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The social impact of the Internet at the local level

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The social impact of introducing ICTs in local government and public services: Case studies in Buenos Aires and Montevideo

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Introduction: the reshaping of civil society

Civil society is in the process of reshaping itself. Computers have the potential for facilitating and continuously expanding the capacities of individuals within the institutions, businesses, organizations and governments where they work. The new information and communication technologies (ICTs) – the tools of the information society – are now working their way into all areas of activity: production, consumption, trade, administration, government, recreation, finance, business and education. Every sector of society now feels the need to find ways and means of seizing the opportunities offered by ICTs in order to enhance governance, to establish new communication channels between government and citizens, to create and strengthen community networks and to participate actively in the information society. “Citizen networks”, “electronic government” and “digital cities” are commonplace expressions today. They refer to new forms of interaction between citizens and local governments and to new concepts of urban policy, using the electronic media.

The urban landscape, the built landscape as much as the social one, has been irreversibly transformed in the transition between millennia. As citizens, we have also undergone a profound transformation in our perception of space, of time, of politics, of what is public and what is private, and of what is local and what is global. As Tsagarousianou, Tambini and Bryan (1998) put it, the development of ICTs has been largely responsible for the changes now affecting our cities and our contemporary societies.

In terms of local policies, telecommunications has transformed our cities into nodes of communication and computer networking has brought changes in municipal governments that facilitate administration, communication and

interaction with other levels of government and with the citizenry. At the same time, civil society and regional and national authorities are experimenting with various versions of “electronic government”.

“Electronic democracy”, as a means for making public institutions more responsive and accountable, has attracted the interest of academics, politicians and social activists since the 1960s when, imbued with optimism and faith in the democratic potential of new technologies, activists introduced a wide variety of communication media (such as free or pirate radio stations). Since then, the many experiments with remote communications, teleconferencing and interactive cable television have sparked much debate about the advantages and hazards of these technologies in social and political life (Tsagarousianou et al. 1998).

The concept of online government is nothing new: indeed, it has been talked of since the beginning of the Internet. Since the mid-1980s, the development of computer networks has significantly altered the terms of the debate over the democratic use of new technologies. Writers such as Rheingold (1994) maintained that ICTs have the capacity to challenge the monopoly of the existing political class over the means of communication and to revitalize citizen-based democracy. They could, moreover, empower grassroots groups to collect information, organize citizen initiatives, change public opinion and influence national and local policies.

What is new is the way Internet technology has evolved: electronic government is now possible, at least technologically speaking. Most of the software needed is already available. The next step must be a thoughtful debate about how we wish to govern ourselves.

The emergence of electronic government at the local level poses a number of key questions:

- Citizens must be able to have access to electronic government services from whatever terminal they are using, whether it is old or new, private, in a cyber café or in a community technology centre.
- Citizens must have access to technological tools, both in physical terms (e.g. through telecentre networks) and through educational campaigns for using these instruments.
- Citizens and community organizations must have legally enshrined rights to communication.
- Citizens must participate in the decision-making process. We need to understand how direct participation by urban residents affects these processes, the degree to which citizen involvement can impact policies, legislation and actions of local governments, and the mechanisms through which it can be done.
- Models must be selected for offering electronic public services, involving the online provision of municipal and other services. This will require methods for ensuring security, encryption, access, record-keeping, etc.

- Models of communication between citizens and municipal officials must be selected. Here we must identify the best model for each situation and local culture: electronic forums, chat lines, combination with face-to-face meetings, and others.
- The content of public sites and portals must be defined. We must decide what kind of local, regional and national information should be included, how forums and chat rooms are to be administered in order to ensure dialogue between citizens and officials, and how much detail the projects posted on those sites should have.

For the most part, technological solutions to these problems already exist or are being developed. Much more important is the human and social side of this question. What will happen when the most common democratic practices – referendums, consultations, electronic voting, etc. – move to the Internet? Will this enhance the commitment of civil society and its participation in decisions that affect the quality of life and the rights of citizens? Will it make public management more transparent and efficient? If it is to do these things, this interactive space must become a shared community resource, publicly administered and accessible, in order to help improve public policies and community participation.

Many experiments with electronic democracy (including the two studied in this paper) share a number of characteristics:

- The social players who initiate or participate in them see them as ways of revitalizing democratic politics, which for a number of reasons has lost its strength and dynamism.
- They are perceived as ways of reducing bureaucracy and making government more transparent.
- They are local or regional in nature and are closely identified with urban or metropolitan territories.
- They are based on similar technological infrastructure.

This paper relates the results of research conducted by a joint Argentine–Uruguayan team (from the Gino Germani Research Institution, Faculty of Social Sciences, University of Buenos Aires and the Carrera de Sociología of the University of the Republic in Montevideo), which represents the first effort at research into this issue. The cities of Buenos Aires and Montevideo were selected for comparative case studies because their geographic and cultural proximity makes it easier to appreciate the differences and similarities in urban and social uses of these technologies.

Our general objective was to evaluate the social impact of introducing and using ICTs in local government and in communication with the citizenry, as well as in the activities of citizens organizations that are seeking to become interlocutors with the local government. We investigated the use and effective scope of ICTs in internal government management, as well as in local efforts

to integrate the population into the information society. We analyzed the use and scope of ICTs in communication between local governments and civil society, and we collected and processed data on the way community organizations use ICTs. We paid particular attention to designing a research methodology specific to the issue at hand. We used both primary and secondary data, including electronic surveys, face-to-face and electronic interviews with municipal authorities, monitoring the progress of municipal web pages, analyzing ICT plans and their implementation in both cities, and tracking the use of ICTs by community organizations through electronic media surveys and, in the case of Montevideo, through personal interviews.

A great deal of information was collected and processed in parallel for the two case studies. The researchers gave a public presentation of their work at a wrap-up event: the Binational Seminar on the Social Impact of ICTs in Buenos Aires and Montevideo, organized by the Infopolis Team from the Urban Studies Area of the Gino Germani Research Institute on April 17, 2001, in Buenos Aires. We hope that this first experiment in comparing the social impacts of ICTs in these two Latin American capitals will provide useful input for preparing policies and strategies to optimize those impacts and thereby improve the quality of life for their citizens.

ICTs in local government

Today, thousands of cities of all sizes around the world have home pages on the World Wide Web and forums of city webmasters are being organized. There are also thousands of cities, not only in the developed world but also in a growing number of developing countries, that have invested in electronic government projects using networks that allow citizens to access city government structures, conduct online transactions, obtain information on local, regional and national policies, and participate in decisions concerning the urban habitat.

Experiments with electronic government began in the second half of the 1990s. In Europe, the Telecentres Project was created and financed by the European Community to help local governments acquire resources and expertise in applying ICTs to urban management. In the United States, electronic government has burgeoned as a way not only of facilitating local management but also of trying to overcome the “democratic deficit”, i.e. the lack of citizen interest and commitment in public affairs.

Electronic government is not only an ambition of developed countries. Peripheral countries have begun to use ICTs to facilitate various government activities. Brazil was the first country in the Americas to introduce electronic voting and has now moved to eliminate paper in sending draft legislation and the texts of decrees between the head of state and government ministers. This programme, dubbed “electronic government”, seeks to use the Internet to reduce the bureaucratic red tape that encumbers communication between the different areas of government. It also seeks to make document circulation

swifter and more secure, thereby reducing administrative costs. For the last two years, Brazilians have been using the Internet to file their tax returns and to access their bank accounts. And electronic voting was an astounding success in the municipal elections of October 2000 <<http://www.clarin.com.ar/diario.2001-01-05/I-0420.htm>>.

It is not just a question of setting up portals or web sites with government data, or of facilitating internal procedures. Electronic government means putting government – national, regional or local – on the Internet as a way of transforming political and institutional culture and allowing citizens to obtain information of interest to them. Yet, if these sites and other similar administrative tools are to be really viable, all citizens will need to have the know-how to navigate over the Internet, they must have access to the necessary hardware, either at home or in telecentres or other public facilities, and information must be secure as it makes its way through cyberspace. There must also be adequate dialogue with citizen networks which are now taking on great importance.

Buenos Aires: do online services mean electronic government?

There has been much discussion of the issue of governance since the 1970s. In the last decade, a number of writers have analyzed the issue from a broader perspective. They have sought to expand the concept of governance to embrace a whole set of social factors and the international political and economic context in which they operate, “to focus thinking on the variables that determine the relationship of the state with all economic bodies and public authorities and its interaction with organized civil society, the economy and the marketplace” (Filmus 1999). These variables are essential for achieving consensus or forming “stabilizing majorities”.

The idea of local governance put forward here highlights its political dimension and focuses the debate on the interdependence between the state and civil society. The underlying assumption is that if the many interests of civil society are not organized it will be impossible to guarantee good governance.

National and local governments have adopted varying policies for the use of ICTs with the intention, declared or tacit, of responding directly or indirectly to problems of governance. ICTs are a key element of government decentralization policies. The assumption is that using ICTs can enhance the efficiency and transparency of government and of its communication with the citizenry by giving reality to the ideas of accountability, predictability and honesty. This also implies decodifying technical language into a language that is accessible to ordinary citizens.

Consequently, in their political action, municipal governments face a great need to search for alternatives to the traditional models of public management. This search involves a number of challenges, including that of opening or

improving channels for participation in consensus building and of modernizing management technology.

This discussion focuses on three major issues:

- (a) The impact of ICTs on the government of the city of Buenos Aires, specifically on its legislative body and the agencies responsible for decentralizing the city administration
- (b) The impact of ICTs on the channels of interaction and participation between the city and its citizens, in terms of the services offered by government and the demands presented by community organizations
- (c) The local government programme for facilitating public access to the Internet for all citizens

The executive and the decentralization and modernization programme

The government of the city of Buenos Aires (GCBA) is an excellent case in point: the process of decentralizing and deconcentrating city management, which began in 1996 when the city adopted its constitution and created the post of head of government, has provided fertile new ground for the introduction of ICTs. This process involves the creation of management and participation centres (known by the Spanish acronym CGP, for *Centros de Gestión y Participación*) as political and administrative management units with clearly defined geographic responsibilities, based on a decentralization and modernization programme that calls for introducing ICTs and involving the community in city management. One of the most important aspects of decentralization is to give the citizenry a more active role. Technology is a key dimension here, as a means of “permitting citizens to enjoy greater access and participation in government decision-making through the use of computer and telephone networks”.

Our information-gathering activities involved a series of interviews with officials in the Department of Decentralization and Modernization and with managers and employees of the CGPs, as well as the examination of internal documents produced to that time. We selected 5 CGPs out of a total of 16, where we conducted qualitative research through interviews, observation, and analysis of the GCBA web sites. Our fieldwork was conducted between June and September 2000.

Main players and activities

The programme called for the computerization of the CGPs by 1998, creating a communication network (intranet), developing a hotline for citizens' complaints employing Internet-compatible technologies and technical training, and selecting staff to operate the information system in the centres.

The current situation, however, falls considerably short of expectations, and the programme has been completed only in part. The complaint system is up and running, but the intranet has not yet been installed. Some comments from the interviews are highly revealing:

People enter their complaints online. This is not an intranet, it is simply Internet. The access is by telephone line through the Internet to the page of the server that the . . . I don't know where it is, I guess it must be a server for GCBA. . . The idea is to have an intranet. Now this is going to be something they call a "single window system" with 10 machines. They will all be online, and the GCBA will provide them. . .

