



# METROPOLIS 2002

SEOUL MAY 27-31

## Commission 4

### The Information Society and the City



# COMMISSION 4

## THE INFORMATION SOCIETY AND THE CITY

### COMMISSION'S REPORT

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*Mayor of Barcelona*

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## CHAIRMAN'S FOREWORD

Given the incredible speed at which one can access information in this, the new millenium, it is of great importance for governments and administrations to disseminate knowledge in a most user-friendly and logical way. While advances in Information Technology have changed the way we do business and opened the doors to an infinite number of opportunities, such unparalleled growth has also given rise to a number of challenges and obstacles which need to be overcome.

For instance, governments and administration have a great opportunity to modernise themselves, through becoming more accessible and transparent, but the first priority should lie with their citizens and ensure that all quarters of society have the potential to acquire such information and knowledge.

This study has concentrated on describing the means that major cities have used to reinforce their presence in the information society. I am convinced that it will help orientate the Metropolis members in their task to lead the development of the information and knowledge society in their respective urban areas.

During the coming years Metropolis will maintain its interest in those projects related to the new communication and information technologies.

Firstly, through our own Internet site, Metropolis aspires to become for its members an instrument of management and interchange of knowledge. On behalf of all the members, I would like to thank the team of the Victoria Government's Department of Infrastructure in Melbourne who has taken responsibility for the management and technical support of the site.

Secondly, through collaborative projects with other organisations and international institutions. I would like to highlight the agreements with the World Bank, that have allowed Metropolis to co-direct the Gateway Development Urban Management website.

Lastly, I would like to thank all of the study's participants for their contributions and commission members for their dedication.

Joan Clos  
*President of Metropolis*  
*Mayor of Barcelona*



# PART I

## FINAL REPORT

### 1. PRESENTATION

#### 1.1 COMPOSITION OF COMMISSION 4

**Presidency:** Barcelona

**Vice-presidency:** Cordoba and Guangzhou

**Technical coordination:** Barcelona

**Participating members:** Abidjan, Barcelona, Brasilia, Bucharest, Cordoba, Guangzhou, Havana, Lisbon, Manila, Melbourne, Mexico, Paris, Rio de Janeiro, Seoul, Shenyang, Wuhan.

#### 1.2 COMMISSION 4'S WORK SCHEME

In mid-2000, Commission 4 started its work on the elaboration and validation of the work plan. The identification and analysis of the impact on large urban areas of the development of the information and communication technologies<sup>1</sup> (henceforth ICT) was established as the main objective in the initial phase. The need to concentrate efforts in identifying means of promoting the presence of large cities in the Information Society was contemplated soon after.

To reach the stated objectives the Commission considered the application of ICT in three spheres (including that of Internet which this document deals with later on):

- The electronic distribution of the Local Administration's services and information to citizens and companies through the development of an online one point of call Administration model available 24 hours a day, 7 days a week ("one stop shop").
- Through the introduction of the ICT modernise the Local Administration's internal management. The deve-

lopment of corporate intranets and the digitalisation of files, documents and requests have particularly been considered.

- The use of ICT to enable citizen's participation in public decision making processes.

Since its constitution the Commission 4 work group has met on two occasions: the first meeting took place in Guangzhou in October 2000; and the second was organised in Rio de Janeiro in May 2001.

#### 1.3 REPORT'S OBJECTIVE AND METHOD

In order to stimulate the current development of e-government in large urban areas the Metropolis Commission 4's report intends to provide recommendations and thought provoking ideas. These contributions are focussed on the design and distribution of online information and contents which are the most visible aspects of e-government. Whilst it is of key importance to communicate with the users, the main benefits of e-government are to be found along side the greatest difficulties at the other end of the system. These difficulties encompass aspects of the internal design of the services and how administrative procedures need to be redesigned to allow their transfer to an online setting. A further issue is how the Administration's organisation should manage itself within this change process.

In this respect, this work should be considered as Metropolis' first step in the subject of e-government that shall be further elaborated in accordance with the continuous advances in technology. In addition the Administration ought to widen its analysis and thinking on e-government's internal management.

1. In this document the information and communication technologies (ICT) are defined as the information and communication tools that include personal computers, programmes and software applications, Internet and web platform-based communications, and information storage and recuperation resources.



Throughout the report, e-government is considered as the online distribution of information and services through Internet.

Differentiating between information distribution and online services is not an easy task and in many cases the distinction is blurred. For practical purposes an electronic service is defined as a transaction that can be totally completed online. It is not an electronic service if a person has to print a form and then take it to an office. Databases are only considered as electronic services if the user can make a specific consultation<sup>2</sup>. Interactive services are used to describe cases where there exists user interaction but the procedure was not completely finalised over the Internet.

Information used in the preparation of the report was obtained through the distribution of questionnaires to Metropolis cities and through an analysis of a selection of metropolitan area websites from around the world.

The questionnaires were addressed to the ICT directors and strategists of the member Administrations of Metropolis. In this way, for those cities that responded to the survey, it was possible to compile information on the extent of the introduction of ICTs and the best practical use of these technologies<sup>3</sup>.

The website survey consisted of an analysis and comparison of available online contents. The information was always extracted from the country's home language version. Available online English translation software found at <http://www.babelfish.altavista.com> was used for those cases where the home language did not correspond to English, Spanish or Portuguese. Foreign language versions of a website are normally less developed and offer fewer contents.

The identification and analysis of e-government's good practices constitute the value of the Commission 4's work. From this basis some simple recommendations were defined and addressed to the Local Administration for the purpose of assisting in the process of its adaptation to the challenges brought about by the information society.

---

2. E-government's definition and the distinction between information distribution and online services through Internet are taken from the Global E-Government Survey (2001).

3. Unfortunately and despite the efforts made by the Commission 4's technical coordination, the scope of this procedure has been less than anticipated due to the few questionnaires eventually returned by a reduced number of cities (see section 3 of this part).

## 2. E-GOVERNMENT DEVELOPMENT

### 2.1 BENEFITS OF E-GOVERNMENT

In recent years and at all levels, the Administrations have made an important effort to develop their e-government proposals. This is founded in part on the belief that the information society is pushing the Administration to update itself and is characterised, in some countries, by high enthusiasm and significant investment. However the key motive has been the expectation that the Administration could improve its efficiency, reduce its running costs, as well as increase transparency and response time to its users' needs by developing e-government (Heath, 2000).

There exists a growing literature, particularly of specialised articles, that carefully analyses the positive impact of e-government on the Administration. These works, based on real experiences, bring evidence that the investment made in e-government could be recuperated. The following identified benefits are emphasised:

- Users have unlimited access (24h/day, 7 days/week) to faster services without needing to visit the governmental offices.
- Public service production and distribution costs are reduced.
- Users have increased access to information.
- Paperwork is reduced.
- Administrative process automation reduces incidents and internal control audits.
- A closer and united service can be offered to the user.
- A more transparent government action.
- Users have a better perception of government action.
- Electronic payments allow the Administration greater flexibility in receiving income and investing these funds.

Lastly, it should be highlighted that the most important benefit the Administration could obtain due to the development of e-government is found outside of the online setting. The adaptation of traditional public servi-

ces to an electronic distribution forces the Administration to rethink, reorganise and simplify the processes associated with these services. Important benefits in terms of efficiency and cost reduction are the result of this effort (McKinsey, 2001). In addition, with an online environment the Administration has the means to offer new services, previously not provided, improving its response to users.

### 2.2 THE CURRENT SITUATION

To be able to offer services through Internet, most governments have introduced the information and communication technologies through their different administrations. Generally the service deals with institutional information but also has electronic publications, contacts directory, online databases, a continuing advancement in public transport electronic services and traffic conditions; as well as Administration procedures relative to the citizen (suggestions box, registrations, licences, taxes, etc.) and companies (job market, location and investment support, licences, etc.). In this way, although it is generally considered that e-government is in its infancy, there already exists a sufficient amount of experience to demonstrate its lines of development.

The results of a worldwide e-government study were published at the end of 2001. Carried out by the World Markets Research Center and Brown University, the work comprised of the analysis of the online contents distributed by more than two thousand websites from countries throughout the world. Although the study excluded local institution websites its conclusions permitted the establishment of a general framework that could analyse the current situation of e-government development.

In this sense it is evident that e-government is still a long way from reaching a satisfactory level of maturity

and realising its full potential. Besides, whilst there exist countries which have gained much relevant experience in this field there are other countries which not only do not have online information but who are also are taking little advantage of the benefits of Internet. In general, the development of e-government is inadequate within the least economically developed countries and where the penetration of Internet is scarce.

In a summarised form the following general framework can be considered:

- English has become the language of e-government. Most of the websites analysed have an English version. Close to half of the websites are multi-lingual and are available in two or more languages. Usually the versions in languages other than the official home language offer only a part of the website's contents.
- The most common services relate to online publications, databases and the mailing of suggestions complaints.
- Only a small limited number of websites offer fully executive online services. The most frequent cause for needing to finalise the service off-line is the lack of electronic payment means. It appears that electronic payment has had its widest introduction in the service of ticket sales (shows, museums, transport, etc.).
- Only half of the websites give information on their security policy and even fewer on their privacy policy.
- There are practically no websites with specific facilities for persons with access difficulties.
- Few websites have a "portal" format or links to governmental portals.
- The state of e-government is highly varied within the countries analysed. The countries with most developed e-government are the United States, Taiwan, Australia, Canada, United Kingdom, Ireland, Israel, Singapore, Germany and Finland.

- There also are important differences at the regional level. In general the countries of North America, Europe, Asia and the Middle East are more developed than the rest of the world.

In particular it is indicated that there are important deficiencies with respect to privacy and security policies, and the accessibility of those members of the population with special needs related to the handicapped.

From these conclusions, which coincide with this study's results, different e-government strategies and development levels are identified. With reference to strategy, three major options can be considered (see Illustration 1)<sup>4</sup>:

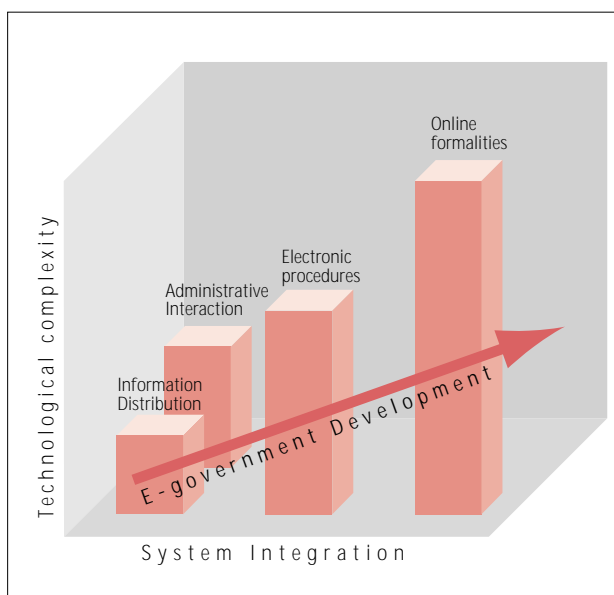
- a) Multiple website. Each city administration department or agency offers electronic information and services from its own specific domain.
- b) Joint Website. The departments and agencies are grouped under a single official city domain from which a joint offer of electronic information and services can be distributed to the users.
- c) Portal. The official city Administration's domain becomes a contents portal which combines the offer of the Administration's services and information with complementary offers from other public or private suppliers.

Illustration 1: E-government Strategies.



4. Adapted from Mckinsey (2001).

Illustration 2: E-government Development Level.



Independently of which e-government strategy the Administration adopts, the official website can reach different levels of development of services offered through Internet to users. Four development stages can be identified based on the previous reports (Heath, 2000) and the Administration website analysis (see illustration 2):

- Information distribution. The Administration offers statistical information to the users. This is similar in function to the information panels but in this through Internet.
- Administrative interaction. Making specific enquiries the user gains a response from the Administration.
- Electronic procedures. Procedures with the Administration can be initiated but not finalised through Internet. At times the user must send complementary documentation or make off-line payments.
- Online formalities. The user without the need to step outside of Internet can complete online administrative procedures and other types of services with the Administration.

The satisfaction of user needs is determined by the development level of the website services offered by the Administration via Internet. This satisfaction contemplates two parameters: on the one hand the satisfaction level reached for each specific need, and on the other hand the range of needs that can be satisfied. In other words, with a greater development of services the website could satisfy more user needs in a more complete manner.

However, the service development level requires that the Administration introduces more advanced and complex technological solutions and, above all, improves the integration of the online system with off-line formalities of administration procedures. In this manner, e-government development requires the modification the Administration's common procedures.

In practice and depending on the type of information or electronic service distributed, the official websites combine different development levels. The development threshold of e-government, online formalities, is being introduced step by step in a progressive and particular way. Generally, those services that need a payment form or a modification of the Administration's records have stopped at the electronic formalities level. Thus in these types of services the online procedure is completed outside of Internet. Usually users are required to make payments in the Administration's offices or collaborative entities or bring paper-based documents to the Administration's registers.

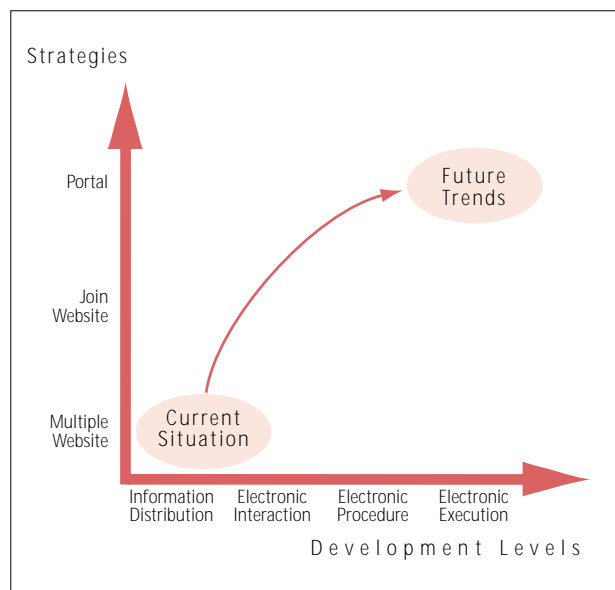
One of the most important obstacles to adopting online procedural solutions appears to be the lack of an appropriately developed digital certificate. The secure identification of users and Administration alike is an obligatory condition. The cooperation between different Administrations both within a country as well as at an

international level (including such a collaborative space as the European Union) is proving to be problematic in this area. In particular no institution has been nominated to either manage the Administrations' electronic certification or set up technical standards for the electronic communications that are needed for the administrative processes.

### 2.3. FUTURE TRENDS

Looking towards the future, the current e-government development points to the tendency to pass through a city Administration agency or department specific website concentrating on the distribution of electronic information, to a unique official website that acts as a contents portal integrating information and services offered by the Administration and other commercial websites, with a predominance of services that can be completely carried out in Internet. (See Illustration 3).

Illustration 3: E-government Trend.



In accordance with the portal strategy, the Administration should not only integrate all its information and link all its databases, but also jointly distribute its information and services from a unique official website. This process would help the Administration to offer its contents in function of user needs rather than its internal organisation. In this way users are able to quickly find and make use of the contents that interest them.

Moreover, through a portal, the Administration could improve user satisfaction by offering novel services that go far beyond that of their off-line services. These new official services could be complemented with the distribution of other commercial services that are related to the city and the Administration.

