto standard for user-oriented web sites, thus decreasing their usability for ICT-non-literates. In this more encompassing way, e-literacy is necessary if e-Gov is to be a tool to help good governance and democratic enhancement.

#### Training and professional development

In 1998, a leading researcher noted that “specialized human resources are very scarce, and we face the paradox of having one of the best technical access systems in Latin America, but with professionals with

very low capacity levels to operate them.” (Utreras, page111)

Training and professional development for public servants is needed at all levels, notably the higher ones. Only recently, however, is public discourse on the need for ICT and Internet training surfacing on the public agenda and into specific initiatives, whether involving public service entities, universities, businesses, NGOs, or CSOs. The call is increasingly reflected in media coverage and op-ed pieces as well.

In addition to public agencies themselves, training beyond basic e-literacy must reach the general population. The pioneering telecenters in Chile, e.g., El Encuentro, Cunco, and Red Comunitaria, are exemplary in incorporating user training as a key service component. Indeed, nowadays, all the previously noted public access initiatives provide training services.

For example, Fundación Chile, a public-private entity, now certifies ICT aptitudes, aiming at certifying 10% of the workforce (El Mostrador, 10-1-02).

Teachers in Chile provide an excellent example of focused e-literacy interventions that evolved into personal and professional development. By July 2002, 41% of teachers had Internet access at home, and virtually all of them had access at their schools. Ninety percent use it for educational and professional tasks, with 67% of them trained through the *Enlaces* program. (Tercera, 7/02)

#### Research and Development

Chile seeks a high level of technology competencies. This goes far beyond e-Gov, but it is part of a government's macro agenda for ICTs, the Internet, and the fundamental enablers for continued national development. e-Gov is part of the package. Advancing development with the contribution of ICTs means providing the infrastructure, then guaranteeing equitable access, then developing good user skills and practices via e-literacy, training, professional development.

Still, it is not enough. After a demanding comparative study, Brunner (UNDP, 2002) forcefully set the challenge. “The results of the analysis show a worrisome picture: Chile is falling behind in the technological race, a fact explainable by the lags and weaknesses in practically all of the elements that [configure] its transference platform.” Such national technology capacities are what enable international competitiveness, “which is constructed. It is an acquired advantage.” The platform includes human

capital stock, R&D, ICT infrastructure, as well as specific factors dealing with economic and technological transference relationships.

While Brunner does not deal with e-Gov per se, he does point out the significance of shifting responsibility for R&D in technology transfer from the government to private industry, including universities. Ultimately, while the government may provide leadership, initiatives, and guidance for e-Gov, sustaining e-Gov and making it useful as a tool for development in a global environment will be contingent on a very strong human capital basis. In this sense, e-Gov interventions must be more than anecdotal if they want to catalyze societal impacts. They must be ambitious and exemplary actions that call upon all of society's innovativeness and capacities.

### Lessons

While most e-Gov initiatives are in fact implemented by public sector agencies, the lasting impact of e-Gov is only obtained when civil society and private sector entities and leaders are also involved. E-Gov is not an exclusively governmental intervention. Rather, it demands participation and commitment from the non-public sector agents and common citizens. For the most part, Chile has tried to involve all of society in its initiatives, directly or by the best available proxies. When some have not been able to reap the most immediate benefits, actions have been taken to address the obstacles, such as unequal access. Public-private partnerships are emerging, civil society organizations are undertaking relevant initiatives, and media are contributing to putting e-Gov into the agenda.

Perhaps the most enduring lesson is that building a culture of e-Gov in particular and, more generally, a culture of ICTs for development and for everyday life is a long road. That challenge alone is, by necessity, a full societal challenge and not merely one for the government. The trick is vision, coherence, leadership, executive capacity, perseverance, and inclusive involvement of many in a variety of diverse projects aiming at a similar purpose: an effective, democratic, and responsive government serving all.

1. It takes considerable persistence by recognized leaders and significant, visible products and public events to get e-Gov into the public agenda. A media strategy may be needed to make progress newsworthy.