The definition used for the complaint system is confusing. It has several different names and it is not clear whether it is an intranet. While the state of progress with the complaint system was not uniform and, at the time of our research, it was in the process of migrating from one system to another, it is significant that every person interviewed had a different definition for it. This can also be explained by the failure to provide proper training in using the computer and the networks – no one is sure what the operating system is. The centres do not have anyone assigned or trained for using the tools, and in some CGPs the problem is left to whoever has the interest and skills:

Here we have no one with any technical training. I never took a PC course, I know something because I'm interested in the issue myself and I read up on it. There's a decentralization group that has some expertise, but they only come here when there's an emergency and they have 16 CGPs to look after.

Little use is made of the Internet for communicating between the centres and the department. Most people prefer to use the telephone. The GCBA site has a link to the CGPs, where each centre provides information on services and activities and the e-mail addresses of its directors. The CGPs are not involved in designing the web page or its content, and merely provides information to be posted on the site. There is no possibility of interaction with local residents or with community organizations; e-mail is the only means available, and it is seldom used.

Communication with local residents and publicity about services and activities are channelled through conventional means: telephone, letters, public assemblies, committee meetings and the press. Strategies revolve around communicating with neighbourhood or *barrio* associations, business organizations, educational and other institutions, such as local FM stations. There are invitations to participate in workshops or discussions on priority issues, visits to associations, occasional groups of associations that work on a specific problem, and other equally conventional approaches. The possibility of using the Internet more intensively and extensively is impeded, according

to the leaders we interviewed, by the restrictions on “local residents”, limited Internet access for lower-income groups, the age factor, and lack of skills and initiative, among other things.

Even so, the introduction of ICTs is viewed positively, but as something for an indefinite future when conditions will be ripe for massive use, when the public will be more accustomed and local government will have better-defined and more appropriate strategies in place. According to our interviews, the use of ICTs as a tool for citizen participation is “a work in progress”, “people aren’t used to it”, “the barrio dwellers don’t really know what it is”, “they aren’t in a position . . .”. As to how to resolve this problem, there are no clear answers. It might be addressed by a government body, but the real prospects of local government through the CGPs are still remote, for want of equipment, space, human and material resources, and a specific policy. The possibility of mounting joint projects with community organizations is not seen as an alternative: government and organizations do not work together for this purpose. Although three CGPs are conducting an experiment with free Internet access (discussed further below), it is not sponsored by them but by other government agencies that are using only the physical premises of the centre; the technology access centres are not involved in the activities of the CGPs.

In short, the CGPs have been computerized, but their performance is uneven; in some cases they face technological problems and in most cases even the available equipment is underused. Some of the objectives set out in 1998 are now starting to be implemented (such as the intranet), while others have not yet begun (the single complaints window). Nevertheless, the Internet has made a significant difference in the handling of citizen complaints over problems with facilities and services, and it has had a positive impact on the responsiveness of the system.

Communication and linkages between the executive and the decentralized units are highly tenuous. There is virtually no communication through ICTs within the central organization, nor does it take part in the GCBA site. It is clear that decisions were taken “from the top down”, without involving the CGPs. As a result, installed capacity is underused and there is a lack of training and proper support. Without a greater commitment on the part of the executive bodies, it will be difficult to achieve the organizational changes needed to optimize the use of these technologies.

The introduction of technology in the decentralization process has been slow and there has been little experimentation with citizen participation through ICTs. Internet tools are still not adequately used for communicating with citizens and community organizations, although some centres have undertaken innovative experiments, generally at individual rather than institutional initiative. For example, CGP No. 13 has created its own community access centre, although it is small. For the most part, however, there is little linkage to local government through the CGPs and communication technologies are not being used to strengthen that relationship,

to request information or to encourage participation; and indeed they are not even viewed as alternatives for this purpose in the short run.

Activities targeted at the community reflect for the most part individual or group initiatives, rather than institutional strategies. Although the directors have a positive attitude about the Internet as a means of dissemination and communication, this has not translated into any clear view as to how to promote participation and to channel demands in this sense. The lack of any strategy or policy in this regard is glaring.

The recent political and legal changes in the city of Buenos Aires have undoubtedly opened the way to creating new public spaces for making greater use of ICTs in the local government. This “virtual” public space for community participation in management requires not only a declaration of political will on the part of the local government (as expressed in documents from the Department of Decentralization and Modernization), placing information at the service of citizens, or a political will on the part of citizens; it also requires an open institutional culture, a transparent flow of information and receptiveness to community participation in local government. Making information available to citizens through ICTs involves, above all, learning how to use the tools and changing perceptions about the use and the potential of these tools on the part of the managers themselves, starting with the executive.

The city of Buenos Aires web page

We analyzed this page <<http://www.buenosaires.gov.ar>> from the viewpoint of the functionalist theory of communication and the general theory of hypertext. We examined the content as well as the graphic design, monitoring the page at intervals of two weeks. The home page offers a succinct map of the site, with information that is updated daily and takes the form essentially of press releases. The other pages contain static information, or data that are updated less frequently.

The team that designed the Buenos Aires page has given it animation and a wealth of graphics. Nevertheless, the page is presented as a kind of entry portal, with a series of links that are not very successful at optimizing communication and dissemination. It is divided into a dynamic portion, which is updated daily, where press releases and institutional notices are posted, and another portion in which agencies are allotted space to post information.

Most of the internal links include a short presentation on the objectives of their particular area of government, as well as more specialized information that ranges from institutional data to useful facts for citizens (such as procedures or the “How do I . . .” guide, which, however, do not allow forms to be filed online) and tourism information for promoting the city abroad. For example, the Health Department’s site, which belongs to the portal, has information of various kinds, including the health by-law of the city of Buenos Aires and a vaccination calendar. Some of these links allow

the user to send e-mail messages to health programmes, for example, or to include addresses for the authorities; most of the links are similar in this regard. The most complete links, in terms of volume of information and interactivity, are those for education, health and culture.

There are noteworthy sections on the city's strategic plans, which offer the possibility of interaction, and from the Public Defender or ombudsman <http://www.buenosaires.gov.ar/defensoria/sec_defensoria_defensoria.asp>, which offers citizens the services of an institution "whose mission is to protect them from arbitrary acts, abuse of power and errors of the public administration, as well as to respond to the concerns of those who feel themselves the victims of abuse, negligence or irregularities". The section entitled "Internet services 2000" <http://www.buenosaires.gov.ar/internet2000/centros_inter2000.asp> leads to the publicly accessible Technology Centres 2000 (more on this later).

The interactive portal comes close to the concept of electronic government providing prompt information on various internal links to the entire city site. This portal allows bibliographic consultations and documentation provided by city libraries and the teaching library; it provides information on schools, facts about the city (including which CGP serves a particular neighbourhood) a hospitals map, hotel listings by category, a list of the neighbourhoods or districts (*barrios*) of the city with a map of each one, pictures of the city, etc. In terms of institutional information, it offers back issues of the *Municipal Bulletin*, a directory of city government officials with a short biography and e-mail address for each, a guide to names authorized by the civil registry, and a procedural guide that does not, however, provide any information beyond what can be obtained in a brochure from the CGPs.

As Fanta (2000) explains, in terms of their application, the tools of electronic government can be divided into successive stages incorporating new elements that make for more complete interactivity between user and government over the web page. These stages can be described as follows:

- First stage: a "procedural map" of the various public services available in terms of basic information (with a "procedural booklet" that can be printed out).
- Second stage: the most widely used official forms can be printed from the web site to speed up processing (when the procedure requires a form to be completed).
- Third stage: the intention is to make it possible to conduct procedures electronically and complete transactions online. This presupposes automating these procedures.
- Fourth stage: the objective here is to provide a single electronic window for city procedures, bringing together a number of services in one place. It will also include the ability for consulting information on public procurement.

The web page of GCBA is now at the first stage of progress towards electronic government. The interactive portal offers a procedural guide that explains the features and requirements for a series of formalities, among which the user may choose, as well as the address and office hours at which they can be conducted. This first stage is limited to providing the information needed to begin procedures, but it does not allow any other kind of interactivity, except the possibility of sending e-mail to the webmaster and to officials. The current situation stands in contrast to official pronouncements of the government, according to which the city's electronic government will be the most widely used in the country by 2003.

Computerizing the Legislature of the city of Buenos Aires

We examine here the viewpoints of politicians involved in introducing ICTs into the Buenos Aires Legislature, comparing achievements, progress, obstacles and delays in light of the plans set forth in the modernization programme. To do this, we reviewed newspaper articles on the process of modernizing the Legislature and monitored the Legislature's web site on a weekly basis for updates. We attended two sessions as observers. We traced, obtained and examined printed documents and web sites linked to the Legislature computerization programme. And finally we interviewed authorities and officials of the Legislature in depth.

The Legislature of Buenos Aires was established on December 10, 1997, following the elections in October that year, and marked the beginning of the city's political autonomy. Its initial sessions were held in the General San Martin Cultural Centre. On March 8, 1999, they were moved to the refurbished building of the former Deliberative Council of the city, a body of which the public had become highly sceptical because of repeated incidents of corruption, ineffectiveness and inefficiency.

To differentiate itself from the Deliberative Council, the Legislature decided to give a modern and dynamic profile to its work and to ensure greater transparency in its activities and its expenditures. A modernization programme was adopted to this end, through the Parliamentary Works Commission, entrusted to a management group consisting of two deputies from each parliamentary faction, administrative authorities, technical experts and professionals. This group began work in March 1998, with the objective of establishing organizational guidelines for the Legislature, and completed its task on October 28, 1998, with presentation of a report¹ to the Commission.

The modernization programme, which was to be a systemic undertaking, proved to be stillborn. In fact it generated mainly indifference and a degree of resistance and incomprehension among legislators. As soon as it was presented, the management group was dissolved, and the continuity proposed in the document was never achieved. Electoral campaigns and political emergencies completed the job of burying the document. Efforts at modernization continued but, divorced from the work of that group, they

lost sight of the original spirit of the initiative and became increasingly sporadic.

One innovation with respect to the use of ICTs in the Legislature was to install a central computer system of the latest generation to manage services in the Legislative Palace, transforming it into a “smart building”. This was done at the same time as the restoration work, between December 1998 and November 1999. The system allows for synchronized control of lighting, air conditioning, fire detection and extinguishing, monitoring of elevators, and surveillance of access points and corridors of the building with closed-circuit cameras. The Legislature has also been computerized and equipped with an internal network. Each of the 60 councillors’ desks has access to the Internet and intranet, and every legislator has a notebook that can be connected to the networks. A high-definition television system was installed to transmit sessions over closed circuit, and they can also be transmitted by the Internet. From our observation of two sessions, we found that only 12 of the 56 legislators present had notebooks on their desks in one session, and only 9 of 53 in the second session. Very few legislators use their notebooks to carry or retrieve information for debates or to communicate with their advisers.

The intranet has run into a number of problems and delays. While the physical structure is installed and well equipped and dimensioned, there have been bottlenecks in terms of content and services. The equipment is of the latest generation and includes about 800 personal computers, most of them Pentium 2 and 3. Most of this equipment was acquired with a loan of US\$6 million from the Inter-American Development Bank to the city government, a portion of which was earmarked for equipping the Legislature with computers.

Despite this sound infrastructure in terms of hardware and software, the content merely duplicates that of the Internet web page. It is reduced to a merely informative page, the content of which is managed by the Office of Press and Communications. User services are limited to the provision and maintenance of some 400 e-mail accounts. The page cannot be accessed through the Internet, but only from a terminal connected to the internal network.