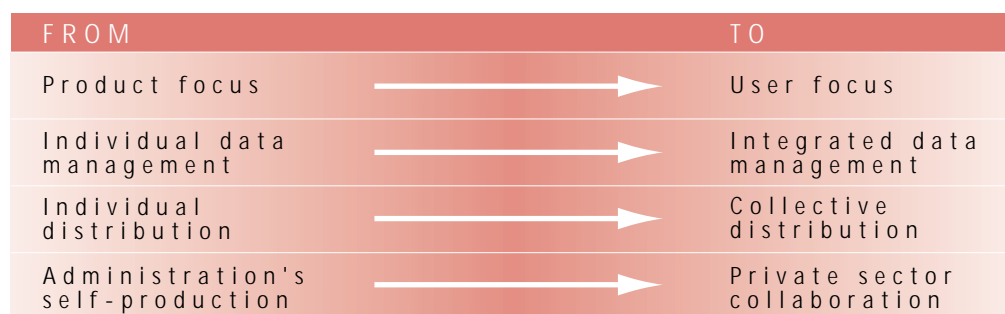
In this way the official city website eventually becomes its territory's referred Internet distributor of information and services. Consequently the official website strengthens its current commercial value especially with reference to large urban areas. This is about the number of visitors to these websites which is usually very high (see section 3). As is suggested later in this report, the Administration could use this asset to provide an e-government source of private finance.

### 2.4 SUCCESS FACTORS IN E-GOVERNMENT'S FUTURE

Although it is the most foreseeable and efficient evolution, it is no easy task for the Administration to configure the official city website as a territory wide contents portal. In accordance with current experience (IBM, 2001), in order for the Administration to be successful, it must first provide a series of basic factors to carry out this task.

Firstly, the Administration must adopt an information and service distribution, conforming with a design and content that respond to users' needs in its website. As

Illustration 4: E-government Success Factors.



the web contents increase the attraction of e-government decreases since the complexity of general access makes it difficult for the user to browse the website. Designing the website according to the needs of the user displays those parts of the website of interest to the user thus reducing exploration time. This contradicts the current situation where the predominant focus of the website is in accordance with the Administration's organisational structure.

Independently of the website's focus, the introduction of a function that permits a user to personalise the website is recommended. At least there should be an area where the user can locate links to those parts of the website that interest him most.

On the other hand the official website back office should jointly coordinate data and information available from each Administration agency and department. By way of contrast, the individual management of each agency or department currently predominates. A co-ordinated design would be difficult and the user forced to repeatedly introduce the same data despite being in the same website without this management change.

In addition, in order to make the user focus effective, the official website's front office should jointly distribute the contents of the Administration's different agencies and departments. For example, if a person wants to start a commercial activity in the city he ought to find in the same access screen information on how to start up an activity, be able to freely obtain or complete online the necessary forms for business start-up, as well as building rehabilitation licences, access to the online job market, etc. Later on he should be able to access other levels of the Administration's services such as social security forms in the event of registering workers, etc. Nevertheless the geographical or functional based distribution predominates in today's websites. This type of development should be focussed on the process in such a

way that the Administrations could offer a "one-stop shop" to resolve administrative procedures. Therefore, it is not only about digitising the administrative procedures but also integrating the management of these procedures maintaining the corresponding responsibilities of each Administration. In this context each Administration should manage a specific access doorway to administrative procedures.

Finally, the collaboration with the rest of the Administrations with territorial responsibilities and the private sector should be forthcoming. On one hand this will enable the broadening of public services, and on the other hand complement this offer with other related commercial services. Also, collaboration with the private sector should be considered as technological solution providers and as a complementary source of e-government financing (see illustration 4).

From the analysed experiences it clearly demonstrates that the Administration is required to show clear leadership within its organisation in order to develop these success factors. The Administration's management must establish firm objectives that guide its e-government's activities, policies and foster internal coordination and private sector collaboration. At the operating level this is usually interpreted as being the elaboration of an e-government strategic management plan and the creation of a coordination, management and technical support unit for the different Administration agencies and departments.

The e-government strategic management plan should show details of the objectives and results that the Administration hopes to achieve through its Internet activity. Moreover, it should establish the budgetary framework and available resources (both internal and external). Above all, the diffusion of e-government and the promotion of its accessibility amongst its potential users should be the priority of the management plan. As indicated by McKinsey (2001), e-government investment is only justified if the citizens and companies successfully use those services.



### 3. INCORPORATING ICTs INTO THE ADMINISTRATION OF LARGE CITIES

In the year 2000, Commission 4 conducted a survey among Metropolis's member cities in order to find out how certain aspects of e-government are rated. Specifically, the incorporation of the ICTs into public administration, the rate of Internet presence in society, and policies regarding the use of this technology were analysed.

The final survey comprised 16 cities from around the world, although most were European (see Table 1), thereby ensuring a heterogeneous sample of cities. There were considerable differences in population size, yearly

budget and Administration staff (see Table 2); while the institutional role of the Administration (see Graph 1), focussed on municipal or metropolitan administrations.

In spite of the differences between the cities, the results obtained as a whole indicate a general agreement on incorporating ICTs into their Administrations. Of special significance is the fact that the majority of the cities either have a plan for implanting ICTs or they are in the process of elaborating one. Additionally, the cities are increasing the Internet services they provide, Internet being the primary channel of e-government.

Table 1: Participating cities.

CITY OR REGION	COUNTRY
MANILA	The Philippines
THE STATE OF MEXICO	Mexico
CORDOBA	Argentina
BUCHAREST	Rumania
BARCELONA	Spain
SDUH/SUPIN-DIRIN	Brazil
REGION OF ILE-DE-FRANCE	France
GUANGZHOU	China
LISBON	Portugal
SHENYANG	China
THE STATE OF VICTORIA	Australia
SEOUL	Korea
BERLIN	Germany
RIO DE JANEIRO	Brazil
ISTANBUL	Turkey
DOUALA	Cameroon

Table 2: General information on the city/region and its civil organisation.

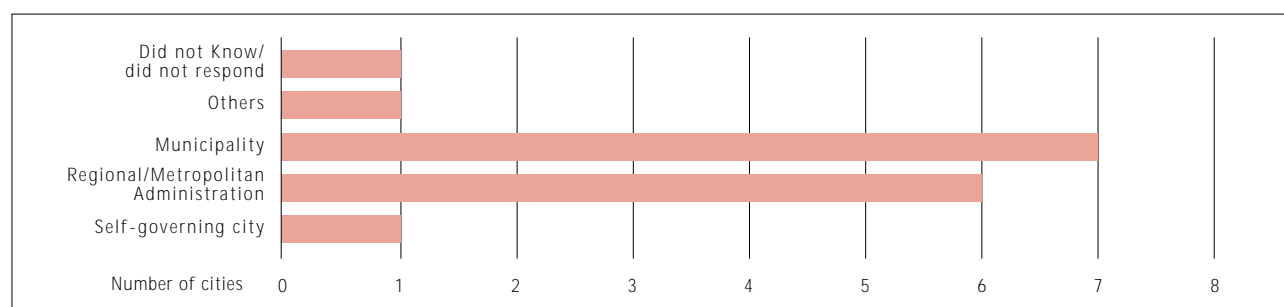
	MEAN	MAXIMUM	MINIMUM
Population	5,661,021	13,083,359	750,000
Employees <sup>(*)</sup>	8.300	47.782	185
Annual budget (euros)	1,694,018,526	10,073,159,285	3,905,901

\* Not included in this list of figures is the city of Shenyang, which has 3.4 million employees.

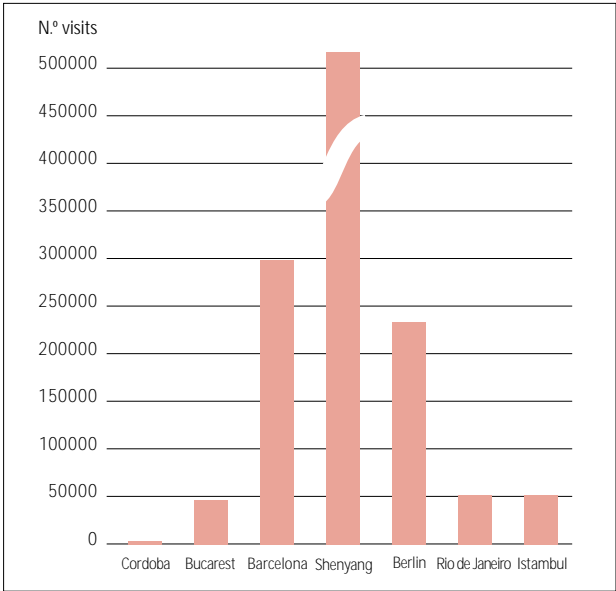
#### 3.1 PROMINENT RESULTS

- Among the Administrations which participated in the survey, the use of e-mail and the Internet is common, although the level of incorporation is not homogenous. For example, in a third of the institutions, both e-mail and the Internet are used by only a few employees.

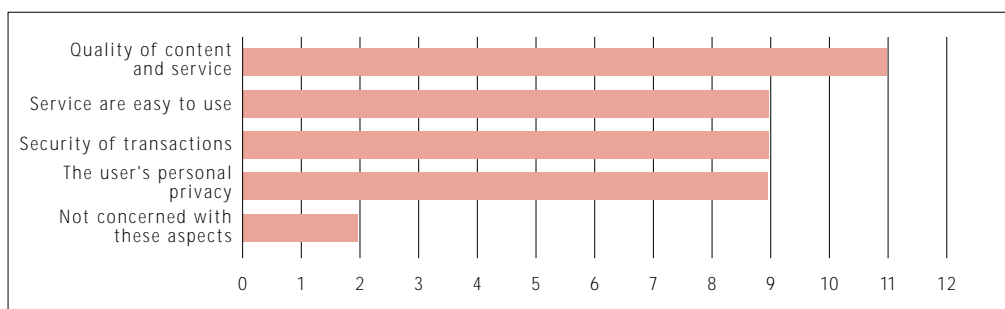
Graph 1: Institutional role of the organisation.



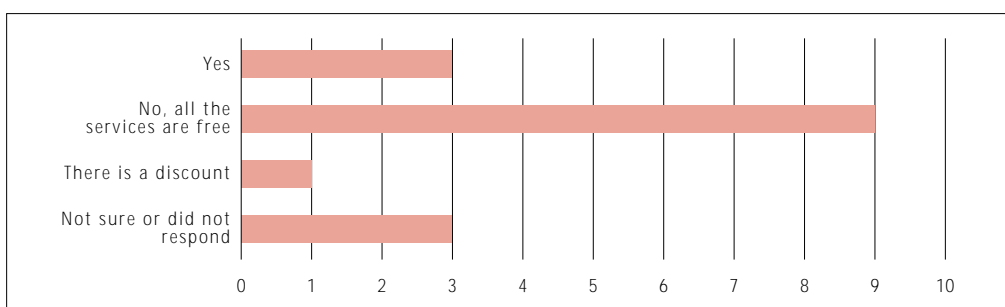


- Corporate Intranet is used less. Some institutions do not have this system and, in others, only certain departments or agencies have access to it.
  - Half of the institutions have hired telephone operators, while the rest have not thought about choosing this option for the next few years.
  - Almost all of the cities have their own websites and the rest expect to have one within the next few years. Most of the websites were running before 1998. The average mean of monthly visits to each website is 524,541, although the dispersion of responses is high. The bulk of the figures is between 50,000 and 300,000 visits per month (see Graph 2).
  - Through their websites, most of the organisations have provided interactive information centres or terminals which are open to the public. Those who have not done so intend to within the next two years.
- Graph 2: Distribution of the number of visits per month.
- 
- | City           | Nº visits (approx.) |
|----------------|---------------------|
| Cordoba        | 10,000              |
| Bucarest       | 40,000              |
| Barcelona      | 290,000             |
| Shenyang       | 510,000             |
| Berlin         | 230,000             |
| Rio de Janeiro | 45,000              |
| Istanbul       | 45,000              |
- E-mail has become an additional means of communication between citizens and companies. Almost all of the organisations offer the citizen an e-mail address (or several), so that they can communicate with the employees or heads of each institution, request information, make suggestions or file complaints.
  - Institutional websites allow citizens to obtain a wide range of information. This information is diffused through a combination of videotext systems, Internet, terminals which are open to the public, telephone assistance or fax on request. The information available on the websites pertains primarily to (the number of responses is in parenthesis):
    - Information on public transport (13).
    - Information on the environment (12).
    - Calendars of events and entertainment (9).
    - Decisions of the institution (9).
    - Urban planning (9).
    - News about public proposals (9).
    - Information on social services available (8).
    - Information on educational offers (8).
    - Support for local shops (8).
    - Information on tourism (8).
    - Electronic guide to the city (7).
    - Directory of administrative posts (6).
    - Information on job offers (5).
  - Conversely, the websites' interactive services (those which the user expressly requests) are not as important as their information services. The most accessible interactive services on the Internet are:
    - Requests for public documents (9).
    - Making suggestions to management or filing complaints (8).
    - Requests for legal documents or certificates (8).
    - Requests for social services (7).
    - Requests for online work (6).
    - Reserving tickets for entertainment (6).

Graph 3: Aspects which the Administration views as important in the distribution of information and services.



Graph 4: Payment required for electronic distribution of information or services.



- Checking the current status of administrative operations (6).
- Participation in discussion groups/community networks (6).
- Searching in library catalogues (6).
- Citizen e-mail (6).
- Commissioning municipal services (4).
- Participating in planning processes (4).
- Paying for online services (4).
- Sending in applications for public proposals (3).

• The survey also analysed the aspects which each Administration considers most important in the electronic distribution of information and services. The responses obtained indicate that the quality of the content, ease of use, security in transactions and personal privacy for the user are the most important aspects.

• The user is normally not required to pay a fee for the interactive services. The user should make a payment only in a few cities and for certain specific services.

• However, even when the services are free, it is generally considered that e-government will improve the cost-effectiveness of public services. Further benefits which are expected are the improvement of the company's image and increased accessibility for disadvan-

tagged groups. On the other hand, it is considered unlikely that the quality of public services can be improved.

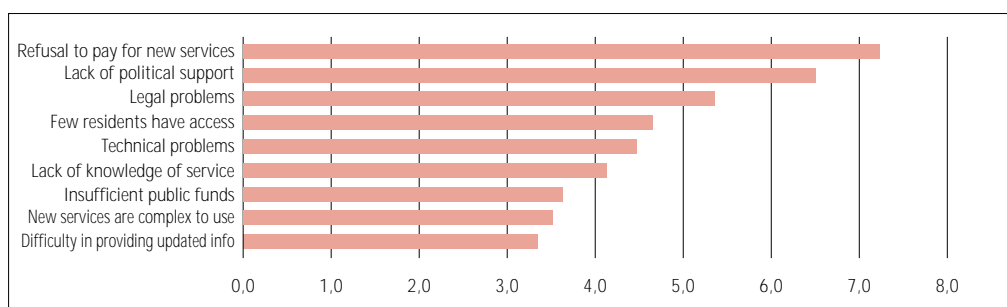
• The survey also enquired about the obstacles met in the incorporation of e-government. The refusal of users to pay for new services is the primary obstacle, followed by lack of political support and legal problems, while difficulties in providing information, the complexity of using new services and the insufficiency of public funding were viewed as unimportant.

• The amount of money invested in ICTs is highly disparate among the administrations: the minimum amount invested was just over 60,000 Euros, while the maximum figure was 231,113,679 Euros.

• Various sources of financing are available, but the use of each institution's own funds and those of National or Regional Administrations predominates. Contributions from the private sector are infrequent.

• On the other hand, the private sector does participate in technological collaboration, especially in fields concerning suppliers of technological information or of content services and, to a lesser degree, in areas pertaining to telecommunications operators and financial institutions.

Graph 5: Obstacles encountered by the Administration in the electronic distribution of information and services.



