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# 11 ‘Alt-Tab’

## From ICTs to organisational innovation in Portugal

*Gustavo Cardoso and Tiago Lapa*

### **Introduction**

Alt-Tab is the set of keystrokes that are used in the Windows operating system to change between applications. Using this expression as the opening title for this chapter is a way to remind us that when analysing the relation between ICTs and state, we should not only focus on the implementation of new services and routines but ask ourselves up to what point are we also dealing with organisational change. We need to change our focus of attention from technology to organisational innovation in order to fully understand the changes that ICTs might bring to the state. This is the perspective that we tried to follow connecting the analysis of the appropriation of ICTs in Portugal by the state, at the same time contributing to a better knowledge of organisational innovation through technology.

In the following pages we will clarify what has been the scope of the e-governance initiatives in Portugal, identifying the limitations and opportunities of Portuguese society in the global context of network societies, and the difficulties that the state in a society in transition, such as the Portuguese society, faces.

The first part deals with the possibility of the emergence of new trends in governance in Portugal. We will argue that there are still few initiatives that are transversal and that can be identified as new trends in governance caused by the technological innovation of the Portuguese public administration. Nevertheless, we have identified three different trends promoted by e-governance within the Portuguese public administration. The first is ‘Administrative Network Swarming’, occurring when one department under hierarchical dependence from a given ministry becomes, in fact, temporarily networked to another hierarchal dependency due to the implementation of ICTs. An example might be found in the programme to connect all Portuguese schools to the Internet; a programme led by the Ministry of Science and Technology in schools that are hierarchically dependent on the Ministry of Education. Under network swarming some level of agreement between the entities is needed, but in reality what occurs is the formal substitution of one entity by another for a short period, implying in the end structural changes in both administrative entities involved.

The second identifiable trend is what we have called ‘Networked Archipelagos’, found when, through the implementation of ICTs, a set of services are networked

to the public but that at the same time are not connected between themselves within the public administration organisational matrix. This trend tends to use the citizen as a hub or node of interaction between departments. The third identifiable trend is what we have entitled 'Networked Administration' that is when, through the horizontal sharing of processes and accountability, entities within the administration reach a level of networking that changes the organisational matrix. Such a process cannot yet be identified in Portugal with specific examples – nevertheless, initiatives put forward during 2006, such as the merger of several identification cards into one smart card of individual identification containing several services (drivers licence, national identity card, NHS number, social security number, tax revenue card, and so on), might be a first step into inducing such changes.

We will also discuss here the heuristic utility of the ideal-typical dichotomy between traditional and digital political and government models. What seems to be notorious is that the technological innovation and the organisational innovation of the public administration has been at the centre of political discourse in recent years, but very little organisational change has been identified.

In the second part, we will discuss ICT-supported forms of interaction between citizens and the Portuguese government, and try to identify new capacities and patterns of interaction. Then, in the third part, we will take a closer view and overall assessment of the adoption of e-government practices and future developments.

### **New trends in governance in Portugal?**

From 1995 onwards, the 'information society' started to become a national priority in the programme of the XIIIth Constitutional Government (1995–2000), substantiated in the publication of the Green Paper for the Information Society.<sup>1</sup> This document presented strategic reflections and proposals for structured action concerning firstly, the democratisation of the Information Society, guaranteeing free access to all citizens; secondly, the introduction of ICTs into the public administration; and thirdly the widespread development of ICT competencies in society, counteracting the phenomenon of 'cyber-exclusion'.

Later, in 2000, the national initiative for the information society was approved, including the guidelines for the central and local public administration ('the open state') and its relationship with citizens, refusing *a priori* a new modality of electronic bureaucracy: free-service electronic systems and electronic forms for contact between the administration, enterprises and citizens, the diffusion of office systems based on e-mail and e-commerce across the public administration, the training of public servants with the certification of the acquired competences and so on.

Effectively, the concept of e-government, defined as an offer of better and faster services, closer to the end user and with less costs, took the central role in the international discussion about new forms of political power in the era of information, an orientation that has been developed in Portugal through the creation in 2002 of a new special unit called UMIC (Unidade de Missão, Inovação e Conhecimento), set up to plan, coordinate and develop projects in the areas of information society and e-government, following an integrated and transversal vision that aggregates all

governmental organisations. The creation of UMIC had as its main objective the conversion of Internet access into new opportunities for enterprises and other measures, such as the implementation of e-business, broadband investments and public access to the Internet at competitive prices.