There are a number of obstacles impeding development of the Legislature’s intranet. One of them is the lack of trained personnel. The Legislature called for tenders to provide training for all positions, from the lowest to the most senior managers, but for internal reasons only the lower categories were covered. The technical training of staff is therefore inadequate to meet needs and demands in terms of skills and qualifications.

In addition, too many staff members are assigned to the “help desk”. The General Systems Directorate has 25 employees, most of whom are dedicated to maintenance and technical support for the network’s 600 terminals, and there are few staff resources available for designing and developing new applications.

The previous networks (those that existed before the intranet was established) have been retained, and there are still “private” networks, holdovers from the old Council, that have resisted integration, such as those of the Parliamentary Bureau Commission² and CEDOM.³

The survival of outdated practices and closed information circuits is another obstacle: the existence of an intranet on which classified information can be published, against the persistence of conventional information circuits, and the failure to establish user profiles with differentiated access mean that there is virtually no demand for services from the intranet. The situation is made worse by the fact that many legislators and officials are unaware of what an intranet really is.

Yet, another reason is the rapid growth of the Internet site, which is used as an information source instead of the almost useless intranet. Furthermore, content on the intranet is administered exclusively by the Press Office. This means that the intranet serves merely for information purposes and is not interactive.

The Legislature’s web site

In January 1999, the Legislature was officially placed online, at <<http://www.legislatura.gov.ar>>, at the initiative of the Administrative Secretariat, the Press and Communications Office and the General Systems Directorate, which was responsible for implementing and updating it. Originally the design, maintenance and updating were contracted out to an external supplier. This was done simultaneously with the re-inauguration, in March 1999, of the old Deliberative Council building as a smart building. These events were accompanied by an active press campaign,⁴ intended to portray the Legislature as a modern political institution that was efficient, transparent and participatory, in contrast to its predecessor.

The design and the architecture of the web site remained unchanged until December 1999, except for updates to its content. In itself the site was innovative, attractive in its design, and it held the promise of interaction between citizens and legislators (Baumann 2000). It had an informative section, under the headings “Know your Legislature” (information on the Legislature’s history and functions), “Legislative activity” (information on sessions and draft bills tabled) and “CEDOM” (access to the municipal Documentation Centre database, the *Municipal Digest* and summaries of the sessions). Other sections allowed for greater citizen participation: “Live transmission” and “Legislature network”. The latter page announced services that heralded an overall attempt at electronic democracy and citizen participation through ICTs: chats with legislators, discussion group lists, debating forums and on line surveys. Yet this site lasted less than a year, and the many innovations expected of it turned out to be empty promises.

Why were services announced that never materialized? The explanations offered point to the fact that the design and updating of the site were contracted out, its content was solely informative and was not well adapted to the needs

and information habits of the Legislature. While the page contained features for searching legislation, interaction, etc., they were designed in ways that did not work. It was never possible to carry live sessions because the Legislature did not have the proper bandwidth. Moreover, not only were the legislators for the most part unfamiliar with using such tools (Herzer and Kisilevsky 2000), they knew little of their purposes and were frequently hostile to the initiative. Nor were there any internal mechanisms for legislators to participate in chat rooms or forums, and no coordinator for such activities was appointed.

This initial page had objectives that the Legislature was unable to meet, technologically, institutionally or organizationally. Why were such tools announced when it was impossible to implement them with existing resources? Probably because officials had to time their announcements with the inauguration of the new smart building, hoping that a drastic change of image would serve to distance them from the old Deliberative Council and its unfortunate reputation.

In December 1999 the interface and content of the page were redesigned, and it was placed directly in the hands of the Office of Press and Communications. Its design is now more austere and sober, and its architecture is sounder. Nevertheless, it has lost its interactive tools, such as the chat room, the discussion group lists and the surveys. Currently it receives about 600 visits a week, most of them from journalists and news agencies, lawyers and solicitors and, to a lesser extent, non-governmental organisations (NGOs). This "second site" differs from its predecessor in that it contains greater and more up-to-date information and it is easily navigable, with double entry (from above and from the left). Yet, paradoxically, it repeats some of the mistakes of the earlier version: it announces interactive services that in fact do not exist, such as live transmission and forums. Bandwidth is no longer a problem since it has been increased from 256 to 512 Kbps and the reference rate had been planned to reach 1 Mbps by June or July 2001.

The impact of modernization on the Buenos Aires Legislature

The process of modernizing the Legislature has had some successes and some setbacks, some breakdowns and some continuities. These results (still partial) have had an impact on local government management as well as on public services, the two being intimately linked. An initial impact on management has been to generate resistance and conflict, especially since introduction of the technologies was not accompanied by any effort at institutional modernization embracing all areas of government. A second impact has been "to generate greater commitment, new kinds of cooperation and organization", which have made for greater efficiency in carrying out the institutional mandate. The third impact has been greater availability of information, both for members of the institution and for the citizenry at large. The fourth impact is negative: it may well lead to greater scepticism and apathy, and serve to

impede rather than encourage citizen participation. This relates to the “delay in making available the instruments for effective citizen participation” – the fact that some tools were promised but never delivered (live transmission, forums, chat rooms) and that other tools were ignored (applications to public hearings, the Strategic Plan, articulation with the government decentralization programme etc.). It would be well if the Legislature were to turn its attention to the organizational guidelines proposed by the management group so as to create real synergy in efforts to strengthen the projects now underway and prevent them from collapsing or interfering with each other.

The effort to bring the citizens of Buenos Aires into the information society has moved out of government offices and into the *barrios*, offering an innovative service: we refer to the Technology Centres 2000 programme of GCBA. This provides citizens with free access to informational tools, but it does not foster citizen participation.

The Technology Centres 2000 programme of GCBA

This experiment arose at the initiative of a small group of officials from GCBA. Essentially it provides free Internet access to citizens through computer terminals located in public places around the city. These places are known as Technology Centres 2000 (CT 2000). The initiative reflects the local government's intentions to provide equitable public access to the technologies and benefits of the information society. Based on the techniques used in telecentres (Gómez et al. 1999), they are designed as “civic telecentres” offering public access to the Internet at libraries, schools, universities, community organizations and other civic facilities. The key feature of these centres is not the telecentre activity itself, but rather that it is integrated with other cultural, educational and recreational services provided at the same place.

We explored these centres between June and August 2000. We were able to cover all the centres that were in operation at that time (i.e. eight out of the current nine). We took a combined qualitative–quantitative approach, using interviews, non-participatory observation and surveys. The open interviews were conducted with technical advisers and users at the centres. Observations were carried out at all the centres using a standardized observation format. We surveyed 100 individual users, employing a structured questionnaire. In our analysis we used a triangulation approach, contrasting results from the survey with statistical data from the Office of Information Structures and Systems. This methodology made it possible to cover all players and to observe the interaction among them and with the institutional environment.

The CT 2000 are set up in CGPs and public libraries, institutions that are thoroughly rooted in their neighbourhood and have existing infrastructure, although the computer equipment had to be installed specifically for this project. They are integrated into the regular services and activities of CGPs, and access to their facilities is circumscribed by the CGP's general operating

standards. The centres are located in different districts of the city. They serve a diverse population in terms of people's economic and social levels (ranging from the working-class La Boca to the rarefied preserve of Belgrano), their sense of identity with the neighbourhood, their age, sex, motivations and interests, and their familiarity with computers, etc. The centres located in libraries have three computers, while those in the CGPs have between 14 and 18 terminals, connected in a network. Users take turns at the equipment and are assisted by technical advisers from the same office. There are no printers for public use, nor are people allowed to use diskettes, for fear of viruses. No training is provided, but assistance is available for navigating and using e-mail. Interest is very high throughout the day, and anywhere from 25 to 120 people may be served, depending on the equipment available.

Most visitors to these centres are males: the gender ratio during the period observed was 59 percent males and 41 percent females. Most of the users at the CT 2000 are teenagers and young adults, with the majority of users being 16 or younger. Most users are students, mainly from high schools. Among the non-student population, we identified workers, professionals and the unemployed.

The most frequently used services are e-mail (particularly popular among young adults) and chat rooms (used mainly by children and adolescents). A significant portion of users (40 percent) come to the CT 2000 a couple of times a week (frequent users are considered as those who come every day, twice a week or once a week). The greatest number of occasional users is in the age group of 17 to 26 years. Most people access the Internet from public places or organisations (CT 2000, cyber cafés, place of study or place of work).

In short, the information we obtained, together with statistics from the DGE and the SI, reveals the following user profile: children and students, with a certain facility at using the Internet. The younger ones tend to chat and the older ones use the e-mail. They typically do not have Internet access at home or at their place of study or work. The CT 2000 represents for them the ideal place to connect to the Internet.

In terms of meeting its objectives, the programme is a success since it attracts high attendance and provides free access to the Internet, especially for children and youths who would otherwise be unable to do so. Yet there is no training offered, users cannot participate in the planning of the project, and it does little to facilitate interaction between the community and the local government. The project has not been designed with the social and cultural setting in mind. The context is rigid: the physical environment in most cases is not very appealing; and there is no link between the activities of the host institution and those of the CT 2000, with activity beginning and ending with a turn at the computer terminal.

The feature that separates a private telecentre from the model we examined is that the latter is free, but this is not enough to regard it as a social project for permitting access to the information society by the most disadvantaged

groups. Experience with telecentres in other countries, although it has not been thoroughly assessed in terms of their social impact, suggests that “the telecentre becomes a social project when it is integrated into a neighbourhood and offers a place where members of the community feel at home, with strong participation in the centre’s activities and management, and with the possibility of generating local promoters who can put it on a self-sustaining basis”.⁵

Does Buenos Aires have electronic government?

We return now to the original question: do online services constitute electronic government? The answer would seem to be negative. GCBA, as noted earlier, is in urgent need of alternatives to the traditional models of public management. These alternatives involve a series of new issues that must be addressed, including the question of governance and the related question of opening or improving channels of participation and of consensus building, as well as modernizing the technology of management.

The political and legal changes to GCBA would seem to be opening new spaces for participation through the use of ICTs. But if this public space, whether physical or virtual, is really to lead to community participation in city management, then before the various bodies of government are equipped with computers there will need to be a thorough transformation of the institutional and political culture to make it more transparent in terms of information flows and more open to community participation in local management. On the other hand, making information available to citizens through ICTs requires, above all, an understanding of the tools involved and a change in perceptions as to the potential uses of these media on the part of managers themselves, beginning with the executive. It also implies providing training in computer tools and changing the way the public views their use and potential, which will require massive information campaigns.

There is a link between government policies regarding Internet use and actions by the governing class to interact more closely with the public through new forms of participation. From the institutional viewpoint, electronic government has some serious limitations: politicians and government staff are not much in favour of using ICTs. They see the portal as a channel for publicizing their institutions and the web page as nothing more than an electronic bulletin board. They are not interested in interaction with citizens, and they offer the public no alternative channels of communication such as chat rooms or discussion forums. At the same time, there is a low level of ICT penetration among the citizenry in terms of interaction with government and citizen participation. Our research shows that government policies and pronouncements about “modernization” through the use of the Internet are not linked to efforts of the governing class to interact more closely with the citizens through new forms of participation.

Computerizing the *Intendencia Municipal* of Montevideo

The *Intendencia Municipal* (municipal government) of Montevideo (IMM) governs the smallest but most populous (1,344,839) part of Uruguay. Montevideo is the capital of the country and the seat of the MERCOSUR Secretariat. IMM is governed by an Executive Council consisting of the *Intendente* or mayor, the General Secretariat, 7 departments, the Central Planning Unit and 18 local councils (*Juntas Locales* or *Comisiones Especiales Delegadas*). The legislative body is the *Junta Departamental*, made up of 31 councillors.