- Collaboration with the private sector obtains a positive balance; however this does not manage to fulfil all of the initial expectations.
- Regarding future trends, most of the Administrations have planned on increasing the role of the private sector in the distribution of new electronic services. At the moment, the opinion is that there are no relevant obstacles in this area.
- The survey also reveals that the majority of the institutions consider the use and promotion of telematics as an essential component of planning in their respective territories. Only 3 of the 16 institutions which participated in the study feel that this type of technology should not form part of their activities in the territory.
- Nonetheless, there does not seem to be a common practice among the cities of responsibility and management of the planning of the cities' technological policies. There are different models of management, although the distribution of responsibility between each of the institution's departments, while said responsibility falls on a specific department, seems to predominate. Midway between the fore-mentioned options, there are cities which have opted for forming a multi-departmental work force.
- The prevailing viewpoint is that ICTs will have a relevant impact in most of the matters that affect the economic and social development in the territories, although this impact is expected to have different levels of repercussion. Specifically, significant impact is expected in the following areas:
  - Providing better services.
  - Aiding in economic development.
  - Improving social and economic cohesion.
  - Improving educational opportunities.
  - Supporting local industry.
  - Increasing involvement of residents.
  - Making public administration more efficient.
  - Creating new opportunities in tourism.
- On the other hand, a lesser impact is expected in areas such as:
  - Preserving the cultural heritage.
  - Improving the quality of life for underprivileged groups.
  - Creating a healthier environment.
  - Generating new jobs.
  - Providing better sanitation.
  - Improving transport.

## 4. CASE STUDY ANALYSIS

### 4.1. GENERAL RESULTS

- The domain names of the websites analysed tend to use the name of the territory which the Administration represents, followed by the country's governmental domain. Thus, references in the URLs which identified the sites as forming a part of public Administration have been eliminated. For example, in 1999, the URL of the city of Seattle was changed from <http://www.ci.seattle.wa.us> to <http://www.cityofseattle.net>. By making this change, visitors to the site are better able to remember the address, and requests from each of the departments for their own domain have decreased.

URBAN AREA	DOMAINE
Barcelona	<a href="http://www.bcn.es">http://www.bcn.es</a>
Berlin	<a href="http://www.berlin.de">http://www.berlin.de</a>
Cordoba	<a href="http://www.cba.gov.ar">http://www.cba.gov.ar</a>
Guangzhou	<a href="http://www.gz.gov.org">http://www.gz.gov.org</a>
Helsinki	<a href="http://www.hel.fi">http://www.hel.fi</a>
Melbourne	<a href="http://www.melbourne.vic.gov.au">http://www.melbourne.vic.gov.au</a>
Mexico	<a href="http://www.edomexico.gob.mx">http://www.edomexico.gob.mx</a>
Rio de Janeiro	<a href="http://www.rio.rj.gov.br">http://www.rio.rj.gov.br</a>
Seattle	<a href="http://www.cityofseattle.net">http://www.cityofseattle.net</a>
Seoul	<a href="http://www.metro.seoul.kr">http://www.metro.seoul.kr</a>

- Very few websites inform visitors that they are viewing an official page of the corresponding Administration, as Melbourne does in an introductory paragraph on its homepage.
- The language used corresponds to the official language of each country. However, since English has become the language of reference on the Internet, the websites representing non-English speaking countries generally have an English version.
- Except in only a few cases, such as Barcelona, the versions which are not in the official language generally

offer only those contents which are considered relevant for people not residing in the city. This information pertains specifically to the tourism industry, advertising and investing. However, those services which concern the local population, such as information on taxation, the fiscal calendar, etc., are generally included in the version in the local language. Thus, the cost of updating the contents of the non-local language is reduced, while at the same time the content offered to non-residents is focussed on specific information and services that might be in their interest.

- Regarding the information which is available, the possibility of downloading online documents and publications is widespread. This is an alternative that complements and reduces the costs of an information agency or telephone information service, especially for those visitors who are not residents.
- The contents which are generally included are, on the one hand, contact information (telephone numbers and e-mail addresses) of policy heads and specialists in the institution, and, on the other, statistics on the territory, the organisation's budget and its primary activities. Databases of local companies, job offers and postings for public sales are provided, but not as frequently. In only a handful of cases, such as with Helsinki, Berlin and Seattle, are there abundant links to external websites related to the city.
- In some cases, such as that of Guangzhou, the websites systematically distribute video and audio files, although downloading speed is usually slow.
- Although several instances of online services have been identified, it is not a general practise among the Administrations. While in some cities, such as Seattle, Melbourne, Barcelona and Helsinki, it is possible to conduct most administrative procedures online, the same is not true of the rest of the cities. It should also be noted

that, even in the fore-mentioned cities, it is not always possible to finalise procedures entirely online. Usually, it is necessary to pay a visit in person or mail documentation to the Administration in order to finalise the transaction.

- Specifically, transactions with the Administration which involve the payment of services cannot be conducted online. Therefore the electronic payment is clearly shown to be a deficit or obstacle in the development of the Administration's e-services.
- Concerning the electronic payment, there is another difficulty which has not been resolved in any of the cases examined: the identification of persons carrying out administrative formalities. The means (such as, for example, electronic registration, which is used in the private sector) for satisfactorily resolving this situation have not been detected. Thus, the confidentiality of personal information is compromised. Some e-services related to licensing and the payment of debts with the Administration have not been put into practise for this reason.
- The information and services provided on official websites are free. Additionally, there is almost no advertising on the sites. The only website featuring banners is Berlin's.
- Each Administration has structured its website according to the contents available and the goals set forth by each institution. In spite of this apparent diversity, two approaches to organising and presenting information to the users can be clearly established. One is seen in those websites whose design focuses on information output; the other approach is a design centred on the users' needs.
- The "information output" approach means that the information and services provided are distributed among different sites, according to the department or agency which is in charge of that particular information or service. The website's homepage usually features links to various

departments and agencies, within whose respective sections the users can find the information and services provided by each. In this case, a user wishing to conduct a transaction involving more than one department or agency must access each of the corresponding sections.

- This system, which is the simplest option for transferring off-line information and services online, is highly inconvenient for users. First, it obliges the identification of those departments or agencies which provide the services that users wish to carry out electronically. Thus, users must first find these departments on the website and then verify if these services can, in fact, be conducted electronically (and they are not always available). Once this is done, the users must then access the page for each service, which is independently managed, and supply the required data. It is often necessary to introduce the same information, for example identification data, more than once. Finally, users must keep themselves informed about the different procedures that have been opened in order to verify if the service has been satisfactorily carried out or if all of the necessary information has been gathered.
- In dealing with this situation, several Administrations have opted for redesigning their websites so that the information and services provided online are organised according to the users' needs. In order to do this, a structure has been built into the website which allows information to be accessed through a series of questions asked by the user. Put into practice, this has generated sections arranged by topic, such as, for example, tax payment, where users find all of the relevant information and the procedures which can be carried out online; or sections based on the user-profile (resident, visitor interested in business or tourism, local entrepreneur, foreign investor, etc.).
- In the "information output" approach, the homepage could be seen as a display window for the different depart-

ments or agencies operating within the Administration. Additionally, this type of approach generally favours information on projects and activities in certain areas; whereas in the "user-based" approach, the homepage becomes the manager of the Administration's contents, where various alternatives for accessing the information and services that may interest the user are offered. In this type of design, priority is generally given to contents which the user can use, and less to information about the institution. The difference between one system and the other is clear: with the user-based approach, visitors to the website can more quickly find the contents they are looking for and the time and effort spent in surfing are reduced.

- The development of the user-based approach involves a change in the presentation of official websites. The system of maintaining a group of independent agency or department websites is evolving in favour of the concept of a municipal portal, where visitors can find links to the various services from the different municipal agencies or departments. In some cases, for example Helsinki and especially Berlin, the official website includes access to commercial pages.
- In this way, the information and services available on a municipal domain are considerably increased and navigation becomes more complex. In order to solve this difficulty, municipal sites feature browser bars maintained throughout the website. Users can thereby see where they are and return to the website's central sections at any given moment. Additionally, users learn to recognise the format of the official page and focus more on content than on formats.
- Development of the official website in portal format is equally as advantageous to the Administration as it is to users. First, since one website combines the various departments or agencies, access to different websites is reduced to a single domain. Marketing of the domains is also facilitated, since names close to the name of the

municipality are generally used. Along these same lines is the attempt of the Administrations to shorten the domains and identify them more with the name of the city, as commented at the beginning of this section. Second, it is easier for visitors to remember the website's domain under which the different Administrations operate. Third, the number of times which visitors must identify themselves to the Administration is reduced, thereby simplifying online procedures. On several occasions, there are complex services which, while they may appear to the user to be the same service, require the combination (intersection) of different information under the jurisdiction of different agencies, with the resultant problems in handling databases with confidential personal information. Finally, by integrating different departments into one municipal portal, the Administration can offer users new online services, which combine the different resources of each.

- On the other hand, there have been very few instances of specialised access methods which would allow handicapped users to visit the website. Only in the case of Seoul has a programme been implemented which allows visually impaired users to read the website's contents.
- Lastly, the privacy and confidentiality of information and the security of transactions all require, in general, greater effort. Only a few websites contain information regarding their policy in these areas; irrespective of whether that policy is carried out.

## 4.2 THE USER-BASED APPROACH IN WEBSITE DESIGN

### 4.2.1 Website Design

- Most of the Administrations analysed in this study have taken the user-based approach into account when designing their websites: Barcelona, Berlin, Helsinki,



Illustration 1:  
Adding pages to the Personal Menu  
of the city of Melbourne's website.

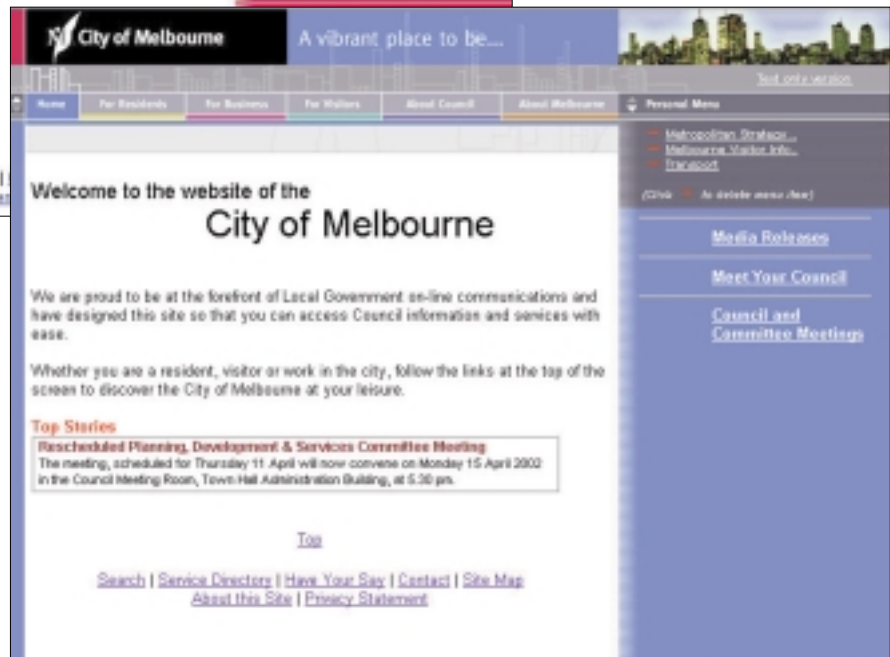


Illustration 2:  
Structure of the Personal Menu of the city of  
Melbourne's website.

Melbourne, Seoul and Seattle (see the homepages of the second part of this report for the available cities).

- The key to navigating in the user-based approach is based on the website's homepage. This page becomes the gateway of links to the site's contents. Different links may lead to the same content, thereby better enabling the user to find the information.
- With this approach, links to the site's contents are organised independently of the corresponding agency or department; although without nullifying this classification. The links available may be presented by topic or according to the user's profile. The topics generally used relate to tourism, business, online services, the city, the Administration, news, highlighted issues, the agenda, events, e-commerce, etc. The user-profiles taken into account are: resident, visitor (for tourism, business or study), foreign investor or specific groups within the population (families, young people, elderly, disabled, etc.).

- In this respect, the websites for cities such as Helsinki and Melbourne stand out, primarily for their simplicity of design without thereby reducing the variety of contents offered. The homepage directs users to the sections they are looking for and, once there, offer the specified contents, screen by screen.

#### 4.2.2 Customising the Website

- In spite of the effort expended, practical application shows that it is not easy to structure a website so that users will always quickly and efficiently find the information or services that they need. The combination of interests of the users is highly varied and the content offered by the websites of extensive urban zones can reach considerable proportions.
- In confronting this situation, which is analogous to those which large business portals have also had to contend with, one solution is to allow users to confi-

Illustration 3: Access account for users registered on Cordoba's website

**GOBIERNO DE CÓRDOBA**

**Registro**

El siguiente formulario permitirá obtener sus datos para brindarle diferentes servicios. Usted podrá a partir de aquí personalizar el sitio, seleccionando los contenidos y la información que usted prefiera. Además le permitirá realizar trámites de una manera rápida y sencilla

**Datos personales**

Nombre:

Apellido(s):

DNI:

Sexo: ☐ Masculino ☐ Femenino

Fecha de nac.: Día:  Mes:  Año:

E-mail:

**Datos de la cuenta**

Empiece por una letra, y termine con letra (a-z), máximo (6-16) el carácter de subrayado (\_), y ningún espacio.

Nombre de usuario:

Debe tener al menos ocho (8) caracteres de longitud, puede contener números (0-9) y letras mayúsculas y minúsculas (a-z), pero no puede incluir ningún espacio.

Contraseña:

Confirmar contraseña:

Elija una pregunta cuya respuesta sólo usted conozca y que no tenga nada que ver con su contraseña. Si olvida su contraseña, le haremos esta pregunta para comprobar su identidad.

Pregunta:

Respuesta:

**Datos del domicilio**

Dirección:

Localidad:

Cód. postal:

Provincia:

País:

Teléfono:

Interno:

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gure contents via direct access. However, to date, there are few instances of this having been put into practice. For example, in the municipality of Cordoba's website, there is a section whose purpose is to offer this service, but it was not running at the time of the writing of this report. Conversely, the city of Melbourne's website does feature this kind of function.

- Melbourne's system of customising is very simple for the user. It consists of a specific section in the website called Personal Menu, in which users can establish direct links to the site's pages which contain the information or services which each user accesses most often. The procedure for incorporating links into the "Personal Menu" is also very simple and works in the following way: first, the user identifies a page within the site which he/she finds useful. If the user wishes to add the page to the Personal Menu, they need to simply select the option which appears on the right-hand side of the page marked "Add this page to my

Personal Menu". The direct link to the chosen page then appears on the Personal Menu.

- However, Melbourne's system does have the drawback that it works through the use of cookies in each computer. Hence, it does not recognise persons, but rather computers which have accessed the website. In the event that a user accesses the website from another computer, he/she will not have access to the Personal Menu (if this computer has not previously incorporated the cookie). Or, in the event that more than one user visits the website, each user must share the contents of the Personal Menu.
- However, the system which is being planned for the Cordoba website would solve this problem through the use of an access account for each registered user (see Illustration 3). This system allows the Administration to better establish the profiles of the users and to directly notify them of new developments which could be of interest to them. Additionally, in case a survey is conducted,



Illustration 4: Search engine on the city of Barcelona's website.



Illustration 5: Map of the city of Barcelona's website.



the answers obtained could be analysed according to the profile of each registered participant. Users, on the other hand, enjoy the benefit that, once identified, they do not have to fill in the same information each time, a benefit which could mean saving time in online forms.

#### 4.2.3 Surfing Support

- Website efficiency depends on whether users can easily find the contents which are offered online. In order to enhance this function, the websites have developed three methods of navigation support:
- First, they have been provided with browser bars (in the upper or lower part of each page) or side columns which enable, through direct links, movement between the various sections of the website. The observable trend here consists of offering different links for arriving at the same contents. Thus, the links do not respond as much to the content itself, as to the way or

perspective in which the user might focus the visit to the website. The browser bars appear on the homepage and, usually, they also appear on all of the contents throughout the website. This way, a user might begin another search for information or services at any time.