With the programme of the XVth Constitutional Government (2002–5), the policies concerning information society underwent strategic modifications that clearly gave special attention to the concept of e-government by the state. This programme centred mainly on the measures concerning online provision of all public services in the term of one year, with regard to functions responding to the citizens' and enterprises' needs and not the internal structure of the public administration – namely launching of information portals to citizens and businesses.<sup>2</sup>

Table 11.1 below presents the range of e-government programmes launched in Portugal over the past decade.

Having as a philosophy the improvement of the representative democratic system, the political conception of the XVth Constitutional Government defined the citizen as the main actor, but ideally as 'a *citizen-client* that accesses the services of the public administration at any time and at any place; a *citizen-consumer* linked by broadband connections; and a *competent citizen* that possesses basic competences in information technologies'.<sup>3</sup>

More recently, the Socialist Government, elected in 2005, set as a national priority the implementation of a technological plan. The programme of the technological plan ([www.planotecnologico.pt](http://www.planotecnologico.pt)) focuses on policies concerning the growth of the Portuguese economy, setting incentives (fiscal, infrastructural, and so on) for technological and organisational innovation of enterprises, for the promotion of investment in research and development necessary for the creation of new knowledge. In this context, the bulk of e-government measures are set to meet the purposes of the government's growth agenda, reducing the bureaucratic wall between the public administration and citizens and enterprises.

In the sphere of the relationship between state and citizen, the policies for the information society were essentially designed for the communication between citizens and the public administration. However, none of the political actors had used ICT for the promotion of participation in the legislative process or the communication between citizens and elected politicians as a priority.

In terms of the modernisation of the public administration, Mulgan<sup>4</sup> proposes delineation between radical, systemic and incremental innovation in e-government. The nature of innovation in Portugal has been distinctly incremental and cautious, despite ambitious rhetoric, and the impact on underlying state structures has been very limited. It remains the case that there is not an example in the entire public service sector that has been radically reengineered to make full use of new technology. There are some good reasons for caution, such as risk, uncertainty and the likelihood that significant citizen-customer groups would not be able to use new technologies. However, vested interests are also a crucial factor, as a result of which the new measures are added as layers on top of the old ones, thus making it unfeasible to obtain maximum efficiency gains.

Table 11.1 Portuguese e-government initiatives: brief descriptions

<i>Program</i>	<i>Description</i>
<b>Government to Citizen</b>	
The Citizen’s Portal (www.portaldocidadadao.pt)	The Citizen’s Portal is the central digital channel for public services, complementing with total convenience and availability the physical Citizen’s Shops. Since it was released in the first quarter of 2004, the Citizen’s Portal has offered more than 700 citizen-oriented 24/7 services (56% informational, 26% interactive, 18% transactional), provided by 118 public administration bodies. It is already a well-known brand, recognised by 30% of the Portuguese population. More than half a million users access it on a regular basis, with 2.5 million page views per month, mainly for such services as information on the public administration, income tax declaration, change of address notifications to public services, official certifications requests from public bodies. The Citizen’s Portal is regularly classified among the ten best Portuguese sites (KPBI30, Internet performance Portuguese index, January 2005). The development of the Citizen’s Portal has been continuous. Besides improvements on the user interface, since February 2005 it has offered services supported by sms, and access through wap protocol by mobile phones and PDAs. The services provided to citizens will be further enhanced by the adoption of the electronic Citizen’s Card to be launched at the end of 2006.
Public employment offers (www.bep.gov.pt)	Online search of public jobs for citizens of the UE who would like to work in the Portuguese Public administration. Civil servants who want to exchange to other department or workplace can also use this online service and can post their mobility requests.
Electronic delivery of tax declarations (www.e-financas.gov.pt/de/jsp-dgci/main.jsp)	This service was created to facilitate the relationship between the taxpayers and the General-Direction of Taxes (DGCI).
e-Accessibility (www.aceso.umic.pt/)	A special unit promotes, since 1999, the adoption of good practices for accessibility of the public administration websites to citizens with special needs. This unit also promotes the availability of digital libraries and audiobooks in high schools, the adoption of assistive technologies in hospitals, and the infrastructuring of (re)habilitation centres (53 projects led by consortiums involving NGOs and people with special needs).
Solidarity Network (redesolidaria.org.pt/)	In 2001, a Solidarity Network connected NGOs concerned with people with special needs (elderly and impaired) to the Internet. Presently, this network involves 240 broadband access points, maintains 650 email boxes for use of the target groups, as well as specific content of interest, and includes 13 videoconference connections between schools and hospitals allowing bed-ridden students to remotely attend classes and to keep in touch with family and friends.