The city has been governed since 1990 by a leftist coalition known as the *Frente Amplio* (Broad Front), which has won three successive elections and has undertaken a series of political and organizational reforms that have met with public approval. According to recent surveys, 76 percent of the city residents feel that the city is better run than it was 10 years ago. Fifty-three percent approve of the job done by the re-elected mayor, Mariano Arana, compared with a 20 percent disapproval rating.⁶

One of the fundamental transformations brought to the city's management and government was the decentralization policy, which has involved a series of political and administrative changes and the reorganization of services. While the process began in 1990, it was only in December 1993 that the local political bodies were established, together with the neighbourhood councils, as instances of social participation. Each of the city's 18 zones has a local *junta* or board that is responsible for programming, managing and controlling local public works and planning; a neighbourhood council, which provides social input to the identification of local needs and priorities and allows participatory surveillance over planning; and a district community centre (*Centro Comunal Zonal*, CCZ) in which decentralized administration and services are focused.

The origins of the project for computerizing IMM date back to the 1970s, when mainframe computers were introduced, essentially for registering and printing invoices in real time. This was one of the first such services in the country. It was undertaken, however, as a one time initiative and was not part of any overall computerization plan so that by the end of the 1980s there had still been no major investment in this area.

When the *Frente Amplio* came to power in 1990, it assessed the need for computerizing management within the municipal government as a way of integrating the city's various departments and functions. The Central Computer Service of the University of the Republic was asked to advise on the strategy for computerizing the municipal government. As a result of its recommendations, the position of Director of Computer Services was created, and it has been held by the same official since that time.

In late 1992 tenders were called for hardware and software, and a start was made at installing a computer system in IMM. The objective was to streamline and standardize procedures and provide up-to-date information

to the authorities. The computerization plan, however, made no provision for coordinating these innovations with initiatives at citizen participation. The computerization process was undertaken at the same time as the decentralization plan and the creation of the CCZs. No attempt was made, though, to build on participatory experience with the use of ICTs. As far as the CCZs were concerned, ICTs were to be used strictly for management by IMM, and not as tools for communicating with local residents. One of the arguments that emerged from interviews was that “we could not foresee how important these technologies would become at the time we were planning the process”.

Systems installed

By the end of the 1990s IMM had a computer system made up of the following components:

- **Supply Management System:** Introduced in 1997, it integrates goods and services procurement, works contracting and warehouse management.
- **Human Resources System:** The first version was introduced in 1994 and the second in 1999. It is a comprehensive computer system that includes all functionalities relating to human resources within IMM (payroll, work records, licences, social benefits, etc.).
- **Financial System:** Introduced in 1998, it is used for budget management and treasury operations: payment of salaries, revenue management, payment to creditors and cash movements. With this innovation, the Court of Accounts can audit the system directly.
- **The Municipal Archives System:** Introduced in 1997, it allows for data entry, preparation of statistics and document storage as well as providing warning of overdue documents. It is fully compatible with the Internet. It contains more than 100,000 active documents and 125,000 filed documents.

Problems and potentials

One of the major difficulties with the computerized system was the lack of training of the officials who had to use it. Those interviewed agreed that the disparity in the pace at which the various sections and divisions were able to introduce and use the tools reflected the different levels of skills among the officials using them. Age appears to have been a key factor in the pace at which the new technologies were introduced: younger officials were able to adapt and use the system more swiftly, while older officials appeared more resistant to the new procedures. One person interviewed commented: “Some officials prefer to look for physical files before they attempt to search through the system.” This lack of training also produced problems within the system,

where there were frequent errors in entering data. Although the quality and functioning of the systems were judged positively, the fact that many municipal employees had no training was an obstacle to optimal functioning.

The situation in terms of hardware is very uneven. While there is an overall master plan for computerizing IMM, the pace of equipping the different sections and divisions can be “speeded up” on request. The sections that show the greatest interest in working with the tools request the most equipment and therefore have the greatest number of computers. In some divisions, according to our interviews, as soon as the computers were installed “they asked for an extra employee to run them since it was felt that this was not the job of the existing staff”.

In this process, the CCZs became recognized as “the municipal offices closest to the barrios”. Having an integrated computer system means that some procedures could be handled in the CCZ. Nevertheless, most procedures still involve going to an office of IMM – they cannot be conducted online. It is possible, however, to consult a file through the IMM web site, and to print duplicate invoices for the various municipal taxes.

While the process of computerizing IMM was pursued in parallel with the creation of the CCZs as decentralized administrative and political bodies, there was no convergence between these two processes. The purpose of computerization was to improve management, but the system does not allow procedures to be conducted online. While at the time the plan was drawn up the potential impact of ICTs on daily life was not fully appreciated, there was no subsequent attempt to make more use of them in interaction with local residents. This is clear from the history of the IMM web site.

The IMM web site

The history of the IMM web site sheds light on the way ICTs were introduced into the municipal sphere. The origin of the web page had nothing to do with strategic planning, unlike the computerization initiative. It arose from a proposal submitted in response to the Capital Fund (*Fondo Capital*), which sponsored competitions for artistic and cultural activities. A proposal to prepare a web site with information on the city of Montevideo was submitted and selected. With that project, a start was made at developing the IMM page. Maintenance of the site was in the hands of the IMM Press and Communications Service, the body responsible for communicating notices from the IMM to the press, preparing press summaries for IMM, coordinating with the municipal television channel and preparing the web page.

The web page was initially supported by outside personnel who were related to the sponsors of the winning project. Gradually it came fully under the responsibility of municipal employees in this division, who undertook the needed training, and other IMM personnel who had training in the area. The page has been online since 1998. According to interviews and our on-site analysis, the initial function assigned to the page was to provide

information about the city, especially to people abroad. As time went by, it came to include services provided by the different units and offices of IMM.

The web page team of the Press and Communications Service is responsible for information, press credentials, events of the week, information on the staff working in the mayor's office, speeches of the mayor, the static portion of the page and coordination of the different groups who contribute independently to its content (e.g. the Geographic Information Service, which provides online data aimed at professionals, and the Computer Node, which is responsible for file consultations and online duplication of invoices). The office has institutional responsibility for the page, and its role involves coordinating the contributions of the various units. Yet the team has little input in creating content, and it is dependent on contributions from the various groups.

Participation in the web page depends on the familiarity of each unit with the use of the tool. This varies from units that have developed complex projects on the Web – such as the online geographic information service or online access to the city's photograph archives, which required setting up working teams – to units that, according to our interviews, “have to be pushed to make any contribution”. The content of the page is updated daily, especially the activities notices and information about IMM.

One of the most important changes has been the use of ICTs for distributing information on the IMM to the news media. This service, which used to involve the distribution of printed press releases, has been completely digitized since July 13, 2000. Site visit data show that from January through June 30, 2000, there were 38,438 visits, although that figure does not reveal where the page is accessed from: within IMM, within Montevideo or outside the country. While e-mail can be received from users, at the time we conducted our research a system for receiving suggestions and answering e-mail messages was still in preparation.

The web page offers information on the activities of the CCZs, as well as the e-mail addresses of municipal authorities, councillors and managers of the CCZs. We found no services that allowed for interactivity with citizens, nor did we detect any effort to foster participation by this means: the system merely provides information – lots of it – for encouraging participation through “conventional” channels.

From our interviews, we concluded that the managers take a positive view of the web page's potential for participation, although there is as yet no clear idea of how to implement this. They feel that they have begun to reap the fruits of the computerization effort of the last 10 years. Yet the priority in terms of communications is accorded to the city television channel, both in terms of resources and investment: there is now a plan to send the signal by satellite. When we asked one manager why the content and services offered at the web site were not being transmitted, he replied that “we don't have the necessary bandwidth and we're afraid that if there are too many visits the system will crash”. It was suggested that this problem would be resolved once a clear transmission policy is in place for the web site.

Opinions are divided as to the impact that ICTs may have on the level of citizen participation. There is a fear, which came out clearly in the interviews, that ICTs might replace the traditional means of “face-to-face” participation, which are viewed as essential for maintaining community cohesion. This is consistent with the decentralization policies of the municipal government over the last 10 years and with the characteristics of the information found on the web page as it relates to this kind of activity. This view goes hand-in-hand with the perception of ICTs as a relatively economical way of advertising the city’s potential abroad to tourists and investors, rather than as a tool for fostering greater interaction. The national government and the municipal authorities seem to have the same view of the potential of this technology.

In the case of Montevideo, the potential of the use of ICTs is clear in the high number of homes (26 percent⁷) equipped with computers and Internet connections. They provide a solid “material base” for fostering participation through new communication technologies. While such households are for the most part at the higher educational and income levels, they constitute a significant portion of the city’s population. This figure does not include facilities offering public access to these technologies.

Electronic government in Montevideo

The process of computerizing IMM is now relatively mature, having begun (although somewhat sporadically) at the end of the 1970s, although it was not until the *Frente Amplio* came to power in 1990 that attention turned to computerizing management within the IMM in order to integrate the various departments and functions. Almost a decade later, computerization was undertaken in Buenos Aires, at the same time as the decentralization plan there, although the programmes were not interconnected or managed with a common goal.

Computerization of IMM was undertaken for administrative purposes. It was not designed as a means of communicating with citizens and was not coordinated with initiatives at participation through the use of ICTs. The use of ICTs in the CCZs was seen as relating to management of IMM, not as a tool of communication with residents. This is clear in the design of the web page, which was not the product of any strategy for communicating between organizations or with citizens but sprang from an individual initiative for an artistic and cultural project.

Despite favourable circumstances – in terms of the attitude and strategies of the national government for using ICTs as a means of economic and cultural growth as well as the high number of households with computers and Internet connections – the impact of these technologies on urban management in Montevideo leaves much to be desired. Municipal officials are still not fully aware of the potential of ICTs as a tool for interaction with citizens. In fact, ICTs are viewed primarily as a relatively inexpensive way of advertising the city to foreign tourists and investors, rather than as a means of communicating

with urban residents. Views are similar in this regard at the national and municipal levels of government.

The most significant point concerning ICTs in the relationship between the municipal government and citizens is that, although the computerization of IMM has proceeded in parallel with the creation of the CCZs as focal points for administrative and political decentralization, these two processes have not converged. The computer system was aimed at streamlining municipal management, although it does not include online procedures. The parallel and non-intersecting paths of these two processes reflect the fact that few, if any, studies of the potential social impact of ICTs on governance had been undertaken before they were implemented. This may be due to the fact that computerization of IMM was launched well in advance of similar initiatives in other countries of the region.

ICTs in citizen networks

There are currently a number of successful community-based experiments using computers to enhance the quality of life. In fact, such experiments are nothing new. As Artopoulos (1998) points out, "they were the result of the efforts of a political-technological movement opposed to the centralized computerization of the American military and industrial complex. . . . In contrast to the theory of postmodernism, the alternative use of that technology expressed not only the cyberpunk rebellion but also the utopia of citizen participation in the centre of the territorial community space: the city."

Douglas Schuler (1998) suggests that we begin by examining the concept of "community". For this purpose, we may define the community as a group of people living in geographic proximity to each other and linked to each other through social or labour relations or other common interests. If this community is to be effective, the individuals who develop citizen networks must recognize, support and encourage these links. One way of doing this, according to Schuler, is to offer information and provide services that will help to sustain and develop the community's "core values". Those values are culture and conviviality; education; a strong democracy; health and welfare; economic equity, opportunity and sustainability; and information and communication (including, for example, conventional libraries, digital media, television and free radio). All of these values are interdependent and respond to an organic vision: they can be visualized as the vital systems of a community, just as the circulatory, nervous and muscular systems play interdependent roles within the human body.