- Second, as a partial consequence of the previous elements, the pages of the website are evolving toward keeping the same design for all of the web's pages, the only variations being the contents. This way, users come to know the website's format and can concentrate on the contents found therein.
- Third, the websites have been equipped with a search engine for finding contents housed within their domain, as well as a map of the site. When the design and links fail, the search engine, normally via words included in each document, enables the user to pull up a list of pages that may be of interest, while the site map allows the user to visualise the overall structure of the website


Home Living Business Visiting News Events Directory About Contact Us

Seattle Services  Go! City Home Pages

## Site User Guide

### Welcome to the City of Seattle's New Web Site

As you see, we have a fresh new look and many newly enhanced features. We created this visual and structural redesign based on comments from web site users and thorough research and development, in order to create a pleasant, professional and useful place for citizens to acquire public information. The new top-level pages of the city's web site have been developed using the portal concept to deliver "one-stop shopping" for the information you need.



Our most popular and frequently-visited pages may look a little bit different, but they're still easy to find (for instance, the buttons for **Weather** and **Traffic** are right on top of the new home page). So is a lot of other public information provided by the City of Seattle, one of the oldest and largest public access networks on the web.

**Enquete ?**  
Você concorda com as medidas de segurança adotadas pela Prefeitura em relação aos fogos do reveillon?

☐ Sim ☐ Não

**Votar Resultado**

**Enquete ?**  
Você concorda com as medidas de segurança adotadas pela Prefeitura em relação aos fogos do reveillon?

Sim: 89%

Não: 11%

Total de Votos: 404

Obrigado por sua participação!

Lastly, on some websites, such as those for Berlin or Seattle, a page featuring a navigation manual for the website can be accessed from the homepage. Here, the use and structure of the domain is explained (see Illustration 6).

#### 4.3.1 Opinion Surveys

cost of using it is very low. Once the information retrieval system is configured, the registering of responses does not incur any costs for the Administration. Additionally, the information gathered can be analysed immediately, as long as it is in electronic format. This reduces the time and expense of analysing responses. Second, the agility of this system means that the questions asked of users can easily be changed.

- THE INFORMATION SOCIETY AND THE CITY 25

Illustration 8: Electronic Suggestion Box on the Helsinki website.

City of Helsinki

SEARCH

SITE MAP CONTACT FEEDBACK HOME

**My suggestions, my opinions to the city's planning and decision making branch**

Please pick the Department you want - see the list:

Choose

☐ I wish that some measures be taken in:

☐ I request an answer to this question:

☐ I wish to make an application for (state advertisement in question)

☐ I have found the following defects in the City's operations:

☐ Other comments:

(Free space for writing)

**My contact data**

However, contact data are necessary, if any action is to be taken in the matter. All issues calling for action are entered in the Records.

Please note that the data security of this E-mail has not been separately secured. Never E-mail classified or private info, such as social security numbers, bank account numbers, state of economy or health etc.

Name or pseudonym

Tel. at daytime

Address

Postaddress

E-mail address

Fax

City's decision making branch's e-mail address.

Send Reset

Thank you for your message!

Copyright 2000 City of Helsinki

- However, online surveys which currently follow this model come up against a serious drawback, which somewhat compromises their value. The fact that the users who participate in the survey are not required to identify themselves gives rise to two problems. First, a user could vote more than once; and second, since the responses are not differentiated according to the participant's profile, the same weight is given to a response from a resident as to that of a participant who

does not live in the city (or who simply does not have enough information to answer the question).

#### 4.3.2 Electronic Suggestion Box

- Within the system of participation, the Internet has also opened a new channel to the Administration in order to improve the receiving of suggestions from citizens. It is basically an electronic mailbox, to which

citizens can send e-mail messages in order to make suggestions, requests or even complaints. Most of the websites are equipped with this system in an attempt to bring the workings of the government closer to the citizens.

- Advanced use of this online mailbox is seen in the website for the city of Helsinki. As with other websites, visitors can access the mailbox from the homepage. Once there, they can choose the department or agency to which they would like to direct their suggestion. Additionally, four categories of messages are established: request for a specific government action, request for specific information, putting in a public job application or registering a complaint. Visitors then write out their suggestion and provide their contact information (which is subject to complete confidentiality, according to information provided on the website itself).
- However, what really sets the Helsinki website apart is that the Administration has made the commitment to answer all messages in less than a week from the date that the e-mail was sent. Additionally, all suggestions are recorded and filed for subsequent verification by the users.
- On some websites, such as the one for Mexico, an effort has been made to use this channel for encouraging citizens to report infractions committed by civil servants and for reducing corruption.

#### **4.3.3 Disseminating Information on Government Activity**

- Some websites have made use of the Internet to provide information on government activity, which is disseminated using two different methods: press releases and activity reports. The formats used include anything from text to audio and video files, as is extensively done on Guangzhou's website.

#### **4.3.4 Keeping Track of Public Records**

- Finally, as demonstrated by various websites, the Internet is a proven, low-cost means of keeping citizens informed on Administration procedures and adding greater clarity to government activity.
- For example, Barcelona and Rio de Janeiro provide information on the state of procedures in their municipal files to those citizens who have requested the service. Rio de Janeiro's website also features a service through which citizens can consult the current state of their own administrative processes.

### **4.4 ADVANCED INTERACTIVE SERVICES**

#### **4.4.1 Traffic Support System**

- One of the services which has most quickly been elaborated on the websites is a back-up system for traffic in the city. Barcelona's site has one of the most well-developed and useable services (see Illustration 9):
  - A map of current and foreseen traffic situations on the city's main roads, in real time (15 minutes shown). The information is updated every 5 minutes and includes travel time for major segments of the main streets. In addition, live footage of traffic can be accessed from the cameras located on the main roads.
  - A map of the city, featuring a car park locating service, as well as the best way to get there from a given point of departure.
  - Design of personalised routes on public transportation, based on the point of departure and destination. Taking into account the date and time of the journey, the system indicates the best combination, marks the route on the map and includes the total journey time for each segment of the route.

Illustration 9: Traffic Support System on Barcelona's Website.



- Based on a given point of departure and destination, calculation of the time and distance of personalised walking routes of the city.

- Seattle makes especially innovative use of this service by using e-mail to create an online system that warns motorists and bus drivers of traffic accidents around the city; while Rio de Janeiro has incorporated information on traffic fines which users can consult online.

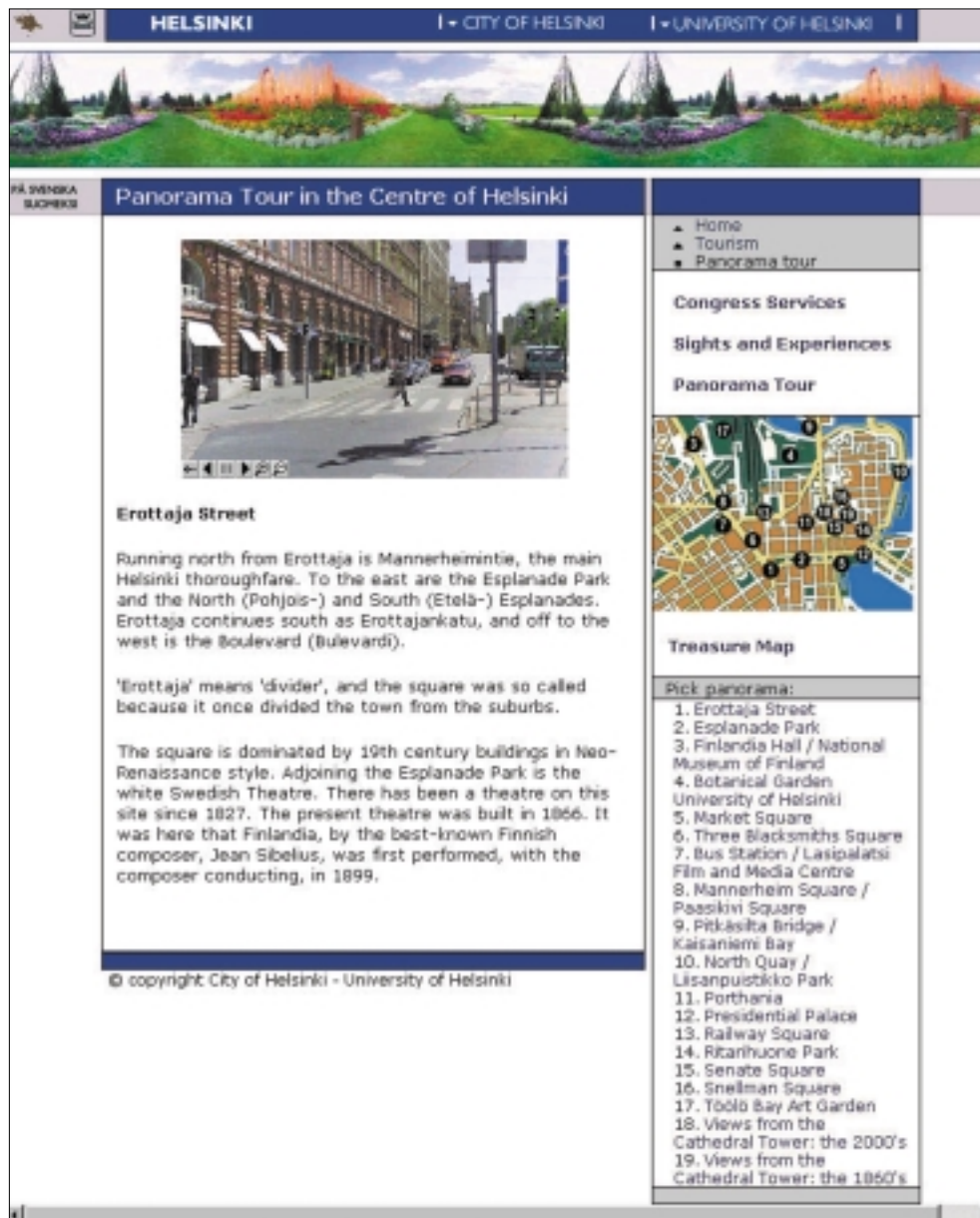
#### 4.4.2 Services for Promoting Tourism

- A city's website offers excellent opportunities for promoting tourism. Since users can access infor-

mation and services from any place at any time, local tourism can be promoted and tourist satisfaction can be improved once they are in the city.

- Therefore, the Administrations have made an effort to ensure that their websites provide a large sampling of the tourist attractions, entertainment, culture and life to be found in the city. This offering is also being expanded upon with the incorporation of services designed for tourists, such as tours of the city, a system of making online accommodation bookings or purchasing transportation passes or tickets to the city's entertainment venues and museums.

Illustration 10: Virtual Tour on the Website of the City of Helsinki.



- For example, to promote tourism and the various points of interest in the city, Helsinki's site includes 360° panoramic photographs, accompanied by explanatory texts. Additional information and each site's location on the map is also included. Each place can be chosen using either its position on the map and/or its name (see Illustration 10). The cities of Guangzhou and Seoul post video-clips and photographs of the city, along with lists of local activities.
- The Berlin website is worthy of special note for its various innovations in the use of e-commerce for promoting tourism. The site has been set up as an information intermediary for local tourism services,

both official and commercial. Visitors to the website can access information from the Tourist Office, as well as view offers from tour agencies and other providers, making the website an operative platform for e-commerce, as we will see further on.

- However, the site's greatest effort has been placed on online accommodation bookings and ticket sales for entertainment and museums. The website has an exhaustive system for finding a wide range of accommodation of various categories in the city. Users can find lodging based on the type of accommodation, price per room and, on occasion, photographs of the establishment. However, more than providing a



Illustration 11: Making Online Accommodation Bookings in the City of Berlin.

**Hotel & Guesthouse Search**  
Your Accommodation in Berlin

Reserve your accommodation in Berlin in six simple steps! With these pages, we offer you online booking of more than 300 hotels and guesthouses in Berlin. The accommodation possible we offer range from youth guesthouses and small Berlin guest houses to luxury hotels. Whether or small, in the downtown or out in the leafy suburbs, we can find the right accommodation for a visitor to Berlin. If you encounter problems just click on [Help](#). Acclaims and animations will be carefully if you post them to [info@berlin.de](mailto:info@berlin.de). On the day of your arrival in Berlin you may only be until 4 p.m. (central European time).

**1 Desired Date of Arrival/Departure**

Your Arrival in Berlin on:  
Friday, the

Number of Nights:

Your Departure from Berlin on:  
Saturday, the   2001

**2 Desired Accommodation**

Please choose one type of room:  single room(s)  double room(s)

[Next Step!](#)

Our reservation hotline will gladly assist you in booking: ++49-1805-754040

© Copyright by Berlin Tourismus Marketing GmbH

Illustration 12: System of Purchasing Tickets on the Berlin Website.

**Berlin Business Location Center**

Yin Yang  
Fr, 10.03.2002 20:00 Uhr  
Yin Yang

Block	Reihe	Platz	Erstattung
2. Rang		31	Yin Yang inkl. VVK 28.06 EUR
2. Rang		32	Yin Yang inkl. VVK 28.06 EUR

**Ticketpreis (inkl. Gebühren)** 56,12 EUR

[zurück](#) [weiter](#)

Schneller geht es mit Ihrer [berlin.de-eMail-Adresse!](#)

Benutzername:  @berlin.de Passwort:  [Check In](#)

search engine, Berlin's website enables users to make and confirm reservations online, so that they can conduct the entire process of reserving lodging in the city entirely online. This system also relies on e-mail support and a telephone number for reservations (see Illustration 11).

- Berlin's website posts advance information on shows (cinema, theatre, concerts, etc.) held in the city, as well as museum exhibitions. Once users have made their selection, they can buy tickets online and receive them at a specified address (even outside of Germany) (Illustration 12).

Illustration 13: Data Entry Form for Persons Seeking Employment on Cordoba's Online Work

**Córdoba Empleo**  
Red Provincial de búsqueda de empleo

Volver a HOME

Servicios para Trabajadores • Búsqueda de personal para Servicio Doméstico

Servicios para Empresas • Servicios para Consultoras de Recursos Humanos

Servicios para Emprendedores MIPYMES

Servicios para Instituciones de Capacitación

Red privada de empleos de Empleo

**Búsqueda de Servicio Doméstico**

[Beneficios de Córdoba Empleo](#)

[Búsqueda de estudiantes](#)

[Hábitos de consumo sostenibles](#)

[Respuestas a las consultas más frecuentes](#)

**BÚSQUEDA POR:**

☐ **DATOS PERSONALES**

Edad: mayor de  y menor de  Estado Civil:

Sexo: ☐ Masculino - ☐ Femenino - ☐ Ambos

☐ **DATOS FAMILIARES**

Cantidad de hijos: entre  y

☐ Hijos discapacitados

Cantidad de familiares a su cargo: entre  y

Cantidad total de familiares a su cargo: ☐ entre  y

☐ **DATOS DE DOMICILIO**

Localidad:

Barrio:

Zona de la ciudad:

☐ **EXPERIENCIA LABORAL**

Ocupación:

Disponibilidad horaria:

Ingreso Ofrecido: \$

☐ Ocupado - ☐ Desocupado - ☐ Ambos

☐ **ESTUDIOS**

☐ Postulante que actualmente  estudia

Postulante que actualmente estudia:

Carrera que estudia:

Conocimiento informático:

☐ Idioma Inglés

☐ Otro idioma

☐ **CURSO DE INTERÉS**

#### 4.4.3 Online Job Market and Education

- Aiming to make the job market more flexible, electronic job exchanges and, to a lesser extent, educational opportunities, have become some of the most widespread services on Administrations' websites.
- Online job exchanges normally work like an announcement board, where job seekers and employers post their announcements. However, in cities such as Cordoba, Melbourne and Seattle the online work exchange is connected to, and works alongside, job placement agencies. In this way, the Internet is used as an additional channel for registering job opportunities in the databases of local job placement agencies. Workers can enter their curriculum informa-

tion and keep it updated through the website (see Illustration 13). The curricula form part of a database which companies can consult online. Finally, the potential employer and job seeker meet in a job placement office.

- Cordoba also has an online education centre, which works much like the online job exchange. Educational institutions can directly publish their course information, which will then appear on the website's database. Those who wish to can consult this online database and contact the institutions.