2. Legal matters and regulations are not just a matter of the 'enabling environment.' Two key enabling laws are still in parliament (E-signature and authentication, and public sector e-procurement), and the existing privacy laws may need to be revised for the "e-times." It is not just a matter of Presidential Directives. Also, the success of SII online tax filing was enabled by a fast law authorizing it.

Pioneers may get lonely, and their successes cannot be extrapolated easily. The SII and the e-procurement cases are easily justified in terms of cost-effectiveness and are immediately productive. Most web sites cannot make a credible business case at all, given their aims and audiences.

3. New thinking and new practices are required regarding innovative alliances or cooperation between public sector agencies, businesses, and civil society organizations, notably academic institutions and ICT-committed development NGOs. Not all the content and services need to be generated, provided, managed or controlled by the public sector.
4. The quality of information and content in Chile's government web sites are not only a function of preexisting and continuing quality content developed within the public sector. It also has been fueled and stimulated by the quality of locally-produced content available from diverse private sector entities and civil society organizations, including online mass media, universities, and Internet portals.
5. Education is at the heart of ICT progress. No e-Gov, either supply or demand-driven, can prosper without continued, substantial, long-term human capital development.
6. Based on Chile's experience, Enrique Fanta, the Subdirector of the PRyME project, provides these lessons to countries embarking on e-Gov:
  - have an e-Gov policy (with vision and principles, supported at highest level)
  - establish a high level institutional setting for coordinating implementation, but with strong decentralization into public services

- define successive and consecutive stages (don't cross all bridges at the same time)
- develop global strategic guidelines, but promote a decentralized implementation. (Fanta, 2002)

Be aware of problems in implementing e-Gov initiatives, such as resistance, conflicts, lack of support, and an absence of newly demanded capacities and attitudes (loosely adapted from Orrego, 2001).

"Lack of adequate balance between speed, depth and comprehensiveness" (Orrego, 2001) is a recurrent challenge in broad, ambitious e-Gov initiatives. Alternatively, isolated projects may solve a very particular challenge but may not make enough of a global impact or produce momentum.

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## Footnotes

<sup>1</sup> Where enabling infrastructure, access, and usage conditions are widely available, proponents postulate that effective e-Gov initiatives and systems can contribute to increased civic participation in political processes, facilitate greater transparency, lead to more effective governance, and even foster desirable democratic trends in society. For a more complete discussion of e-Gov, see the model-of-use preceding this study of Chile.

<sup>2</sup> An impressively thorough and indispensable review of ICTs and Internet development in Chile up to 1998 is found in Utreras. It can be supplemented by a recent document by Orrego & Araya, 2002, as well as with documents available online at Chile's [www.modernizacion.cl](http://www.modernizacion.cl) web pages for e-Gov.

<sup>3</sup> See [www.modernizacion.cl](http://www.modernizacion.cl) for details on vision, principles and specific guidance for public sector authorities.

<sup>4</sup> Information obtained from web site, [www.sii.cl](http://www.sii.cl), May 10, 2002.

<sup>5</sup> See, for instance, the portal [www.sitioempresa.cl](http://www.sitioempresa.cl) hosted by the Ministry of Economy.

<sup>6</sup> World Bank, PREM Notes, written by Orrego, Osorio and Mardones.

<sup>7</sup> Government-to-Business-to-Governemnt

<sup>8</sup> Fanta 3/02

<sup>9</sup> La Tercera, April 01 2002, [www.tercera.cl](http://www.tercera.cl).

<sup>10</sup> Juan Rada, 2002.

<sup>11</sup> Paulo Saavedra, 2001. See [http://administracionpublica.uchile.cl/docs/ppt\\_paulo%20saavedra.pdf](http://administracionpublica.uchile.cl/docs/ppt_paulo%20saavedra.pdf) for his report. Later on, Orrego and Araya (2002) analyzed 17 sites, public and private, as regards their citizen-oriented perspective and functionality.