An electronic citizens' network (ECN) selects and offers information from multiple sources, providing a single point of access to information without having to call a series of municipal offices, read several newspapers or consult different neighbourhood associations. Yet ECNs offer more than local information: many of them sponsor weekly magazines or electronic bulletin boards, provide connections to national and international networks as well

as community access to cable television – which is in fact a form of two-way interactive communication – and serve as catalysts and conduits for community projects.

Although there is no standard model for an ECN, a survey of existing organizations reveals a number of underlying ideas. The electronic basis of civil society organizations that use ICTs probably includes e-mail, Internet access, electronic distribution lists or listservs, and online discussion forums. Yet community organizations do not offer the same capacity for online circulation as do commercial providers. Some have obtained their Internet connection and their web page through the goodwill of local providers, while others pay for these services. Members of the ECN or citizens using its services only occasionally can contact them in a variety of ways, including through their personal computers and modems, through another computer on the Internet (using the Telnet program) or directly via the Internet. In developed countries, public libraries and universities offer access terminals for those who do not have computers at home. There are also computer kiosks with terminals that can be used to access the Internet for a fee of about US\$1. Access to cyberspace is no longer as financially constrained as it was when the Internet began, although there are still limitations imposed by differing endowments of cultural capital.

The Spanish Association of Citizen Networks describes citizen networks in this way: “A citizen network is a system for intervention, for instrumentalizing, articulating and promoting local development in all its aspects. . . . on the other hand, the authorities have in citizen networks a means for reaching the most remote households with information on matters of common interest and a way of providing services to citizens. In the future, many procedures will be handled by remote means. Communication between governors and the governed must be computerized at the same pace as the rest of society and must not fall behind. . . . Networks can help to enhance the quantity and quality of public services, especially for those groups that have difficulties using them in their current formats. The various groups and social movements have in these networks a means of communication and coordination, a forum for putting forth their ideas and proposals to the public and a tool for interacting with groups that have similar interests in other parts of the world.”

Although this is merely the outline of a principle, it is also the foundation stone of the city of knowledge, which requires a specific design for embracing the barrios, universities, social activists and organizations, which in one way or another determine the shape of the information society.

Civil society and the use of ICTs in Argentina

In the 1970s, the notion of governance was associated with the role of the state in terms of administrative efficiency, sound leadership and management capacity. At the beginning of the new millennium, the concept of governance

has come to incorporate variables linked to the relationship of the state with a series of economic agents and public authorities and its interaction with civil society, the economy and the market. The notion of “local governance” put forward here highlights its political dimension and focuses the debate on the interdependence between the state and civil society. The prevailing view is that if the multiple interests of civil society are not coherently organized it is impossible to expect good governance.

We can see a recent change in the relationship between the state and civil society (Filmus 1999), in terms of policies for reforming the state, the crisis of representation, the fragmentation of the social structure and the change in organizational model.

Public policies are being implemented to reduce the state’s role in running the economy and in production, such as transferring a portion of functions to the market (privatization) and delegating responsibilities to the municipal level and to civil society itself (decentralization policies and the emergence of NGOs as implementers of public policies).

The crisis of representation, while it does not affect the credibility of the political system, does call into question the procedures used for electing representatives. Parties and politicians as a group are seen as placing their own interests ahead of those they represent. We find the emergence of macro and micro policies (civil society organisations and ad hoc social movements) and the consequent separation of the political sphere from the social one; empowerment for self-resolution of demands and resolution of problems in the social sphere; expansion of the “public sphere” through the social sphere; and the problem of participation outside the state, a model for restructuring the state that encourages self-resolution and does not articulate participation.

The 1980s saw the emergence and development of non-traditional organizations: social movements based on specific issues and emphasizing local action, new demands, economic survival and no ties to political parties. In addition NGOs are recognised by the state and by international aid agencies as key players in preparing and implementing development programmes. Some NGOs believe that they must strengthen their relationship with the public sphere and that, as organizations, they can take over the execution of some programmes directly, managing the resources themselves, with state supervision (particularly at the municipal level). Other organizations are not prepared to take on responsibilities that they feel belong to the state, believing that they should limit their activity to the social sphere and maintaining a “public watch”.

Community organizations in the city

Some writers see a relationship between the size of a city and the different forms of citizen participation: thus, the links between the state and civil society will be different in rural municipalities, in small towns, in intermediate and large cities and in metropolitan areas. Under this categorization, Buenos Aires

represents “a complex structure in which, besides grassroots organizations, there are intermediate entities and support organizations that also make demands relating to the quality of life, care of the environment, consumer protection, etc.”. This dense and varied fabric of associations is reflected in the fact that the city has the greatest concentration of NGOs in the country (according to GADIS, 46 percent of the total in 2000).

A study by Filmus, Arroyo and Estébanez (1997) on the profile of NGOs in the district found the following:

1. There are a great variety of problems being addressed: activities involve not only the usual issues (poverty, children, unemployment, etc.) but also other areas such as the environment, human rights and citizen participation.
2. Proximity to decision-making centres facilitates access to sources of information and financing (particularly international).
3. NGOs interact with each other frequently and participate in one or several networks. Their effectiveness needs to be assessed carefully because their contact does not lead to the exchange of resources or the socialization of experience.
4. In their relationship with the state, “direct action” organizations interact frequently with the municipality and various national agencies. While the attitude is “hostile” towards both levels, there is a degree of dependency on government subsidies. The remaining NGOs (the support groups) diversify their public contacts, since in most cases their radius of action involves other regions of the country (project-related).

The National Community Organizations Centre (CENOC), an official body that has the most complete database on community organizations in the country, lists 483 organizations based in the city (CENOC 1998). Most of these are civil associations and foundations. Their most frequent modes of intervention are through training, primary care and advisory services. The questions they deal with most frequently are social and human issues, health and education. Half of these organizations participate in networks, and most of them engage in activities with a broad geographic scope (44 percent at the national level).

In terms of the articulation between GCBA and NGOs, we can point to various experiments with different areas of government for distinct purposes.

The Strategic Planning Council (CPE) identifies urban, public, social and private players. It assesses the main strengths and weaknesses of the city and the opportunities and threats facing it. It sets out guidelines for bringing about a qualitative change in long-term trends. It develops indicators and strategic information for management. The membership of CPE includes a wide variety of social organizations from the fields of labour, industry, religion, culture and education, political parties, NGOs and in general any institutions that want to join, provided they meet the minimum regulatory requirements. CPE

has the power to take legislative initiatives, i.e. to submit draft laws. The network embraces 83 organizations (NGOs, businesses, regulatory bodies, chambers, universities).

CIOBA (Information Centre on Organizations Active in the City of Buenos Aires, Department of Social Promotion, Social Policies Area) helps to develop and strengthen civil society organizations by means of a modern and efficient information service. It maintains a database with specific, up-to-date and geo-referenced information on governmental and civil society organizations. This information is publicly available free of charge and registration is voluntary (294 NGOs are registered).

SSZ (Local Social Services, Department of Social Promotion, Social Policies Area, housed in the CGP) works in two areas. First, it promotes and strengthens local social organizations by encouraging coordination through the formation of social and institutional networks, social coordination, and alliances with public and private institutions in order to pool efforts, avoid overlaps and maximize resources for the benefit of the community. In 1999 there were 15 networks involving 338 institutions in which civil society organizations worked together with SSZ. Second, it provides technical support to NGOs to strengthen their internal organization and enhance their ability to serve users. In 1999 technical assistance was provided to 53 institutions and community or grassroots groups.

The *Control Activo (Legislatura)* system was donated by the Control Activo NGO and 32 NGOs within the Forum for Transparency, including *Poder Ciudadano* (Citizen Power), which audits the Legislature's procurement system. This system, known as Active Control, allows procurement data to be posted on the Web. Since January 1999, the General Administration Department has developed and implemented a computerized procurement management system for making records public. Since that time, information has been entered in the database of the Active Control system.

Survey of ICT use by NGOs in Buenos Aires

As part of our study, we conducted a survey of non-profit civil society organizations that are not dependent on the state or on the market for their financing and that advocate new forms of collective action outside the political parties by making use of ICTs. We therefore excluded traditional organizations such as labour unions, barrio clubs, churches, student cooperatives, political parties and retiree centres, as well as those that produce information for managers (consultants and political foundations and private universities and private schools).

The sources of information we used were CENOC, the Social Sector Forum, GADIS, CIOBA and the Internet. We determined the use of ICTs by checking whether organizations had a presence on the Internet, either their own web site or an e-mail address. In this way we could detect trends in the use of ICTs and their impact on strategic aspects of the production and use of information, communication and the generation of new services.

We conducted a self-administered survey, distributed via e-mail. This approach emulated the method of conventional mail survey, except that in this case organizations had to enter a web site and complete an electronic form. The survey was aimed primarily at medium-scale and large support organizations⁸ in the city of Buenos Aires that had been using the Internet for at least three years. We obtained data from 78 NGOs within 30 days (November 21 to December 20, 2000).

Our analysis of the outcome of adopting the Internet in these organizations was divided into “results” (quantifying new infrastructure and installed capacity, as well as the use of Internet services, either as users or as producers of information) and “effects” (the impact on communication, access to information, and access to and generation of new services).⁹

The most obvious “result” is the infrastructure that has been installed for accessing the service. There are an average of five computers per organization, four of which have Internet connections. For the most part, the equipment was acquired for the exclusive use of the organization, although sometimes use is made of a computer in a member’s home. A third of all organizations had equipment with Internet connections.

Another result is the organizational capacity that has been developed for using the Internet and the division of tasks within the organization, particularly personnel assigned specifically to deal with Internet matters. We also looked at the way in which these members had been trained in using the tool and the cost of this to the organization. Most of the organizations have individuals assigned to Internet-related tasks (between two and five members in most cases). Existing staff rather than new recruits handle this work in 47 cases, demonstrating that the organization usually relies on its own human resources to perform tasks related to electronic communication. In terms of training for members in ICTs, more than half of the organizations rely on self-training (51.2 percent of responses), while a minority have professional or technical staff with a computer science background (17.1 percent of responses) and a few organizations have personnel who were given special training within the organization (16.3 percent of responses). A minority of the organizations have funds earmarked for this activity (26 cases). Among those that do have a specific ICT budget (for service providers, telephone expenses, web site maintenance, software, etc.), some devote up to 5 percent (23 cases) and others up to 11 percent or more (16 cases) for training.

The installed infrastructure and organizational capacity to use the Internet are related to the organization’s access to and use of the technology, either as users or as producers of information. Several of the organizations have been using the Internet for three years or more (50 cases), and another 15 organizations have been using the Internet for at least two years. Half of the members of these organizations have e-mail access (47 percent of cases) and more than a third have web access (38 percent of cases). E-mail and the Web are the services most commonly used by these organizations (42.8 percent and 25 percent of responses, respectively), while 18.9 percent reported using chat groups as well.

Internet use improves information access (20.7 percent of responses), publicity about activities (20.5 percent of responses) and communication with other organizations (19.3 percent of responses). It also simplifies administrative tasks (15.1 percent of responses). Most of the organizations use the Internet to publicize information through their web site (16 cases). This tendency increases among organizations with more experience in using the network. There is also a tendency to establish web sites among organizations that have programmes of broad geographic scope. More than 30 percent of sites were produced by members of the organization (35 cases), while outside firms were hired in 13 cases and volunteers were used in 10 cases. Most of the sites provide information (36.3 percent of responses), access to a bulletin board (20 percent of responses), database access (15.6 percent of responses) and discussion group lists (11.9 percent of responses). Half of the organizations update their content on a monthly basis; the other half do so only two or three times a year.