#### 4.4.4 Databases for Companies and Professionals

- One of the most widespread services among the websites analysed is a database which provides access to



Illustration 14: Seoul Website Designed Especially for Children.



information on companies and professionals in the city. However, some websites have a more evolved system. For example, in Barcelona economic and professional activities, as well as restaurants, hotels, museums and theatres can be found using a database, which also indicates each place's location in the city on a map.

#### 4.4.5 Services for Specific Groups

- Internet services directed toward specific groups are clearly lacking on the websites analysed. Information on the Administration's activities and programmes is normally the only service available on the website. However, concrete action on how to distribute services is not generally considered.
- Nonetheless, the city of Seoul makes a special effort in making its site known to those groups which normally have very specified interests or difficulty in accessing the Internet. For example, Seoul provides a downloada-

ble programme which reads the website's contents out loud. There is also a website designed especially for women, and another for children, which have their own special design and content (see Illustration 14).

#### 4.4.6 Electronic Tax Payment

- A tax payment service is surely one of the functions which should be incorporated in the future. At present, most of the websites only post information on the territory's taxes. Only a small number of websites have gone so far as to enable users to calculate their taxes or download forms for offline payment, as is the case in Melbourne (see Illustration 15), Barcelona, Berlin, Rio de Janeiro and Seattle.
- Examples of electronic payment are in the first phases of development and are conducted for certain taxes, specifically, paying traffic fines, as in Melbourne (see Illustration 16), Barcelona and Seattle, or real estate taxes, as in Melbourne.

Illustration 15: Information and Downloading Forms for the Payment of Taxes in the City of Melbourne.

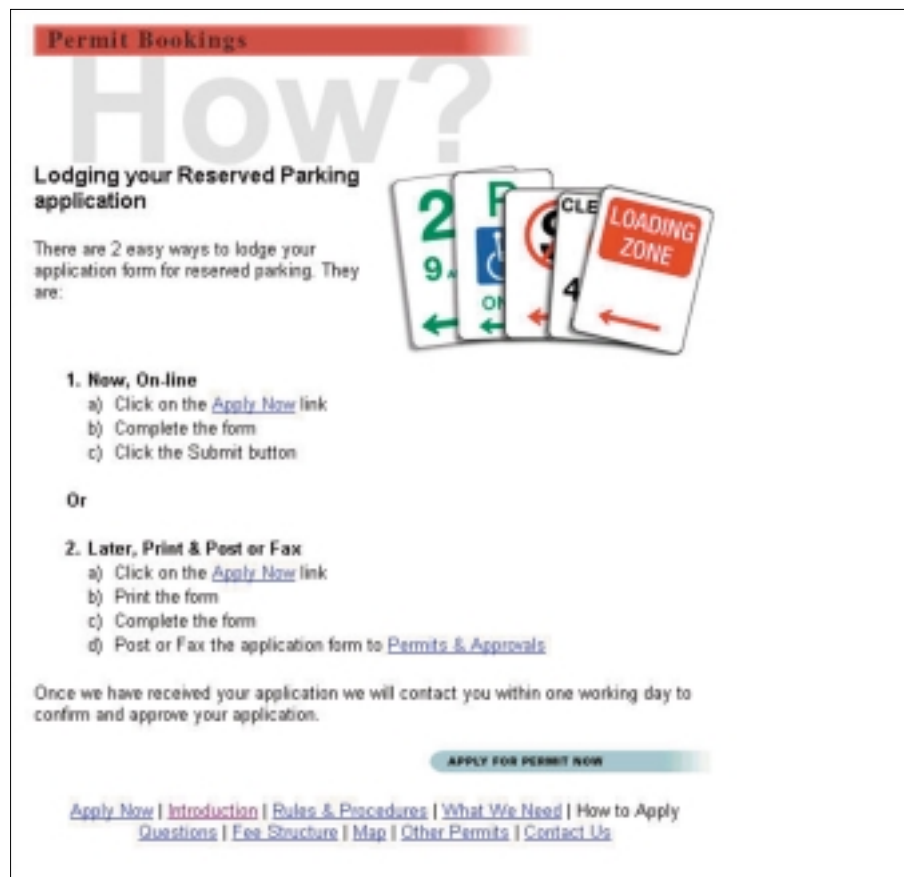
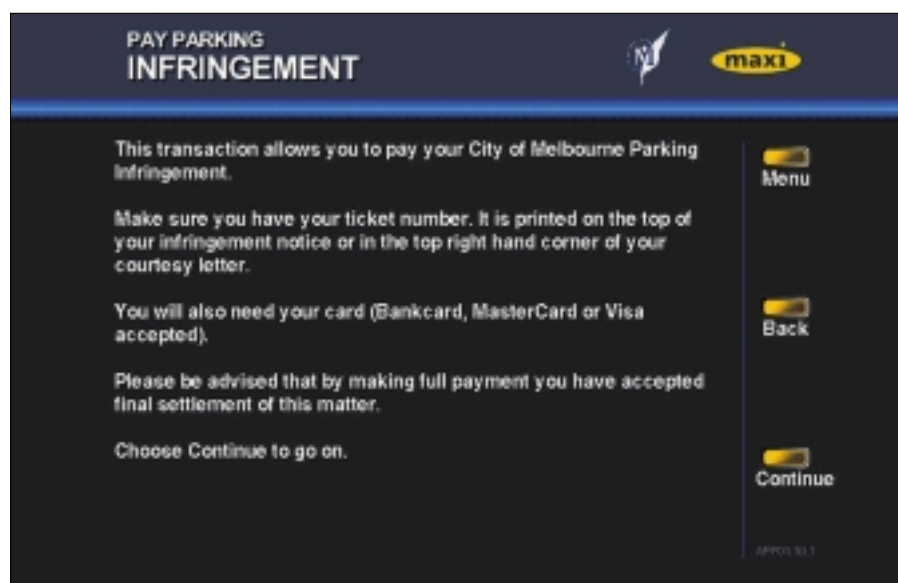


Illustration 16: Electronic Payment of Traffic Fines in the City of Melbourne.



#### 4.4.7 E-commerce

- Very few instances of e-commerce on official websites have been identified. Only the city of Berlin, which has a section specifically dedicated to e-commerce,

has made significant advances in this area. There are a number of companies which have come to an agreement with the city in order to offer their products and services through the website. In entertainment, and other similar areas, the user selects a series of pro-

Illustration 17: Page from the E-Commerce Section of the Berlin Website.



ducts or services and pays electronically (see Illustration 17). With the rest of the products/services on offer, the system functions as an intermediary, merely supplying information on the company and its products. Berlin's website also features advertising banners throughout the entire navigation.

- Both Berlin's and Barcelona's sites feature a search engine for real estate for sale or rent in the city. Berlin's website also offers a service for comparing bank offers for financing the purchase of a home.
- Public transport tickets, museum passes, books and maps can be bought online on Helsinki's website.

#### 4.4.8 Systems for Invitations to Tender

- These are systems which automate – via the Internet – the various stages in the Administration's public purchasing processes. The procedure is initiated with the online posting of the announcement of the Administration's purchases. In this way, the maximum number of offers, which are also posted on the Web, is

achieved. The best offer determines the supplier who will be chosen. Lastly, the contract is finalised.

- This is the procedure in the State of Mexico, as well as in Guangzhou. In the end, the purchasing party makes a printout of the agreement form, which can then be paid in person at the specified bank.
- This kind of system adds greater clarity of information to the entire process of invitations to tender and helps reduce prices by the means of merging all processes and by increased access by suppliers to events of this kind.

#### 4.4.9 User Identification

- Identification of users has been presented throughout this section as an obstacle to the development of e-government. On occasion, it hampers the efficiency of some services or simply impedes other services from being conducted electronically. Although various solutions to this problem are being considered, none of the participants analysed have yet implemented a satisfactory solution.

## 5. RECOMMENDATIONS FOR THE DEVELOPMENT OF WEBSITES OF LARGE CITIES

### 5.1 DEVELOPMENT STRATEGY

- First, the Administration should definitively view the website as a platform for communication and the provision of services. It should have its own, well-planned strategy, designed to satisfy the needs of the users, rather than those of the agencies or departments within the Administration.
- Internet users are the most important consideration. If they are not drawn to the website, they will leave it and the contents provided by the Administration will not be used. Citizens, companies and visitors will continue to use the traditional channels, which means that e-government will not have been worth the investment.
- Therefore, the general objective in designing the official website should be to aim for user satisfaction. To meet this end, the pages should be easy to use, some of the contents should be frequently updated and the design should enable users to quickly and simply find the information or services offered online.
- The success of this strategy should be measured in terms of the number of visits considering that (as mentioned in the second section of this report) the investment in e-government is only justified if citizens and companies use the website's services.
- The Administration should make an effort at ensuring that the website is associated with the territory which it represents, so that the official web becomes a point of reference and an open door for obtaining information and services related to the city. This decision requires various steps:
  - First, the website's domain name must be simple and must be representative of the city, thereby making it easier for users to remember.
  - Second, the website should become the territory's portal, where visitors can find information and access services (both official and commercial). Ideally, visiting the official website should become a routine for those persons who want to find contents on the Internet about the territory.
  - Third, the official website should be identified as such on its homepage (and on the rest of the site's pages as well, since it is possible to directly access pages other than the homepage) so that users know they are visiting the city's official site, as is the case with Melbourne or Berlin.
  - Fourth, the links to non-official pages or services should be clearly identified in order to avoid mistakes among users concerning the responsibility of available contents.
  - Fifth, official websites should incorporate the maximum number of links pertaining to its territory, so that it becomes a gateway for accessing such contents. Using links, as do Helsinki, Berlin and Seattle, offers the advantage of giving the official website greater contents at no additional cost.
  - Lastly, the information posted on the Internet's various search engines (such as Google, Yahoo, MSN, etc.) should be periodically checked in order to ensure that, first, the official website appears in prominent places, and that, second, the information which appears is consistent with the Administration's strategy and goals.
- Official websites should continue moving forward in the development of electronic services. It should be the goal to ensure that all procedures begun online can also be finalised online. Furthermore, these procedures should be grouped together, avoiding individual

lised placement, in order to offer them as a whole and to reduce the number of visits and online operations conducted by the users.

- This objective will surely require the elaboration of two instruments. One is online payment, the incorporation of which into official websites should not be very difficult, as these systems are fully operative on commercial websites. The other instrument is user identification. This is a fundamental aspect, since most administrative procedures require confidentiality and privacy (of the information as well as for the users), necessitating user identification in order to execute such procedures. Without advances in this field, most of the administrative procedures should not be conducted on the Internet.
- Users can be identified by different methods, as seen in the previous section. Furthermore, a system based on the confidential distribution of passwords allowing users to access personal information and to conduct confidential procedures with the Administration could be developed. Therefore, just as a driver's licence or permit for certain activities is obtained, a secret identification could be assigned for conducting online procedures with the Administration.

#### **Box 1: Technical Management Experience of a Complex Website**

When official websites become large and highly complex, the Administration should consider changing the way it is run. Such is the case in the city of Seattle, which has recently reorgani-

sed the technical management of its website, with the objective of optimising its needs for specialised personnel.

The website's new organisation is comprised of a "Central Web Team", which is in charge of the web's technical infrastructure, the city's applications and navigational structure as well as providing technical assistance to the various "Department Web Teams". Each team has a Web Manager and support personnel.

The small departments can share technical-computer personnel. But each department should have someone, who does not necessarily have to be an "Internet Expert", who is in charge of their web. This person should have general knowledge of the Internet and should know how his/her department operates.

The final number of persons in each department depends on the amount of information and on the applications it handles. Specifically, applications require more resources and specialised technical personnel.

In summary, the following guidelines are generally followed:

- Large departments: one full time employee as web manager, another to oversee the technical aspects and another in charge of content.
- Mid-size dept: part-time web manager, a full-time technician and another handling content.
- Small dept: part-time web manager, shared technical staff, and shared content staff.

## 5.2 RELATIONSHIP WITH THE USERS

- The success of e-government depends on potential users knowing about and using its services.
- The website should make it easy for users to quickly find what they are looking for. To this end, the homepage should become a content manager, based on the development of the portal model. Links to other contents should use different kinds of categories according to the way in which each visitor might approach any given topic. So, more than a display window of the Administration's contents, the homepage becomes a content manager through the use of links. The design of the homepage should make the user interact with the website and go beyond the first screen.
- If the contents are infrequently updated or do not include news or current information, use of the website will be reduced to only sporadic visits. In this case, it will be very difficult to make visits to the official website a routine for users. In order to avoid this situation, information which is updated every day, such as news, events and entertainment, should be offered.
- Offering department information is one option, but offering information and services pertaining to the field which concerns that department is another matter entirely. For example, providing information on activities within the Department of Tourism is not the same as offering services which will be of interest to potential tourists. Without ruling out institutional information, the information and services should be centred on satisfying the needs of the users.
- One of the user profiles which is of greatest interest to the official website is that of the non-resident. These people may have different interests concerning the city, but they are concentrated primarily on economic activities (investment, business trips, etc.), and tourist activities.
- Although the dissemination of information and services on the Internet costs slightly less than the more traditional channels, the translation of contents and keeping them up to date does incur great cost for the Administration. For this reason, and given the interests of non-residents, the Administration could choose to restrict the contents which the website offers in foreign languages. For example, e-services related to taxation might be posted only in the local language as it is likely that the vast majority of interested users will speak that language. However, ticket sales for events should be posted in foreign languages so that tourists can more easily purchase them.
- The inclusion of a section for personalising contents enables users to group together the information they require. This function could be improved if users were to register, since the personalised section would be inaccessible if the user accessed the site from a different terminal. It should also allow the posting of links to external websites.
- Aside from posting information and services, the official website could also serve as an advertising tool for the city, by introducing messages promoting the city throughout the entire navigation.
- Since the cost-effectiveness of e-government relies in part on the population's use of the Internet, the cities should take measures to help users access this technology. The Administration should improve Internet accessibility among the population, through the use of various methods. In some instances, such as in the State of Mexico, the Administration has provided public areas for connecting to the official website for people who do not have their own computer (see Box 2).

### Box 2: Promoting Internet Accessibility.

The State of Mexico has begun a pilot project for facilitating citizen access to the official website. The project consists of setting up stands which serve as public Internet sites, where citizens can gain free access to information on the government and the State of Mexico, as well as quickly, safely and coherently using the online services.

To date, there are 17 such stands installed at easy-to-find locations throughout the state. There is no charge to use the stands, where visitors can access all of the pages of the government's website, including:

- The Second Report of Governor Arturo Montiel Rojas
- Assessment of government programmes
- Information on the financial management of the Government of the State of Mexico
- Complete information on the services offered by the State Government
- A wide range of online directories and publications
- Tourism, arts and crafts, ecology, culture, etc.

- Nonetheless, accessibility is not the only variable which determines Internet use. It is also necessary for people to be able to understand and use the world of the Internet. In Barcelona, for example, innovative methods of promoting Internet knowledge among the population and companies have been put into effect. One such innovation is a centre specialising in free of charge ICT training. The contents are organised in modules, which are geared toward solving problems or specific situations through the use of the Internet (see Box 3).

### Box 3: Citizen Training in ICT

The city of Barcelona has instituted a highly innovative ICT training programme. This is 'cibernàrium', which is comprised of a multi-space data transmission programme and introduction into the digital world for professionals, entrepreneurs and students.

Located in the North Building of Barcelona's Fórum Norte, there are five main spaces:

- Off-line navigation room. Provides access to over 100 videos which give in-depth explanations of what the Internet is and the opportunities opened by the digital revolution.
- Online navigation room. Cabled Internet centre, where the knowledge gained can be put to use.
- Training area: Space where ICT-related activities are taught and disseminated.
- Company area: Like the fore-mentioned space, only where the training is more closely linked to the world of business. It also seeks to facilitate business collaboration and encourage new business opportunities.
- Idea space: Dissemination of training topics with greater meticulousness and technical depth than in the previous sections. It is used to encourage creativity and innovation.
- Available services: e-mail with remote access.