In terms of the "effects" of the use of ICTs in community organizations, there were changes in communication, information, and generation of new services, and consequently in the internal organization of the NGOs. One interesting aspect of communication is the level of links to other organizations, including organizational networks and the local government. Among these organizations we found that most are part of a network (64 cases). Most of these networks consist of organizations from all over the country (38.7 percent of responses), foreign organizations (36.3 percent of responses) and local organizations within the city (25 percent of responses). We also found further evidence that organizations that have more links to national and international organizations tend to make more use of web sites.

In terms of their relationship with the local government, a majority of the organizations have no link to their municipality (while 27.4 percent reported such links). Some organizations participate in municipal activities, such as attending meetings (19.7 percent of responses) some receive municipal support for their activities (17.9 percent of responses) and some access municipal information over the Internet (14.5 percent of responses). These relations are established through conventional means, and ICTs are still not seen as a means of establishing links between civil society and government.

Thanks to the Internet, organizations now have greater access to information and databases and they can participate in virtual communities. This is not the only change: with the Internet, these organizations have also positioned themselves as information producers and so they can participate actively in the world communication system. This positioning is not limited to creating web sites as "bulletin boards": organizations have begun to recognize the potential of the Internet for accessing resources and generating new services. Among the web sites we analyzed, we found the presence of innovative tools that incorporate the use of ICTs for improving access to scarce resources, facilitating the solicitation of donations, collecting funds electronically, conducting campaigns for volunteers, distance training and access to information. In turn, these organizations use ICTs in their services

for receiving complaints, providing advice, training, conducting e-mail campaigns, improving communication with beneficiary groups, and accessing information through portals. Some have also begun to make strategic use of the Internet to pursue their objectives, projects and missions (e.g. the Plan Alerta).

Our own research confirms that organizations rely on their own members for training and performing tasks related to the Internet, and they use their own resources for these activities. Essentially, however, our research reveals the changes that the Internet has produced in the way these organizations access information, the way they define themselves and the way they communicate with other organizations. Organizations have increased the number of their web sites, their participation in virtual communities, and their own production of information and new services. Many NGOs are turning increasingly to the Internet and are incorporating ICTs into their functions and strategies. Yet it must be noted that these are for the most part fairly large organizations with international activities; the great majority of small community organizations are not in this situation. Articulation between NGOs and GCBA takes place primarily through conventional channels of participation, and officials and organizations make little use of the government web site and electronic communication.

Pioneering community networks in Uruguay

Civil society organizations have played a key role in popularizing the Internet in Uruguay. At the end of 1985, when democracy had just been restored, the newfound freedom revitalized the NGO world and gave it new momentum. Community cooperatives and research organizations that had opposed the dictatorship emerged from that experience with new strength and were reinforced by returning expatriates, who brought with them new and refreshing approaches to participation and intervention.

One consequence was the creation of linkages between the principal community organizations of the University of the Republic, thanks to teachers and researchers who had returned to their positions from abroad, as well as those who had taken refuge in private centres. This development posed the need to maintain and consolidate social and academic networks, as well as the international contacts that they had built up in exile. The ICT alternative was seized and developed primarily by NGOs engaged in economic and social research and by researchers in the basic sciences and technologies.¹⁰

By 1986 the Third World Institute (ITEM) was already making wide use of ICTs to communicate with a vast network of correspondents and with the secretariat of the Third World Network in Malaysia, as well as accessing databases all over the world at low costs, downloading input for its *Third World Guide*, an annual encyclopaedia of social and demographic data and economic and political information.

Given the high degree of integration among the principal Uruguayan NGOs, news of the availability of this technology spread quickly and demand rose for sending and receiving e-mail through Chasque, the collective NGO mailbox at the bulletin board system of GeoNet in England. ITEM began to provide communication services to other Uruguayan NGOs, especially human rights organizations, private social research centres and feminist groups, many of which shared everything from physical space to the coordination organizations that were promoting the return to democracy. "At that time the fax was still a novelty, and the 'neighbours' (members of GRECMU across the street, the friends of CIEDUR, SERPAJ and PLEMUU) became curious and asked us to send messages or to search information in the databases."¹¹

In 1989 ITEM, together with a dozen NGOs, sought and obtained a donation of US\$10,000 from the Dutch Organization for Development Cooperation (NOVIB) to set up an initial Internet service provider for public use in Uruguay. It was given the name of the old mailbox: Chasque.

The group of engineering students and computer enthusiasts who supported this first electronic community network, inspired by the democratic and participatory spirit of the telecommunications pioneers, met with institutions from Nairobi (Econews Africa) and Penang (Third World Network) and founded NGONET, a network dedicated to promoting citizen participation in international negotiations.

"NGONET launched the idea of linking diplomatic negotiations with incipient discussions in the electronic networks. In the following years Chasque and NGONET would help set up the communication and information systems during the Earth Summit (Rio de Janeiro, 1992), the International Conference on Population and Development (Cairo, 1994) and the World Summit on Social Development (Copenhagen, 1995)."¹²

Chasque played an important part in popularizing the Internet outside the academic world, although it was based in the universities and maintained strong ties with the Central University Computer Service (SECIU). In 1994 a direct line was established between SECIU and Chasque, and this was to lead to one of the key conflicts in the process of spreading the Internet in Uruguay.

In November 1993, ANTEL and ITEM signed an agreement making Chasque's services available to all URUPAC users. This was the first direct Internet link that ANTEL offered its users. In March, SECIU was connected to the Internet over a line provided by ANTEL, which, however, prohibited access by third parties, a ban targeted implicitly at Chasque. Chasque received letters of support from all over the world, and it launched a lawsuit. That suit failed, but the court ruling indicated that the issue of access to the Internet deserved "broad national debate", which effectively broke the "Internet issue" out of its small circle of devotees and exposed it to public discussion.

In August 1995, with new management at ANTEL, there was a change of policy. Chasque was recognized and began to offer access to the Internet in

graphic mode. Its members began to navigate over the World Wide Web and create their own web pages, almost simultaneously with the inauguration of the state provider using a dial-up line of the 0900 type, where registration or affiliation was not needed and services were invoiced on the telephone bill. Since that time, the picture has changed substantially, and the role of NGOs as promoters of the Internet was taken over by the state and by businesses: Chasque went into a tailspin. Today there are questions about its status as a tax-exempt NGO, given that it is providing what are clearly commercial services, it has no specific plans for connectivity and web hosting for NGOs, and its content does not differ much from that of a conventional portal.

The mass marketing of computers and the Internet has led to a change in the profile of users and providers of services and content. Twenty-six percent of the population have a computer at home, and a further 13 percent at work; 20 percent of the urban population use computers frequently, and 10 percent are connected to the Internet, the highest in Latin America.¹³ The number of web users is growing at 40 percent a year. Analysts expect that the saturation point will be reached by 2003, with a coverage of 25 percent.¹⁴

ICT-based services are also expanding: there were 54,065 hosts with the domain “.uy” (for Uruguay), according to a survey by the Internet Software Consortium in January 2001, ranking Uruguay number 47 in the world by that measure.¹⁵

Public access to ICTs in Uruguay

The distribution of ICT access (as measured by computer ownership at different socioeconomic levels) reveals the economics-based digital divide in the country. Among the upper-middle and upper income groups, 58 percent have access to a computer at home, and 25 percent at work, compared to 22 percent and 14 percent, respectively, for middle income groups, and 2 percent and 8 percent for the lower income groups. In terms of Internet access, the overall figure is 10 percent. Among that 10 percent of the population, there is a generational gap, in a country where the average age is now slightly over 32 years. About 62 percent of Internet users are under 30 years of age, and 19 percent are between 30 and 40 years of age. These proportions decline to 11 percent for those between 40 and 50 years and 2.8 percent for those over 50.

Businesses have reacted positively to these differing profiles and levels of coverage. According to a survey of medium-sized and large firms in the principal sectors of the economy, conducted by Deloitte & Touche Uruguay, more than 60 percent of firms surveyed claimed to have a web page and nearly 90 percent used e-mail. The impact of e-business was considered very small (by 58 percent of these surveyed); fewer than 18 percent made sales over the Internet and 28 percent made purchases by that route.¹⁶

The flagship of the information society in Uruguay is the software industry, which is setting a regional benchmark in the development of information

systems for businesses and has achieved world-class competitive status. According to results of the Competitiveness Agenda (in 1999) of the Ministry of Industry, the sector consists of 20 large firms and about 150 medium-sized ones, with total export of some US\$60 million per year.¹⁷

The government is assuming the role demanded by the most dynamic firms in the software business: to portray an external image of a technological country, to facilitate access to financing and to promote the information society. The clearest move was the establishment of the National Committee for the Information Society, consisting of the President of the Republic, the rector of the University of the Republic, and representatives of private universities and the Uruguayan Software Chamber. Its principal national objectives and plans for the next three years include "computer literacy, development of computer services for citizens and businesses, modernization of the public administration, promotion of an efficient market for telecommunications and the Internet, a competitiveness programme for the software industry (Polo Uruguay Soft) and a training and certification programme for quality control in businesses that are developing information and communication technologies".¹⁸

This ambitious agenda, which covers nearly all sectors of domestic activity, will require conscious participation by civil society to defend and promote public interests, as well as broad debate over how these desirable goals are to be put into practice. NGOs, in particular those of the Electronic Citizens' Networks (ECN), will have a key role in this process.

The ICT landscape in NGOs in Uruguay today

The major ECNs active in recent years are few in number but highly diverse. A few examples will illustrate this point.

The pioneers of ECNs, ITEM and Chasque, have recently been joined by Social Watch,¹⁹ a Uruguay-based international network of citizens organizations that is struggling to eradicate poverty and its causes and to ensure equitable distribution of wealth and respect for human rights. This grouping of NGOs is a member of the International Association for the Progress of Communications.²⁰

Uruguay Solidario is a portal dedicated to publicizing and interconnecting community NGOs. It is an initiative of the ACAC Foundation, which belongs to a credit cooperative. It carries a national directory of NGOs.²¹

The recently established Electronic Citizens' Network provides a forum for discussing and promoting activities relating to telecommunications problems. Its discussion group lists include "Internauts Uruguay", "Future" and "ANTEL users", using the distribution services of Yahoo Groups. Although it is not strictly speaking an NGO, it has made its mark with the media as a liberal-oriented "opinion group" with significant "virtual" activity. At its focal point are the editors of the Uruguay.com site.²²

A key ECN for purposes of our research is Vecinet, which, like many NGOs, is heavily involved in volunteer work. Vecinet's centrepiece is its electronic publication *Neighbourhood self-management*.²³ It offers a barrio news service via e-mail. Its web page publishes documents of community interest on municipal administration, participatory budgeting, human rights, cooperativism and self-management.

The Uruguayan cooperative movement has a long tradition and several solid organizations. Although they cannot be considered NGOs because they are for-profit groups, they have been and remain important in development of the social sector, supporting, promoting and cooperating with social organizations. The Neticoop Programme was launched by the Uruguayan Confederation of Cooperatives (CUDECOOP), an umbrella organization for the Uruguayan cooperative movement. Its purpose is to promote the use of available ICTs, in particular the Internet, between cooperative enterprises and organizations and their members.²⁴

Citizens organizations and community telecentres

Citizens organizations have played a pioneering role in the popularization and social appropriation of ICTs for community purposes through telecentres. Until the middle of 2000, there had never been a telecentre in Uruguay. Nor were there cyber cafés, apart from a few isolated cases. National policies had been stressing private connectivity, in the home and in businesses, and paid little attention to community access or to social appropriation of ICTs. In this context, it is not surprising that it was an NGO specialized in poverty and exclusion issues, together with a left-leaning municipal government, that took the initiative to launch a national connectivity strategy involving a system of telecentres distributed throughout the capital city: the *Bibliored* (library network) project.²⁵

This undertaking was the result of an agreement between the Franciscan Centre for Ecological Research and Promotion (CIPFE)²⁶ and IMM, whereby the IMM provides the premises and the "environment" in the libraries of community centres (CCZs) and the NGO supplies perhaps four computers, a computer instructor and an Internet tutor in each of the 20 decentralized libraries of Montevideo. The objectives of the project, which was launched in 1998, include outfitting each of the libraries of the CCZs with a telecentre providing basic computer literacy skills for a minimal fee of US\$23 per month for students, the proceeds of which are used to pay for the instructors. Each centre provides Internet access, free of charge, for four hours a day. The central objective of the project is to computerize databases and administration in each local library.

To date, some 1,700 students have been made computer-literate and another 800 are now in training. User profiles, according to our review of the user log, run from children and adolescents to seniors of up to 85 years and include many housewives, young job seekers and workers seeking to

maintain their competitive edge. In our interviews, several tutors made special mention of adults who have computers available at home or at work but do not know how to use them. The socioeconomic profiles vary from zone to zone, but the project gives priority to the poorest districts.

In terms of the channels of community participation developed under the project, it is noteworthy that former students from the courses have put together web pages for the libraries with information on neighbourhood organizations, places of interest and other useful data. As well, the Internet portion of the training course explains and encourages use of the various resources available to citizens in IMM and the central government.

Another project that could play a dynamic role in this area is being undertaken by the Star Media Foundation together with the National Youth Institute (INJU). The project is administered by an NGO, the Committee for Democratization of Information Technology in Uruguay (CDI Uruguay), an affiliate of CDI Americas. This organization seeks to create self-sustaining information technology and citizenship schools throughout the country, under a contract with INJU, which has provided the premises for its 32 youth houses nationwide. At the moment one school is functioning and there is a training centre for tutors; three more schools are planned to start shortly.²⁷ The model is designed to make up for shortcomings in the teaching of information technology in the public primary and secondary schools.

Survey of ICT use by NGOs in Montevideo

At the end of 2000 we conducted a survey of formally established NGOs in Montevideo, using the national directory of community service organizations produced by the Institute for Communication and Development.²⁸

We selected a random representative sample of 80 NGOs and gave them a questionnaire similar to the one used by the team in Buenos Aires in order to keep the data comparable. We succeeded in gathering thorough information on the use of ICTs in some 60 NGOs of the city, a response that we considered acceptably representative and that allows us to draw conclusions of a general nature and to develop a tentative picture of the impact of ICTs in civil society organizations in Montevideo.

Twenty-five percent of the NGOs surveyed were founded before the coup in 1972. Another 25 percent were created during the dictatorship; 25 percent more between 1985 and 1992, and the final 25 percent since 1992. One-quarter of the NGOs surveyed have no hired staff; another quarter have between 1 and 5 employees. The remaining organizations are divided evenly between those with 5 to 30 employees and those with more than 30.

Seventy percent of the organizations have a dedicated e-mail address. Only 25 percent have their own web site, however. Eighty-seven percent have at least one computer, 55 percent have multimedia equipment and 78 percent have a printer. Forty percent have a scanner and 20 percent have a CD writer. Nearly 18 percent had begun to use ICTs before 1994. Sixty percent

have Internet connection. Ten percent share their equipment with another NGO, and a further 11 percent use equipment at a member's house. Twenty-one percent have an intranet: it is this group of highly wired NGOs that is most committed to interaction with local government, as we shall see below.

The fact that so many NGOs have access to ICTs suggests that these communication technologies should be having a great impact in terms of fostering social participation in local decision-making, consistent with the national goal. However, the most widely used technologies are in fact the telephone (93 percent) and fax (68 percent), and to a lesser extent the traditional postal service (73 percent). Thirty-eight percent have only one telephone line, while 14 percent have more than five lines.

Eighty-two percent use "physical meetings and face-to-face contacts" to cooperate and coordinate with other NGOs, and 47 percent have participated officially in events organized with other NGOs. Sixty-seven percent hold meetings to publicize their community objectives. Fifty-two percent use graphic media and 25 percent say they have used electronic media to reach the community. This indicates that the social sector is very active and in general follows a multimedia communication strategy.

Interestingly enough, little use is made of e-mail for interacting with the municipal government and local players at the barrio level, especially when we consider that 57 percent receive more than 20 e-mail messages every day. Only 50 percent of e-mail messages are "relevant", reflecting no doubt large amounts of unsolicited mail – a measure of the dedication required of NGO staff.

As to the Internet, it is used more for receiving and seeking information than for sending it out. Not many organizations use this medium for communicating with IMM, which confirms our hypothesis that this mechanism has been little publicized by the local government administration.

The following table summarizes the relationship of NGOs with various bodies of local government. There is considerable interaction: note in particular the number of meetings and the number of NGOs that coordinate activities with the municipality, either through agencies of the central executive, such as the neighbourhood commissions, or directly through networking (80 percent of NGOs are members of the network).

<i>NGO links with local government and community centres</i>	<i>Yes (%)</i>
Coordinate activities with IMM/CCZ	43.3
Have contracts with IMM/CCZ	35.0
Participate in meetings with CCZ/IMM	28.3
Interact with IMM/CCZ (support/collaboration/contribution/complaints)	25.0
Belong to an NGO network that coordinates with CCZ/IMM	18.3

In short, Uruguayan NGOs make extensive use of ICTs and they communicate intensively. They are highly coordinated, they are accustomed to networking and they participate in events and coordinate their actions, a factor that surely facilitates the spread of the technologies. In general their information technology infrastructure is good and they are well endowed with peripheral equipment such as printers, scanners and CD writers, as well as Internet connections. Such connections are generally made through a telephone line and a modem. The principal service provider is ANTEL's Adinet (76 percent), followed by Chasque (13 percent), which is, however, losing ground as a provider for NGOs.

In terms of using ICTs as a mechanism for participating in local government, the most active NGOs, those we call "high connectivity" NGOs, have and use a number of high-frequency channels, telephone lines and intranet. The correlation factor between having an intranet and coordinating with IMM is 0.54; for intervening in local policies, 0.35; and for having contracts with IMM, 0.33.

Apart from two-way communication by e-mail between NGO leaders and senior IMM officials, IMM relies to some extent on outsiders for ICT support. For example, municipal information is today distributed by e-mail on a voluntary basis by the NGO Vecinet, using the press release distribution list of IMM.

The Uruguayan social sector is fairly well advanced along the road that the national government has mapped out for bringing the country quickly into the information society. Yet, despite repeated public pronouncements, no operational spaces for participation have been created where social organizations can monitor or influence those plans.

The social impact of ICTs in Buenos Aires and Montevideo: similarities and differences

The results of our research allow us to evaluate current trends, changes and impacts relating to ICTs, mainly in local governments and their internal management and communication with citizens, as well as in community organizations of both cities.

ICTs in local government

In terms of computerizing the local government, Argentina and Uruguay have different historical backgrounds and policies and show varying degrees of commitment to the use of ICTs, reflecting their different economic and political strategies. They have nevertheless some traits in common.

Strategies for incorporating ICTs into local government were developed by small groups of officials without any prior consultation with the public servants who were to use them, or any impact studies, and without any subsequent monitoring or evaluation that would allow errors to be corrected.

We found an ambivalent view with respect to the impact that ICTs might have on the dynamics of citizen participation. There is a fear, explicit in our interviews with municipal officials in both cities, that these media might replace the traditional means of face-to-face participation, which are considered essential for negotiating with citizens and recreating community spaces. We suspect that there is a further, unspoken fear that the use of ICTs will at least partially inhibit the practice of political patronage that is so common in Latin America.

It is significant that the incorporation of ICTs into local government in both cities was not preceded by any campaigns to sensitize officials to the uses and possibilities of these tools, or any serious training, except for a few short courses that were dismissed as inadequate by the officials we interviewed. This lack of knowledge and information has induced scepticism, fear and resistance among officials. Moreover, since they were not consulted on their working needs and how ICTs could facilitate their tasks, they do not feel that their interests have been taken into account in the “solutions” imposed by the government and as a result they have failed to appropriate these technologies. This contrasts sharply with experience in other cities of the world, for example in Toronto,²⁹ where the process of computerizing local government was preceded by participatory workshops in which City Hall officials described their tasks and identified the areas where ICTs would be of greatest use. Indeed, lessons from abroad, in terms of inexpensive and technically accessible solutions, appear to have been given little consideration.

The immediate impact of this “non-strategy” has been the generation of resistance and conflicts, essentially because the incorporation of ICTs was not accompanied by any effort at comprehensive institutional modernization of the local government. One positive impact has been the generation of greater commitment as well as new kinds of cooperation and organization, resulting in greater efficiency in fulfilling institutional mandates. Another is the greater availability of information to officials and citizens alike. Yet there is also another shortcoming: the instruments for fostering effective citizen participation are still not available. In fact, the promise of tools that do not exist can generate further scepticism among the public and thereby become an obstacle rather than a stimulus to participation.

Nor were there any information or publicity campaigns conducted through the conventional media (newspaper, radio, television, billboard, etc.) to inform citizens about the newly computerized services. Both cities provide information on their web pages, but those pages first have to be accessed. Apart from a few public posters and notices in local newspapers when the first three Technology Centres 2000 were opened, citizens who are not Internet users or who are unaware of these new services receive no information that would encourage their use. Information travels by word of mouth but not through institutionalized channels.

It is also a curious fact that, in designing their strategies for integrating ICTs into local management, both governments have neglected to consult national experts in public administration or in information society policies who are now working on the issue both in Argentina and Uruguay. Apart from one technical question posed by IMM to the University of the Republic, neither government has taken advantage of the know-how and expertise of the universities located in their respective cities.

In both cities, the municipal decentralization process has been accompanied by the introduction of technology, but this has been done slowly and rather haphazardly, with little regard for citizen participation through ICTs. Efforts to involve the community were due less to institutional strategies than to individual and group initiatives.

The two countries differ in their national strategies with respect to ICTs. Uruguay is actively encouraging its software industry and has managed to attract Argentine firms to the country by offering fiscal incentives. Argentina has no explicit policy in this area, despite government statements. Notwithstanding the differences, the perception of the potential of these technologies in public administration at both the national and municipal levels is similar in the two countries. Officials are still not completely informed or convinced about the potential of ICTs as a tool for interacting with the citizenry. Generally speaking, in Montevideo their use is limited to providing a relatively inexpensive platform for advertising the city abroad to potential tourists and investors, while in Buenos Aires they are used to showcase the “new model” of urban modernity and efficiency.

The use of ICTs in community networks

While the two countries are similar in terms of local government use of ICTs, they differ noticeably when it comes to incorporating ICTs into community networks. Both countries have a long history of social movements and community organizations, reflecting the heavy influence of European immigration in the 19th and 20th centuries, but for the time being the approach of civil society organizations (CSOs) in the two countries to the use of ICTs has diverged substantially.

One characteristic of CSOs in Argentina is that they have been fairly late in discovering the world of information technologies. This was particularly true of the smaller organizations, despite the fact that the Internet was already firmly established, if not in terms of the number of users, at least in terms of its role in universities, businesses, the media and government. CSOs have played no part in the spread of the Internet, either in the country as a whole or in the “tertiary sector”, except sporadically.