The originality of this centre is that it provides short (between one to three hours) monographic sessions on very specific topics, given in seminar form, with set times. Participants sign up by phone.

This programme is one of many which the Barcelona City Council, with the participation of municipal libraries, civic centres and schools (after class time), has instituted to promote ICT knowledge among citizens.

### 5.3 RELATIONSHIP WITH COMPANIES

- The official website allows the Administration to establish a new framework for collaborating with local companies which it did not have before. Facilitating and improving the relationship with the companies is the priority.
- This framework for collaboration is based on two central ideas. First, the official website can make the companies' administrative procedures quicker and easier. The Administration can also improve other services such as the dissemination of information, access to Administration aid, collaboration networks, work and education exchanges, the search for professionals and companies, renting or buying office space and relationships with entrepreneurial associations or chambers of commerce, etc. Second, given the high number of visits registered on official pages, the official website can become a powerful intermediary between users and local companies as well as attract new potential business for those companies.
- Additionally, the Administration, by developing policies of information and investment, can boost activities aimed at attracting outside investment via the Internet.

- The relationship with companies must embrace the technological sphere. The Administrations should strengthen their collaboration with the technological sector when designing their official websites. With this in view, in many countries, the Administrations are implementing a "free software" policy in the aim of reducing dependence on systems owned by private companies.

### 5.4 NEW CONSIDERATIONS

- In order to avoid speculation, regulation of the domains should reserve the names of the cities, as is done with other territorial specifications, for the Administration or entity which officially represents them.
- As official websites become portals for their territories, they should be incorporating links and electronic commerce functions which will complement official services. This will also reinforce recognition of the official website as a reference for its territory and will help solve users' needs. To meet this end, two conditions should be considered: first, that society accepts this combination of interests and, second, that the official website clearly distinguishes which services are official and which are commercial.
- Once e-commerce has been incorporated into the official websites, it hardly seems logical not to do the same with advertising banners, which might promote private enterprises as well as services provided by the Administration itself. Although revenue generated by banners in the private sector has become less significant in recent years, the Administration could gain a new source of financing its official site this way. Whatever the case may be, incorporating banners should be done in such a way as to not compromise the independent nature of public services.



- In spite of the fact that commercial websites have incorporated systems of e-payment on their websites, apparently without great difficulty, this system is still in the incipient phase on official websites. In the future, official websites should be able to provide this system so that many of the procedures therein offered can be finalised online. Incorporation of this system will bring with it new demands in terms of security on the website.
- The introduction of e-commerce and e-payment, combined with the greater complexity of content on the websites obliges the Administration to increase its co-operation with the private sector. This could be brought about in many ways, including for example, links on the official website leading to commercial services. Collaboration with financial institutions should also be increased in order to make e-payments possible. Finally, as we mentioned previously, participation in technological fields, both in designing and managing websites, should be increased.
- Another consideration is the improvement of usability of official websites so that users can quickly find what they are looking for and easily carry out procedures. Increasing amounts of contents on the websites means that more investment is needed in this sphere. In analysing the websites studied, some very simple recommendations have arisen:
  - The homepage should be downloaded quickly and should not be merely an introductory screen. It should provide links to other pages of the site, current news and important topics, as well as inform users that they have accessed the city's official site. The objective of the homepage should be to inspire the visitor to stay and use the website.
  - If there are options in foreign languages, the links should be easily located on all of the site's pages.
  - The contents of the pages should occupy one or only a few standard-size screens (800x600 pixels), or a code to automatically adjust the configuration to the user's screen should be introduced. Contents which oblige the user to move about the computer's screen make navigation tiresome. Also, the text should be brief so that it takes up little space and is quickly read. Hyperlinks to other pages enable to add more detailed explanations.
  - A homogeneous design helps the users learn how the website works so that they can concentrate only on the contents therein provided. Page headings normally occupy too much space on the screen and should be reduced.
  - As most users tend to print pages in order to read them later on, the documents should be optimised for standard size printing (DIN A4).
  - When information is requested, users should be informed about the safety of the transaction and how many screens they will be visiting, as is the case on the Melbourne site. Additionally, when a procedure is begun, the user should be notified by e-mail.
  - Forums should have a code of conduct which regulates the users' contributions.
  - Finally, we would stress the need for setting up systems to register and identify users on official websites. Analysis of the websites has shown that the lack of this function is one of the primary reasons that certain electronic services which manage confidential user information are not developed.
  - In conclusion it should be said that the Internet facilitates the global development of new spaces for the exchange of information and experiences among

Administrations, which could enhance advances in public services and, in general, public participation. For example, the World Bank has promoted a website (<http://www.developmentgateway.org>) which manages 27 portals dealing with matters related to economic and social development. It is designed for an international audience made up of professionals involved in development, civil society, international agencies, the academic world, professional associations, suppliers of products and services and communication media, among others. This project aims to reinforce the efficiency of international, national and local players by providing tools for co-ordinating efforts and enhancing learning. The content of one of these portals, called Urban Managers, is currently the responsibility of Metropolis and provides information on the following topics:

- Environment
- Globalisation
- Governance
- Housing
- Municipal Finance
- New Technologies
- Social Policies
- Strategic Planning
- Transport

## PART II

### CASE STUDY SUMMARY

#### INTRODUCTION

A summary of the principal features of the analysed website contents are described in this report. The intention has been to make an individual presentation of each website highlighting the most important aspects without embarking on an in-depth description.

The website analysis was carried out in the summer of 2001 and the copies of the website images were taken during the last quarter of that year. Due to periodic updating it is not surprising that some websites currently have a different aspect.

Lastly it ought to be pointed out that in order to simplify each website presentation the e-government's differentiation of development levels introduced in the first part of this report has not been adopted in the case study summaries. The presentation limits itself to only consider the electronic distribution of information and interactive services.

## 6. BARCELONA CITY WEBSITE



### 6.1 HOMEPAGE AND SURFING

- <http://www.bcn.es> is the Barcelona city council's official website. This domain acts as a portal permitting access to information (documents, databases, directories, news, etc.), electronic services and the collection of municipal webs. The website displays contents in three languages: Catalan, Spanish and English, although not all of the contents are found in English.
- The information on the home page is set out in three columns with an upper browser bar. Contents are shown in the central column with the lateral columns providing direct links to other parts of the website. This layout is generally maintained throughout the website.
- Two lines of contents form the upper browser bar. Direct access text to sections highlighted by the City Council

form the first line and correspond to the city "Diary", the "BCN Guide", the "Directories", the "Procedures", "Transport", "Road traffic", "Citizens' e-mail". The second line offers a website search engine and access to the different municipal websites through a dropdown menu. The upper part of the home page also displays an image of the city with a representative logo, direct access texts to the City Council mail, the "Visitors' book", a website map and different language versions of the website.

- Links to the website contents are organised by subject on the left-hand side column. Four groupings corresponding to Tourism, Business, the City Council and the City have been chosen. Direct access texts to different sections of the website are displayed when clicking on one of these links.
- By contrast the right hand column deals with links to special interest municipal and non-municipal websites through direct access images.
- The more dynamic frequently updated contents are presented in the central section. The daily city news (allowing full text access) is an example. Also direct access to the interactive website services is facilitated such as the retransmission of a plenary session of the City Council, online procedures, the City Council electronic publication, the press service and the electronic suggestion box, etc.

## 6.2 AVAILABLE INFORMATION

- The website brings together information destined for three types of visitor profile: the investor, the city visitor, the residents (as users of the administration, as entrepreneurs, as workers, as businessmen).
- A large amount of information dealing with a wide range of aspects of the city, the City Council and city

activities have been made available. The contents include:

- Economic information through the Barcelona city Local Development Agency, Barcelona Activa. In particular, information is specifically offered to support new business ventures, foreign investment, leasing or buying business localities, market analysis information, city company directory, and company support from municipal offices.
- Information and documentation of city data (available spaces in the city, employment, training, tourism, etc.), how the City Council works and the main activities of the various municipal departments (urban planning, municipal services and resources, etc.) are downloadable from Internet.
- City Council departments and / or services telephone lists and e-mail addresses.
- City related website lists.
- Direct access to other municipal or non-municipal websites supplying electronic services such as Barcelona's economic activity database through "Infopime" and the "Camerdata", employment opportunities, reservations or real estate agents.
- Daily city news.
- Plenary sessions of the City Council video clips.

## 6.3 INTERACTIVE SERVICES

- Databases and directories. On the one hand these include services related to the economy and the labour market: business activities, employment offers and

demands, training, subventions and supporting activities. On the other hand are the services that provide information on the city's resources: all types of organisations and institutions, cultural and leisure activities (restaurants, hotels, shops, museums, etc.), social services, health services and services related to everyday activities. Having identified the offer the system does not make reservations but can, in some cases, provide contact with the suppliers. As an example, links are provided to central reservation external webs of accommodation services, and in the case of personnel selection there are links to external online job vacancy lists.

- Support services for city mobility. These include the following utilities:
  - A map of the city's main thoroughfares giving the traffic condition in real time and a fifteen-minute forecast. The information includes travel time for the most important parts of the basic road network updated every five minutes. Images of main road traffic from fixed cameras can also be accessed.
  - A car park localisation service based on a city map with indications on how to reach each one after choosing a starting point.
  - By introducing a departure and destination point the design of a personalised travel itinerary using public transport. The system indicates the best public transport combinations (taking into account the date and time of the journey); the route is indicated on the map and gives total as well as partial travel time details.
  - Given the point of departure and destination the distance and travel time of personalised walking itineraries are calculated.
- Online procedures and formalities. Through Internet detailed information of some 600 municipal and non-municipal procedures can be consulted and more than

50 formalities carried out. Nevertheless, it should be noted that few of these formalities could be completed online. The types of procedures normally dealt with are those that solicit specific information or to register oneself in a service without needing to make any type of payment. Printing the application form and subsequently delivering it or making a payment offline to the City Council's registries or to the supporting entities, depending on the case, usually completes the other formalities. Some of the services that can be completed online are:

- A request to remove without charge furniture and domestic appliances from the street.
- Copies of scaled topographical plans of Barcelona.
- Payments related to traffic fines and municipal taxes.
- A follow up of the state of progress of certain types of licences.

- BarcelonaNetActiva, a virtual business community with access to an entrepreneurial virtual school with online subscription and programme has the following areas:
  - Information and resources: Daily news, Virtual library, Reservation of spaces, links to other webs, Barcelona offices and premises.
  - Setting up a company: Guide to setting up a company, business advice (online consultation, personal interviews and database access), search for financing, access to a network of experts, female entrepreneurs, and web creation.
  - Business school: online courses.
  - Business cooperation: business market, e-commerce, company directory, forums and chats.
- An e-mail service available to anyone who requests it.
- A visitors' book to appoint city visitors' impressions and two e-mail addresses ([bi@mail.bcn.es](mailto:bi@mail.bcn.es) y [qualitat@mail.bcn.es](mailto:qualitat@mail.bcn.es)) to request information or send complaints or suggestions to the City Council.

## 7. BERLIN CITY WEBSITE



### 7.1 HOMEPAGE AND SURFING

- Berlin's official domain is <http://www.berlin.de> and information is available in German and English. In addition city and tourist information in Spanish, Italian and French can be found within the contents of the tourist office.
- It should be noted that the German and English contents are quite similar but have presentational differences.

For its citizens the German version has a privileged access to contents of interest, whilst the English version focuses on visitors.

- The home page contains three contents columns as well as an upper and lower browser bar, which are maintained throughout the website. Direct access texts, grouped by themes, are located in the left-hand column. Direct access to the daily news, website novel-

ties, specific city events, links to the city diary and the main website services are located in the central column. More main website services are accessible through direct access texts and images in the right hand column.

- The upper bar has two sections one of which corresponds to the left-hand column. The other enables access to the English version, my city, city map, industry directory, city services and search engine.
- The availability of publicity spaces for banners marks a difference in the Berlin website. The website is able to offer a wide range of services to the user by integrating both public and non-municipal private services.

## 7.2 AVAILABLE INFORMATION

- Detailed information on museums, shows, sports and cultural activities. A lot of information on Berlin's history and institutions as well as city events, shows and museums are found in the tourism contents. A visitor's city guide is included. To be noted is a section specifically devoted to non-German speaking users with information on the city's artistic and cultural activities. In addition information is available for specific groups of visitors to the city.
- Administrative procedures including documentation and step-by-step guides and the offices of the various city administrations are offered. Electronic requisition forms are available from the web as well as information and payment of taxes.
- City institutional information. Government reports and departmental activities can be obtained from the web.

Embassy contacts directory and other foreign organisations within the city.

- Information on tourist destinations including Berlin. This is aimed at the city residents and includes travel offers, destination information, travel advice, etc. Internet based travel agency directory.
- The Berlin Business Development Corporation's "Business location centre" contains the information relevant to business and investments. Information on investment formalities, taxes, investment opportunities, public support programmes to companies and how to contact the development office is contained in this web. An investor's guide is available that offers basic information on investment procedures and institutions involved; information and contact (via e-mail or telephone) with the Economic Development Corporation office; a newsletter based information service; new business venture information; contact with the Real Estate Development service which offers information and support with respect to buying city properties, start-up support services and support in purchasing city properties; a diary of business events organised in Berlin.

## 7.3 INTERACTIVE SERVICES

- Online ticket purchase (available in English) includes sale and issue of tickets for events. Online payment is possible using a credit card or the systems own payment card. The issue of the tickets can be made outside of the country.
- Traffic information system including the major incidents.
- City based professional and technical personnel search engine. Online job announcements (although this ser-



vice is provided through the employment office <http://www.arbeitsamt.de> outside of the Berlin website domain).

- In collaboration with Yellowmap, a search engine of Berlin based companies by product type.
- In collaboration with EstateNet, a Berlin property search engine for rental or purchase. In addition a service is included to compare bank offers to finance the purchase of a property.
- A city activity search engine using the criteria of category, subject and date (available in English). Information on activities, film listings (cinema information and synopsis of the film), opera, museums, art galleries, theatres, etc. The information is provided with the collaboration of the specialist company such as moviedata in the case of cinema.
- A search engine of accommodation and restaurants in and around Berlin. This service allows online reservations and subsequent confirmation of the status of the reservation in the case of accommodations.
- City libraries databases.
- Citizen e-mail.

## 8. CORDOBA CITY WEBSITE



### 8.1 HOMEPAGE AND SURFING

- <http://www.cba.gov.ar> is the Cordoba website address. Its contents are only available in Spanish except for the tourist section which can also be seen in English and French.
- The structure of the homepage is based on three columns and an upper section including the website

identification and a browser bar. This configuration is maintained whilst browsing throughout the website.

- The upper browser bar contains direct access text to the homepage, news, forums, surveys, communication with the website administrator and a contents search engine.
- The contents of each webpage are shown in the central column. On the homepage news summaries act as

direct access texts and form the contents together with direct access text lists and images to key sections of the website and other electronic services.

- The left-hand column has direct access text to the governor's office, the ministries and the press and media services. In addition there is access to a wide range of information groups such as a list of authorities, the municipal register, a co-operative search engine and links to the Cordoba province municipal webs.
- The right hand column has direct access images to government agencies and direct text access to online surveys and a registered user link (although this is not yet available).

## 8.2 AVAILABLE INFORMATION

- Employment-related information. For example a list of the employment offices with address, telephone, fax, e-mail and contact person is distributed. This is complemented with an interactive service of job and training announcements.
- Information of projects and proceedings carried out by the government and its key agencies. Specific projects orientated towards the small and medium company are highlighted.
- Healthcare system information: addresses, programmes, health advice, prevention campaigns, and healthcare system news.
- Download state and municipal statistical information. Documents offered include maps, economic, social and demographic information.
- Administration directory.
- Press office information.