Uruguayan NGOs, on the contrary, were pioneers in the use of the Internet and have played a significant role in expanding its use. In a society that is

relatively well organized, with a strong labour movement and many cooperative-type associations, NGOs initially used ICTs to link up with worldwide networks and then to communicate locally and nationally.

In terms of networking, Argentine NGOs tend to go it alone: as noted earlier, very few are part of an institutionalized network. The fact that there is no national federation of NGOs or CSOs makes networking more difficult. This same characteristic has carried over into their approach to ICTs: organizations that use them do so in internal networks but not for networking with other organizations, although a few informal networks have emerged for exchanging information. In Uruguay, while we did not find any formal national networks, there is a strong tendency towards intercommunication among NGOs that use ICTs regularly.

The relationship between community organizations and government presents common features in both countries. While Argentine organizations insist on the responsibility of the government to popularize and facilitate the use of ICTs, and the government itself has declared the need to do so, a glass wall has in effect been erected at what should be the point of interface between the state and civil society. There are no points of contact, save on an exceptional basis, between NGOs and the telecentres of the various national and local programmes, which were never designed to "create a community". A similar situation can be observed in Uruguay, although the nascent system of freely accessible municipal telecentres in public libraries augurs well for such an interface.

In both countries, the observed trends point to an early increase in the use of ICTs for giving expression to citizenship, under the impetus of recent government plans and the interest of computer and telecommunications companies. It will be essential to monitor these processes closely and to evaluate regularly the various models of public participation and the degree of initiative shown by CSOs in making use of information technologies.

In Uruguay there is a certain lack of coordination among players and objectives, and yet CSOs, as well as government and business, are politically committed to bringing the country into the information society. This holds the promise that CSOs will, over the medium term, become better integrated into the information society at the municipal level. In Argentina, all three sectors speak positively of the need to integrate the country into the information society, but they have yet to coordinate their efforts, either between or within sectors. As a result, CSOs will be slower in entering the information society, at least in the short and medium term.

It is important to recognize that plans and experiments in both Buenos Aires and Montevideo have been greatly influenced by the broader economic and political context, by conflicting demands in terms of regional and international competitiveness, and by such factors as economic crises, national interests, local objectives, the inherent contradictions within the ruling groups, and the need to rebuild democracy.

ICTs, democracy and social capital

Research has shown how difficult it is to harmonize social, administrative and technological policies. Tsagarousianou et al. (1998) refer to a US study, the *First reflections report*, which declares: "The information society must be about people. We must place people in charge of information instead of using information to control people." The fact is that in many countries that have introduced "electronic democracy" – and this includes "electronic government" as well as citizen participation, individually or through organizations, via electronic media – the results have not lived up to these concepts. There are several reasons for this.

First, "Decision-making in the field of science and technology has been historically, and still is, less democratic than other types of policy decisions" (Sclove 1995). The technical complexity of policy considerations in this area is beyond many laymen and prevents them from identifying with these issues. While the areas of transportation, economics, environment, health, security, education and so on are frequently the target of criticism and interventions by social groups or community organizations who can reasonably expect to influence decisions through the pressure they bring, this has not been true, until very recently, for scientific and technical issues.³⁰

Second, these government initiatives, generally framed in the language of democracy, are not based on any body of academic research on which theories of "cyber democracy" might be constructed. The shortage of intellectual critiques of the assumed democratizing power of ICTs reflects in part the lack of empirical research, as well as the academic community's reluctance to recognize the social impact of ICTs as an issue worthy of serious attention. At the same time, government officials have resisted consulting academics working on these issues.

Third, technological innovations are taking place in a changing political climate, in which rigid government control over the organizations and institutions implementing and introducing these technologies is no longer accepted as an efficient approach. The investments needed to keep up with technological developments are beyond the budgetary capacity of many governments, especially at the local level. As noted by Tsagarousianou et al. (1998), the monetarist thinking now in vogue, with its emphasis on controlling and reducing public expenditure, leaves it to private capital to finance technological development.

The emergence of new kinds of social movements, at both the local and global levels, that thrive on electronic networking suggests the need for more and better research into the empirical bases of electronic government and electronic democracy.

Our own research suggests that electronic government in the countries under discussion will not be fully successful unless it is based on a clear examination of the needs of the public in terms of communication and

participation, on a profound transformation of institutional cultures, and on involvement by the academic world and CSOs in preparing social and technological policies for cities. On the other hand, many of the cherished objectives of CSOs will not be achievable without fundamental changes in the regulatory structures for technology and telecommunications.

The technological tools discussed here can speed up the process of network building, a process that will depend in large part (but not entirely) on the existence of shared values, a culture of participation, the ability to act in synergy and to regenerate networks, the strengthening of horizontal communication, the ability to involve different social players in the pursuit of common objectives, and the capacity to build consensus within society. The social bonds sustained by ICTs will not necessarily ensure effective communication nor will they by themselves create communities, but they can facilitate the contact and understanding needed to strengthen the integration of organizations and create new spaces for building social bonds.

The social networks supported by ICTs have the potential to protect, sustain and nourish our societies' social capital, by which we mean the system of networks, standards and trust that facilitates coordination and cooperation for the common good (Bombarolo 1998). Electronic networking can reinforce a local organizational culture by associating it with global organizational culture, based on models of horizontal communication as opposed to the "*caudillo*" style of leadership³¹ so typical of the social and political landscape of the River Plate (1999). It can also help to move organizations along the learning curve and can generate or reinforce links between institutions, thereby facilitating participation and creating networks of trust and cooperation.

We seem finally to have moved beyond the dichotomy between "technophiles" and "technophobes" that marked the later years of the 1990s, and debate is now focused on the social appropriation of technologies and on the direction of the changes that are underway. As Anthony Giddens (1998) has written, "globalization is not only, or even primarily, about economic interdependence, but about the transformation of time and space in our lives. . . . A world of instantaneous electronic communication, embracing even people in the poorest regions, reorganizes local institutions and the very texture of daily life." The Internet may be universal, but the uses that are made of it are highly differentiated. For that reason, this paper has focused on an area that has so far been little explored: attempts at electronic government and the use of ICTs by CSOs (Jara 2000).

To conclude, we may quote Stéfano Rodotà (2000): "We can see immediately how important the novelties introduced by information and communication technologies are for citizens. The public and private spheres become intertwined and redefined. Living in freedom in the physical city and the political city means being able, at different times and places, to enjoy the conditions of 'invisibility' formerly reserved to the voting booth. Control

over information itself, access to socially relevant data and the possibility of uninterrupted communication become necessary conditions for preserving individuality and for collective action. Possession of the technological dimension begins with literacy and ends in the reconstruction of democratic procedures”.

Notes

1. Honourable Legislature of the City of Buenos Aires, Parliamentary Works Commission, Management Group. Definition of organizational guidelines. Final working document. Mimeograph. Buenos Aires, 1998.
2. The survival of these networks reflects jockeying for power and internal autonomy. The real problem is that they threaten the integrity of the network as a whole. Because it can be accessed from the Internet via a modem outside the internal network server, the entire network is prey to viruses and hacking attacks, as happened in March 1999, when an intruder broke into the network of the Parliamentary Bureau Commission and changed the wording of several draft laws. See *Clarín*, March 7, 1999, <<http://www.clarin.com.ar/diario/99-03-07/y-01101d.htm>>.
3. CEDOM is the Documentation Centre of the city of Buenos Aires. It falls under the Office of Information and Archives of the Legislature. It is responsible for storing, classifying and providing public access to draft bills, messages, resolutions, laws and legislation tabled in the Legislature and published in the *Municipal Digest*. In 1995, CEDOM created its own web site, with its own server: <<http://www.decom.gov.ar>>, a forerunner of the Legislature's current site. It allows access information in CEDOM's database. CEDOM was the first, and for a long time the only, sector of the Deliberative Council that was computerized and had Internet access. It still has its server and its own web page, along with that of the Legislature. Its page still bears the stamp of the old municipal government, including the coat of arms and the superposition and duplication of information from one site to the other.
4. See <<http://www.clarin.com.ar/diario/98-09-14/e-03401d.htm>>, <<http://www.clarin.com.ar/diario/99-01-18/t-00901d.htm>>, <<http://www.clarin.com.ar/diario/99-02-21/e-04401d.htm>>, <<http://www.clarin.com.ar/diario/99-02-21/e-04402d.htm>>, <<http://www.clarin.com.ar/diario/98-09-14/e-03401d.htm>>, <<http://www.clarin.com.ar/diario/99-03-07/t-01101d.htm>>, <<http://www.clarin.com.ar/diario/99-03-08/t-01101d.htm>>.
5. We are grateful for the cooperation of Sergio Mezza and Cecilia Falco, who generously provided information and opened many doors for us in the course of our study.
6. See <<http://www.cifra.com.uy/co021100.htm>> in <<http://www.cifra.com.uy/columnas00.htm>>.
7. Interconsult. Published in the newspaper *El País*, August 13, 2000.
8. We used the typology established by CENOC, which classifies community bodies as “grassroots” or “support” organizations.

9. We relied in part on the methodology developed by Fundación Acceso in its study of the impact of Internet use in civil society organizations in Central America.
10. We based the reconstruction in this section on our interviews with Roberto Bissico, Director of ITEM; M. Cipoletti of Chasque; Ida Holz, Director of SECIU; and Enrique Castillo, Administrator of RAU.
11. <http://www.chasque.net/chasque2000/acerca_de/historia.htm>.
12. <http://www.chasque.net/chasque2000/acerca_de/historia.htm>.
13. Surveys published at <<http://www.cifra.com.uy/column.htm>>.
14. Juan Grompone at <<http://www.montevideo.com.uy/genexus/51.asf>>.
15. <<http://www.isc.org/de/WWW-200101/dist-bynum.html>>.
16. <http://www.deloitte.com.uy/espanol/novedades/2000/19_octubre/encuestaebusiness.pdf>.
17. <<http://www.cusoft.org.uy/docs97/agenda.zip>>.
18. <http://www.uruguayenred.org.uy/informacion_general/agenda/agenda.htm>.
19. <<http://www.socwatch.org.uy/2000/esp/index2000.html>>.
20. <<http://www.apc.org/espanol/about/history/index.htm>>.
21. <<http://www.uruguaysolidario.org.uy>>.
22. <<http://www.uruguay.com/internautas/comunidades.htm>>.
23. <<http://www.chasque.apc.org/guilfont/vecinet.htm>>.
24. <http://www.neticoop.org.uy/neticoop/acerca_neticoop.html>.
25. <<http://www.bibliored.edu.uy>>.
26. <<http://www.cipfe.org>>.
27. <<http://www.foundation.starmedia.com/foundation/ur/country.html>>.
28. <<http://www.icd.org.uy>>.
29. See *Cybercities? Computerization and local management* by Finkelievich, Karol and Kisilevsky (1996), which describes the participatory process of computerizing Toronto City Hall and offers a comparison with the city of Buenos Aires.
30. It is worth recalling the demonstrations organized by researchers and academics in Argentina against the Science and Technology Plan proposed by the minister responsible, Dante Caputo, in 2000.
31. According to Bustelo (1999), a historical analysis of social policy in Latin America reveals models for the exercising of authority that are still valid today: the figure of the *caudillo*, the “man on horseback”, characterizing a vertical-paternalistic authority unmediated by rules or ideas that discourages the emergence of an autonomous system of citizen rights and obligations.

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