## 8.3 INTERACTIVE SERVICES

- Job vacancies. Companies looking for personnel in this site can find the personal details of candidates together with their Curriculum Vitae and presentation letter. The candidate has facilities to automatically introduce and maintain his data quickly and easily. A help page offers advice and suggestions on how to look for work, prepare a curriculum vitae, write a presentation letter, etc. Companies are able to use the system to find candidates to fill vacant positions.
- Training vacancies. All site visitors can review details of the different courses available as published by the training agencies. In addition the centres can market personalised courses to potentially interested persons using the online candidates database by searching, identifying and contacting selected candidate profiles. The candidates can find training course offers and view the list of companies that consulted their work profile.
- Public tender search by Administration and type of tender.
- Printing of local tax payment forms including the amount due. Payment through the corresponding entities can be made using this form. On obtaining by telephone a security code the user can then consult all due payments.
- Online data collection of the Cordoba Province scientific and technological activities. This information is used to generate a provincial R+D indicator system, enable the Science and Technological Operators access to the information and promote network development and the provincial, regional, national and international interchange of research groups. The presentation of a Curriculum Vitae for the solicitude of a subsidy and/or grant is replaced by information contained in the Forms which serves as an affidavit.
- Consultation of the municipal register.
- Co-operative and friendly society search engine.

## 9. GUANGZHOU WEBSITE



### 9.1 HOMEPAGE AND SURFING

- The Guangzhou metropolitan area has several official domains. At times these domains make general references to the municipality, on other occasions they correspond to specific metropolitan government agencies (such as External affairs, Tourism, Foreign investment, etc.), and others are focussed on specific user profiles (citizens in general, students abroad, public sector workers, etc.).

- Within this variety of domains in Guangzhou, <http://www.gz.gov.cn> is considered as the main website. Links to most of the domains managed by Guangzhou can be found in this website. The web is in Chinese with a simpler version in English.
- The structure of the homepage consists in an upper and lower section with three columns in between. The upper section includes the web's identification image

and an upper browser bar which links with the government organisation section contents and the English version. This structure is not maintained when browsing the website.

- The left-hand column contains direct access text to different sections such as the health system's news, government agencies electronic services directory, press conferences, virus news, government action trends and the activities diary.
- A direct access text section relating to a selection of the Guangzhou area government's news is found in the central column. In addition there is a section with direct access images to external websites: Chinese government news, video reports, new technology access programme and a Guangzhou city electronic map. Following on are direct text accesses to different contents organised by subject such as news highlights, project and programme documentation, regulations and laws, Guangzhou surveys, economic development, external economic relations, tourism, city directories, etc. Direct access texts to the different Guangzhou government agencies are found in the left-hand column. Lastly the lower section contains links to external websites offering a wide range of services and information.

## 9.2 AVAILABLE INFORMATION

- The distribution of contents in a wide variety of formats is an important feature of the Guangzhou website. These formats include a text, video and audio platform. This is distributed in the following way according to the type of information:
- The governmental organs and government agencies composition, organisation and location.

- Activity news and documents and trend of the performance of various governmental organisations and agencies. Press conferences (in text or video format) to website downloadable reports can be found. This deals with the most abundant information.

- Information on the status of projects and the most important activities in the fields of economic development, new technologies, health and social services, the environment, etc.

- A city services directory from hotels to museums to social services and medical services. Information on social services, health services, transport, cultural activities, and education services. A special effort has been made with respect to tourist related information (key tourist site videos, electronic maps, etc.).

- Guangzhou's laws and regulations.

## 9.3 INTERACTIVE SERVICES

- Government purchasing and planning information system. Suppliers can have access to detailed information of government requirements and make offers through an electronic system.

- Suggestions box e-mail.

- The Guangzhou web analysed acts more as a portal than a direct service distributor facilitating access to the most important agencies which have their own domains offering information and occasionally interactive services. For this reason no further electronic services are highlighted in this report section.

## 10. HELSINKI CITY WEBSITE



### 10.1 HOMEPAGE AND SURFING

- <http://www.hel.fi> is the official Helsinki city website. The homepage is available in various languages: Finnish, Swedish, English, French, German and Russian. Nevertheless, not all of the contents are available in these languages.
- This website, which combines information and services produced by the municipality with those of external institutions, was conceived as a city thematic portal. In this way it has become a key reference to obtain information and electronic services on Helsinki. The domains of city departments and institutions as well as links to other organisations outside the city can be accessed from this domain.
- An upper browser bar and three columns form the structure of the homepage. To provide access to the contents' search engine the upper browser bar is maintained throughout the website. In this context the second level website pages have a simple upper browser bar with direct access

text to the website map, contact, feedback and homepage.

- Direct access texts organised by subject are found in the left-hand column. City news or novel contents are accessed through the central column. The right hand column is divided into two direct access text sections. Access is based on city areas or departments in the first and visitor profile in the second.
- In collaboration with the university of Helsinki the city has another homepage, <http://www.helsinki.fi>, which is primarily aimed at university users with information and services organised according to this user group.

### 10.2 AVAILABLE INFORMATION

- The website acts as a portal facilitating access to other websites with information and services pertaining to Helsinki through subject organised direct access categories. For example, the Finnish National Meteorological Institute's meteorological service,

(<http://www.fmi.fi/en/index.html>), or the city museums, etc.

- City characteristics information, the city's government, statistics, etc.
- Access to distinct city departments with each one giving information on its programmes, services, performance as well as contact details.
- Free files from the web containing reports on municipal proceedings, regulations, budgets, municipal diaries, etc.
- City and metropolitan area transport system information through maps, timetables and ticket points of sale. The access to the website "Journey Planner" should be emphasised as it allows the visitor to design the best itinerary between two points within the Helsinki metropolitan area using public transport.
- Access to information on the city and its organised activities, a photo gallery, an address and telephones of interest directory and hotels can be obtained in the specific section dedicated to city tourism which is under the responsibility of the municipal tourist office. An abundance of information in the form of downloadable PDF files of catalogues and articles describing different ways of enjoying the city is noteworthy. These catalogues are aimed at specific visitor profiles (such as young people, families, congress attendees, business trips, etc.) or cover specific activities (sports, museums, health, etc.).

### 10.3 INTERACTIVE SERVICES

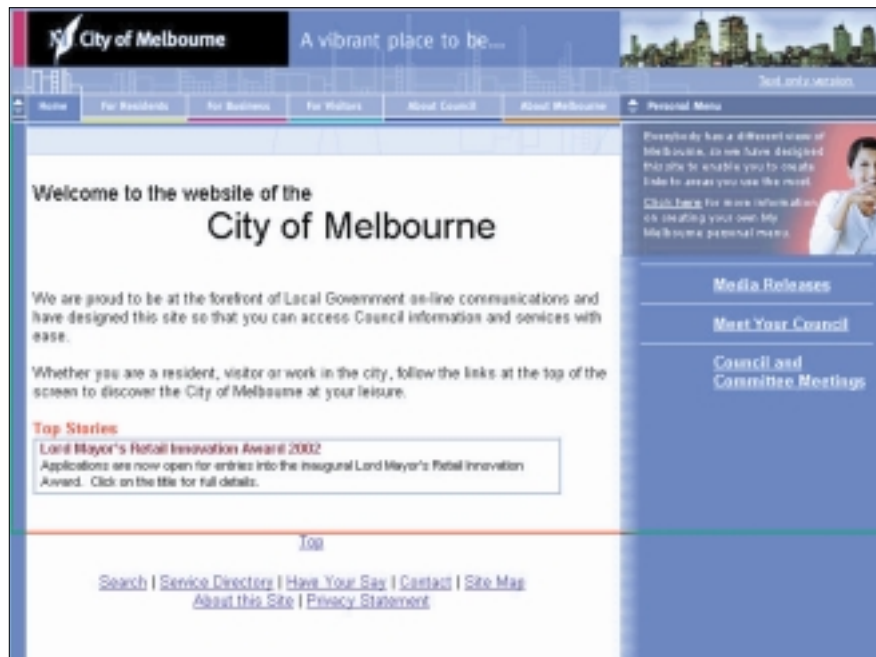
- Administration contact service. This allows communication with the different municipal departments, in particular that for young people and the social consul-

tation service, through e-mail. Replies are given within a week and the service is available in English, Swedish and Finnish.

- City department forms (Social Services Department, Health Department, Real Estate Department, Cultural Office, Environmental Centre, Public Works Department). This is available only in Finnish and Swedish.
- The "Net shop" website which sells tickets for Helsinki transport, museums, books and maps is only available in Finnish and Swedish.
- Information and request for service connections as well as water and electricity consumption cost calculation. Nevertheless electronic payment or access to invoices is not permitted. The service is available in English, Swedish and Finnish.
- A virtual view of Helsinki city giving 360° image projections of city centre tourist points of interest. Each point of interest can be selected from a list or a map location with its accompanying information.



## 11. MELBOURNE WEBSITE



### 11.1 HOMEPAGE AND SURFING

- The Melbourne city domain is <http://www.melbourne.vic.gov.au>. The contents are only available in English.
- A browser bar that remains constant throughout the website is located in the upper part of the homepage. The bar has two parts: the upper part contains the city website identification, a publicity slogan and an image; the lower has an exploration bar indicating the principal sections of the website organised by visitor type (residents, business, visitors, About Melbourne and Personal Menu). In order to increase the space for the rest of the contents the visitor can hide the upper part.
- In addition the homepage has two contents columns. The specific contents of each page appear in the larger right hand column. The purpose of the website and an introduction appear on the homepage together with a dropdown menu highlighting news items.
- The contents of each section that the visitor is viewing are presented in the left-hand column. The categories of the second level website sections correspond to visitor type (resident, investor, tourist), the city and the town council. In addition the personalised website sec-

tion should be highlighted since it allows users to directly store their favourite pages for a more rapid and personal access.

- Lastly, direct access texts to utilities are found at the bottom of the page: a search engine, a service directory, a suggestions e-mail, contact, web map, website information and a website privacy policy. This line is maintained throughout the website domain.
- The design of the graphics and contents of all the levels is homogeneous. A text presentation appears when entering in one of the second level sections and in the right hand column there are corresponding illustrative photos and links to documents or websites of a specific interest. The browsing is helped by the section contents appearing in a dropdown menu.
- Information, including that of the city and city council, is organised around the resident, investor and tourist profiles of the visitors.

### 11.2 AVAILABLE INFORMATION

- Municipal activities, budget and organisation.
- City projects and developments.



- City tourism points of interest and activities.
- City maps, statistical data and reports and activities.
- Free city guide and other informative documents.
- Economic information of the city, company support programmes, local economy key sectors, company directories, economic activity licences, business links (a specialised website, <http://www.invest.vic.gov.au>, offering an investment guide and focussing on investment in the metropolitan area is to be noted). Business and company events diary. Economic development policies and programmes.
- City based companies' directory.
- Free forms for carrying out municipal procedures or formalities.
- Public tender database.
- External website links with information for visitors (tourism, shopping, shows, restaurants, maps, accommodation and transport).
- The management of several local taxes including payment through Internet, such as real estate property or traffic fines.

### 11.3 INTERACTIVE SERVICES

- Job vacancies: a summary of all the vacant positions in the city can be viewed; a complete copy of all the job offers and requests can be seen, downloaded and printed. CVs can be sent through the Internet. Acknowledgement of the mailed forms is received by e-mail.
- Parking fines: Parking regulations and forms for obtaining a personal parking zone are freely available. Online traffic fine claims and payments.

## 12. STATE OF MEXICO WEBSITE



### 12.1 HOMEPAGE AND SURFING

- The domain. <http://www.edomexico.gob.mx> is the official website of the State of Mexico. Apart from the section aimed at “foreign investors”, available in 4 lan-

guages (Spanish, English, French and German); the rest of the contents are in Spanish only.

- The structure of the homepage has three contents sections. The upper section contains direct access icons

for the following contents: "Online Complaints Register", "Tourism" and "Government's Palace". Government departments are accessed via direct access texts contained in the left hand column; in addition there are direct access texts to press releases, events, the website search engine and, lastly, contact with the Governor's office through e-mail. Finally, the accesses of the central section are structured in accordance with the following contents: citizen interchange (c2g2c), internal management (g2g) and interchanges with other institutions (g2x).

- c2g2c contains State of Mexico Government news and special projects, electronic services, social involvement promotion and community information. In addition there is the State government's e-mail and the categories "site novelties", "most visited" and "suggestions".
- g2g gives exclusive access for registered users to the State government's private area.
- Access to contents sections that have information and electronic services elaborated jointly by the State of Mexico and other specialised Administrations are found in g2x.

## 12.2 AVAILABLE INFORMATION.

- Government presentation and the Administration contacts directory. Governor's message and territory presentation videos.
- The Administration's activities information and databases. Reference is made to important Administration activities and projects as well as general activities related to the healthcare service, social security and the employment market. The Administration's public purchasing information.
- Economic, geographical and social information of the State's 122 municipalities; find out about the etymological significance of its official place names.
- Administration online publications.
- The Administration's territorial centres' directory.
- Information in the form of illustrative video clips and data on the State of Mexico's social-economic characteristics for foreign investors, foreign investment company directory and foreign investment promotion information.
- A directory of the Municipal, State and Federal Offices who regulate the set-up and operation of companies. Information on the creation of a business in an industrial set-up guide from territorial advantages to available subsidies, fiscal and environmental obligations, as well as procedures to follow, etc.
- A directory of works and economic activities that are exempt from specific rules regarding the environment, healthcare and civil protection. Distribution of self-evaluation questionnaires assessing the compliance with environmental, industrial, healthcare and civil protection rules. In the case of non-compliance obtain the agreement of the responsible body for corrective action within an agreed timeframe.
- Urban procedures, laws and plans that affect the territory. Forms dealing with the formalities associated with house building including land purchase, division and / or development, building or construction, selling or registration as well as other procedures.
- State of Mexico tourist information on destinations, routes, activities and services (travel agencies and hotels).

### 12.3 INTERACTIVE SERVICES

- Database of payment records due to the Administration.
- Stolen children, missing persons and the identification of unknown persons database.
- A database on the formalities for constituting, building and installing a business.
- Online denouncement register allowing a pre-accusation that must be subsequently corroborated in the corresponding Public Ministry agency on a date given by the system.
- A Business Activity Deregulation system. The Federal, State and Municipal formalities necessary to start-up a business or develop a home can be consulted by giro or lucrative activity; deregulated giro lists by subject; information related with self-verification programmes and inspection visits; and a guide on how to set-up a business in the State of Mexico.
- A Governmental Contracts electronic system that through Internet automates the various stages in the process of contracting goods, services, leasing and public works by the entities and dependencies of the Federal Public Administration. The system allows government-purchasing units to publicise their requests for goods, services, leasing and public works through Internet. The same system allows suppliers and contractors access to the information enabling offers to be presented and continue the contracting process up to the moment of printing the form to make a physical payment in the nominated bank. In addition access to the system is available to the public permitting any citizen to inform himself of the Administration's contracts.
- Civil Register certificates. This allows online petition of certificates which are sent to a postal address after payment of a fee by postal transfer.
- Arrange an audience with the Administration.
- Consult stolen vehicle investigations and non-criminal records.
- Vehicle ownership payment. The payment can be made through Internet (by credit card) and the documentation is available within three days.

## 13. RIO DE JANEIRO WEBSITE



### 13.1 HOMEPAGE AND SURFING

- The domain of the Rio de Janeiro website is <http://www.rio.rj.gov.br>. The contents are only available in Portuguese.
- An upper section and three columns form the structure of the web pages.
- The upper section is composed of a header with a representative image of the city, a current news menu and a dropdown menu browser bar with direct access texts to website sections (website search engine, city organisations, recommended websites and important telephones). This header is maintained throughout the website but in a reduced form. The city image disappears and the contents are reduced to one line containing the dropdown browser bar and an indication of the website title, making surfing easier.
- The left hand column which is maintained whilst browsing the website has a direct access image to the official Rio de Janeiro bulletin as well as direct access texts to the Municipal Bodies' sections, Strategic Plan, Legislation, Rio News, Website Search Engine, important telephones directory and Suggestions Mailbox.
- Second level sections of the website organised by subject have direct access texts located in the centre column. These text accesses appear in the right hand column of the pages in subsequent website levels.
- The right-hand column has an online opinion poll (in which you can vote and see the results) as well as text and image links to important website contents. This column contains access to website sections in the second level pages.
- Nevertheless, the browser bars and direct access to the homepage disappear from the second level making exploration difficult.

### 13.2 AVAILABLE INFORMATION

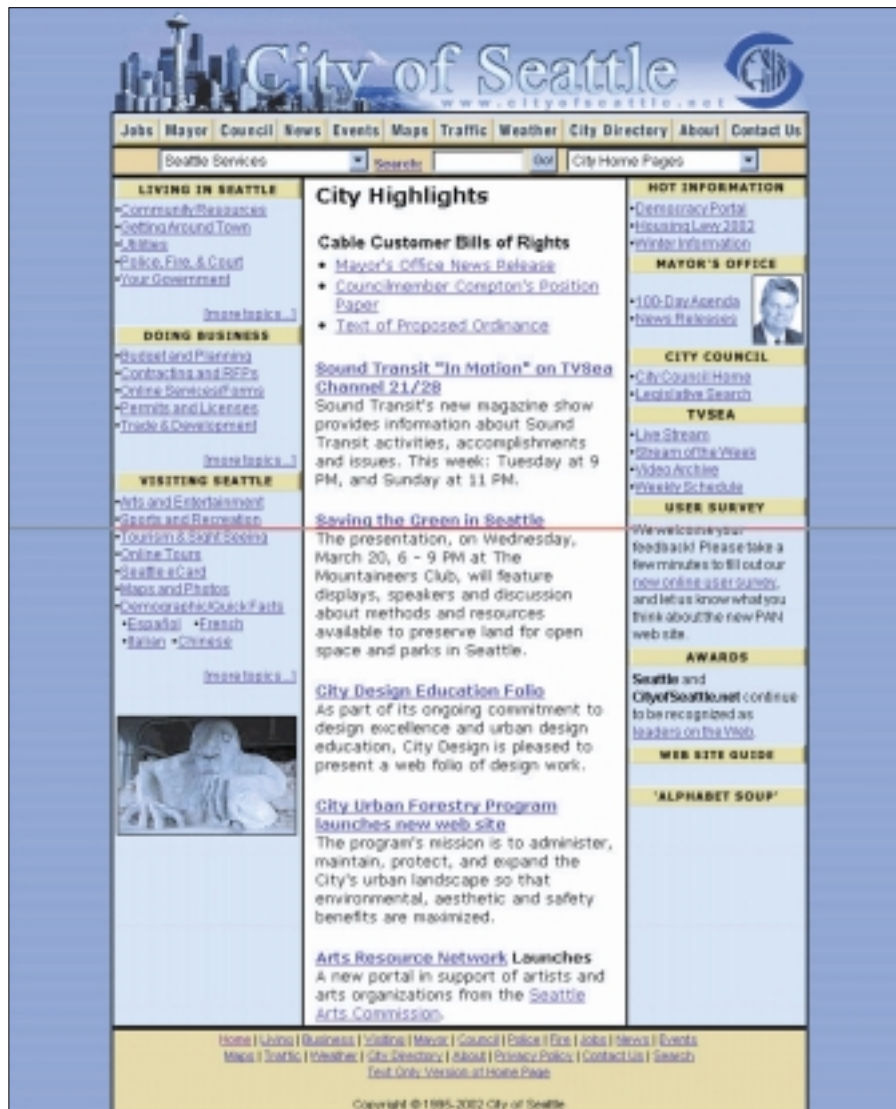
- In general the information available covers the city, traffic, health, education, public utilities, links to the Administration, taxes and rates, employment opportunities, tenders, tourism and culture, and lastly, accommodation.
- Government information and important telephones.
- An electronic bulletin service orientated to city residents that includes city information on programmes, actions, services, cultural diary and novelties.
- The healthcare section includes a health guide, an emergency hospital list, a municipal hospital list, a list of municipal health centres and a health establishment register.
- A school search engine. In addition the purpose of the different education stages are described as well as ongoing educational projects.
- Tourism and culture: online library, city guide and information regarding the cultural MERCOSUR. In addition, in the promotion of city tourism, within the companies' section, the contents are in English, Spanish, French and Portuguese. The information only covers the city (history, characteristics, important sites) and does not cover accommodation nor city travel.
- City accommodation guide.
- City statistical data and reports.
- Tax, rates and procedures section. There is electronic access to the following documents: municipal certificates, local administration dues, administrative fines and traffic sanctions consultation, municipal registration systems (free forms and electronic mailing of data), e-mail register, customer service e-mail, tenders, administrative process payment consultation.
- Job market. The section offers information on employment opportunities and how employment seekers as well as employers can contact this market. There exists a specific section on public posts where you can find information on vacancies and their selection process. Another sub-section deals with the selection of self-employed personnel. A telephone call to the centre or an online request by the client starts up the job announcement process. A telemarketing employee will serve and register the client who will then be passed onto at least two professionals who will negotiate and define the service. Given that they must pass a psychosocial interview and have their curriculum evaluated, self-employed personnel offers are not carried out online. In order to sign on as an employer it is first necessary to register in the employment offices. The different city employment offices are connected to the job market.
- Tender section, where information and a search engine on all the local administration tenders can be located.
- The Administration's electronic mailbox. Users can send requests, suggestions and comments.
- So that a citizen can be up to date in each administrative process, access to this information, through an assigned process code, can be obtained using the unique process control system (called Public Utility). In addition, the applicant is automatically informed via e-mail each time an administrative process is dealt with.

### 13.3 INTERACTIVE SERVICES

- Citizen surveys.

- Private mobility services. With respect to traffic fines, information on a specific charge is available online including, whenever possible, a photograph of the offending vehicle. The sub-section dedicated to city transit should be noted giving access to city-wide traffic cameras and a traffic report. An impounded car search engine is included as well as information on how to recover the car. There is a link to the information of the Transit Code with a sub-section specifically dealing with city traffic, with access to cameras, news, education, relevant information bulletins, traffic fines and procedures, road safety, etc. ([www.rio.rj.gov.br/cetrio/](http://www.rio.rj.gov.br/cetrio/)).

## 14. SEATTLE CITY WEBSITE



### 14.1 HOMEPAGE AND SURFING

- The Seattle city website is <http://www.cityofseattle.net> and is available only in English with one exception. One section offers summarised information of Seattle and its metropolitan area to city non-residents in 5 languages: English, Spanish, French, Japanese and Chinese.
- The Seattle website exploration is based on the portal concept and different ways of accessing the information is presented in the homepage.
- An upper browser bar with direct access images to the most visited pages or sections ("Jobs", "Mayor",

"Council", "News", "Events", "Maps", "Traffic", "Weather", "City Directory", "About" and "Contact Us"). Aside from this bar there is another browser bar at the top with two dropdown menus (one by Seattle city services and the other by municipal web pages) and a website text search engine.

- The centre part of the page is divided into three columns: the left hand column presents accesses to information grouped by type of visitor ("Living in Seattle", "Doing business" and "Visiting Seattle"); access to city news and important novelties ("city highlights") is found in the central column; and lastly, the right hand column includes highlighted sections or information.



- A lower browser bar with direct access texts to the same sections as the upper browser bar and left hand column completes the structure.
- The upper and lower browser bars as found on the homepage are present throughout the city website. On particular occasions and without altering its basic structure, the upper bar appears with slight modifications tending to reduce its content. The different models are:
- A graphic icon is located next to the accesses from the Seattle city website to external websites.

#### 14.2 AVAILABLE INFORMATION

- Access to several databases from business licences to community resources and legislative information are included in the website.
- Administration activities and project information.
- City maps, photos and videos. Activities one can do in the city are included.
- There is information on community resources, municipal legislation, extracurricular activities, and occupational and training programmes.

#### 14.3 INTERACTIVE SERVICES

- There exists one section that groups all the different electronic services and forms which are in turn distributed by different sections. The information contained in the online services and forms section is divided into three sub-sections: one sub-section is generic giving access to general databases such as the city news file, the municipal telephone directory and the city events

diary. The other two sub-sections are user specific, one for citizens and the other for businesses. Both sub-sections include a great variety of available functions that cover the following aspects:

FOR CITIZENS		FOR BUSINESS
Municipal Court	About the City	Fire Department
City Light	Community Resources	Business with the City
City Utilities (SPU)	Consumers	Building and Construction (DCLU)
City Library	Notify Me	City Light
City Animal Services	Contact	City Budget
Green Seattle	Transportation	Elections
City Attorney	Fire Department	
City Neighborhoods	TV and Cable	
Public Arts	Diversity	
Jobs and Personnel	City Web Site	

- The only financial transaction that can be done through Internet is the payment of municipal fines imposed by the Municipal Court of Justice. Traffic fines and other municipal penalties can be paid by credit card through the system.
- From the Municipal Court of Justice or other municipal departments licences or legal documents can be requested.
- Territorial transport and mobility system. Permanent information on the state of city traffic. Access to camera vision of the city black spots and traffic incident reports. An innovative use of e-mail has been employed to alert drivers (private and public transport) of road traffic incidents.
- Fill and print request forms for municipal services (direct debit municipal payments, municipal library card request, denouncement forms, etc.)
- Online job announcements. The current work offers and requests are available. Information can be sent via e-mail.
- Municipal permits database.

## 15. SEOUL WEBSITE



### 15.1 HOMEPAGE AND SURFING

- The Metropolitan Government of Seoul website is <http://www.metro.seoul.kr>. Versions of the website with simplified contents are available in English, Chinese and Japanese.
- A three-lined access browser bar forms the upper part of the page. The first access line allows you to reach the contents in the other available languages as well as a website map. The second access line allows access to the first level sections of the website and the third line access to the second level of the website once a

section has been selected from the previous line. This browser bar is constant in all the website levels. The second and third level sections are structured by subject interest.

- Lower down are three contents columns. The left-hand column gives direct access to the governor's message and other websites (Recommended, other Seoul websites, web search engines, e-mail services, etc.) The central column has accesses to the news section contents (there are three contents: important news, employment news and tenders); direct access to websites focused on specific groups (visually impaired users,

children and women) and direct access to the Seoul metropolitan area departments' websites. The right-hand column contains direct accesses to an online visitor's book and an electronic suggestions mailbox.

- A website search engine is also to be found in the website map section.

## 15.2 AVAILABLE INFORMATION

- Seoul city news on events, projects and developments.
- Information on the Government and its departments' activities and programmes. This also includes information on available official services. Proceedings initiated by the Administration are publicised.
- Seoul city information including multimedia documents, an electronic city map and electronic city publications.
- Abundant tourist information with texts on interesting tourist sites, a guide to shops, restaurants, hotels, etc. The contents offer a virtual tour using text, images and video clip formats. The section is linked to the tourist office website which amplifies the information available with details on itineraries, activities, culture, accommodation, transport, etc.
- Means of transport in the Seoul metropolitan area. Information on railway lines and stations, ferries, subway and bus as well as the airport. Practical data on using taxis and renting cars.
- A lot of economic information on city based companies. In addition there is data on how to initiate commercial activities in the city and, in particular, there is a foreign investor's guide.

- Links to Korean commercial online job market websites.
- Consumer information including representative product prices and shopping recommendations. The housing market is particularly covered.
- Information on the Korean education system, social services, healthcare and fiscal system.

## 15.3 INTERACTIVE SERVICES

- An online product, services and employment market with offers and requests. The market acts as a bulletin board where companies express their commercial interests and professionals communicate their employment offers.
- Real estate buying and selling online market. This functions similarly to that above.
- OPEN administrative process management system. This system allows you to obtain information on all that is needed to comply with the administrative procedures in soliciting Administration services or permits. In addition all the forms are freely available online. Tracking of the status of open procedures is provided by the system.

## RÉSUMÉ

La version française de ce rapport est disponible sur le site web de Metropolis: **[www. metropolis.org](http://www.metropolis.org)**

La Commission 4 s'était fixé comme objectif global de cerner et d'analyser l'impact produit sur les grandes métropoles par le développement des technologies de l'information et de la communication (plus loin, TIC).

Par le biais de ce rapport, la Commission 4 de Metropolis souhaite émettre quelques recommandations et apporter des éléments de réflexion permettant de favoriser le développement de l'e-gouvernement dans les grandes métropoles. Notre contribution est restée axée sur les aspects les plus visibles de l'e-gouvernement, tels que la conception et la distribution d'information et de contenus en ligne. Cependant, malgré l'importance qu'il revêt – il s'agit effectivement d'un outil fondamental pour toucher les usagers –, c'est paradoxalement de l'autre côté de l'écran des utilisateurs que résident la plus grosse difficulté et, simultanément, le plus grand bénéfice de l'e-gouvernement. Nous voulons parler de la restructuration des services et en particulier de la façon dont doivent être réorganisées les procédures administratives, pour pouvoir les transférer à une interface en ligne, et de la manière dont l'administration gère les changements que cela implique dans son organisation.

Pour rassembler l'information nécessaire à l'élaboration de ce rapport, nous avons combiné les réponses à des questionnaires ad hoc distribués à toutes les villes membres de Metropolis avec l'analyse de sites Internet de communautés urbaines du monde entier.

Ces questionnaires ont été adressés aux directeurs et aux chargés de stratégie des TIC des administrations membres de Metropolis. Nous avons ainsi pu compiler des informations sur le niveau d'introduction des TIC et sur les meilleures pratiques dans l'utilisation de ces technologies dans les métropoles ayant répondu à cette enquête.

Par analyse de sites, nous entendons l'analyse comparative des contenus que ceux-ci distribuent en ligne. Le travail effectué par la Commission 4 a eu le mérite de cerner et d'analyser les bonnes pratiques dans le cadre de l'e-gouvernement. Cela nous a permis d'émettre quelques recommandations simples à l'attention des administrations locales, dans l'espoir qu'elles faciliteront leur adaptation aux défis lancés par la société de l'information.



## RESUMEN EJECUTIVO

La versión española de este informe está disponible en el sitio web de Metropolis: [www. metropolis.org](http://www.metropolis.org)

La Comisión 4 se planteó como objetivo general la identificación y el análisis del impacto que podría tener el desarrollo de las tecnologías de la información y de la comunicación (en adelante, TIC) en las grandes áreas urbanas.

Con este informe la Comisión 4 de Metropolis pretende aportar recomendaciones y elementos de reflexión que permitan estimular el desarrollo actual del e-government en las grandes áreas urbanas. Esta aportación se ha centrado en la faceta más visible del e-government, como es el diseño y distribución de información y contenidos online. Sin embargo, a pesar de su importancia, pues es clave para llegar a los usuarios, debemos señalar que la mayor dificultad y, a la vez, los mayores beneficios del e-government se hallan al otro lado de la pantalla del usuario. Nos referimos a la faceta de diseño interno de los servicios y, sobre todo, a la manera en que se rediseñan los procedimientos administrativos para trasladarlos a un entorno online y a cómo se gestiona el cambio que esto implica en la organización de la Administración.

El método de recogida de información para la elaboración del informe ha combinado la elaboración de cuestionarios distribuidos entre las ciudades de Metropolis y el análisis de una selección de websites de áreas metropolitanas de todo el mundo.

Los cuestionarios se dirigieron a los directores y estrategas de las TIC de las Administraciones miembro de Metropolis. De este modo, se pudo recopilar información sobre el nivel de introducción de las TIC y de las mejores prácticas de utilización de estas tecnologías que existían en las ciudades que respondieron a las encuestas.

El análisis de las websites ha consistido en el análisis y comparación de los contenidos disponibles online.

El valor del trabajo de la Comisión 4 reside en la identificación y análisis de buenas prácticas existentes en e-government. A partir de esta base, se han definido algunas sencillas recomendaciones dirigidas a la Administración Local con el ánimo de que sirvan para facilitar su adaptación a los retos que plantea la Sociedad de la Información.