<i>Program</i>	<i>Description</i>
e-Democracy ( <a href="http://www.votoelectronico.pt/index.php?lang=EN">www.votoelectronico.pt/index.php?lang=EN</a> )	The main goal of the Portuguese Electronic Vote Project is to allow, in the future, citizens who are far away from their normal polling stations to be able to vote from wherever they are on election day. In this context, an initial pilot project of Electronic Voting was held in the 2004 European Elections. Three different technologies were tested, with 150,000 voters in nine municipalities. The second pilot project, in the 2005 Legislative Elections, improved voting platforms, with technology for citizens with special needs and a paper trail. It also tested internet voting for Portuguese citizens living abroad (with 4,500 participants from 38 countries). Both non-binding pilot projects were audited and evaluated by a multidisciplinary task force of university specialists, and the results were very positive. At the same time, the Electronic Democracy Project is developing initiatives to enable, in a near future, citizen participation in the discussion of public policy issues, in order to contribute to a modern and participative society.
All schools connected to the Internet since 2001 ( <a href="http://www.infosociety.gov.pt/projects.htm">www.infosociety.gov.pt/projects.htm</a> )	'Providing all the schools with a broadband DSL connection to the Internet through the Science Technology and Society Network'
Public Internet Spaces ( <a href="http://www.espacosinternet.pt/">www.espacosinternet.pt/</a> )	'More than 260 public spaces for free access to the Internet operating, since 2001, all over the country'
Science Alive ('Ciencia Viva'): a program for the promotion of science and technology within society ( <a href="http://www.cienciaviva.pt">www.cienciaviva.pt</a> )	Created in 1997, the Science Alive ('Ciencia Viva') program has been a highly successful initiative for promoting science and technology within society through a variety of schemes that involve a wide network of research centres and institutes, special education projects in schools for the experimental teaching of sciences, and a network of Ciencia Viva Centres throughout the country which operate as hands-on science museums for all ages. Many activities are based upon electronic communications and include educational projects using collaborative computational tools and the Internet, including projects performed in partnership with schools in other countries.
b-on: Online Knowledge Library ( <a href="http://www.b-on.pt">www.b-on.pt</a> )	Through b-on, full texts of the main academic and scientific journals published internationally are accessible to individuals in all research and higher education institutions in Portugal.
Basic ICT Skills Diploma ( <a href="http://www.posc.mctes.pt/">www.posc.mctes.pt/</a> )	The process of recognition of basic competencies in ICT and the associated awarding of is assured since 2001, based on a network of accredited entities of varied nature, most of which can also provide training in ICT, namely schools, Science Alive ('Ciencia Viva') Centres, centres for promoting the diffusion of ICT, professional training centres, and others. So far more than 100,000 people have obtained the diploma. The ICT competencies recognition system is being expanded to include intermediate and higher levels of competencies and e-learning.

<i>Program</i>	<i>Description</i>
e-U: Electronic University/ Virtual Campus (www.e-u.pt)	The e-U initiative is targeted at students and professors of higher education institutions and includes the extensive wireless networking of campuses with more than 5,000 access points, as well as higher education electronic services, contents and applications.
Health Portal (www.portaldasauade.pt/)	This initiative aims to improve the efficiency of rendered health services and guide the user of the National Health System. The citizen can have a simple and more direct access to information and services via the system, with better knowledge of the Ministry of Health and of health policies, access to health related news, information on the support services for citizens, and they can raise questions and submit suggestions as well as learn more about health conditions and healthier lifestyles.

### **Government to Business**

Neotec: New Technological Enterprises (www.neotec.gov.pt/)	The Neotec initiative promotes the creation of new technological enterprises based on ICT and with high potential growth by providing financial support different phases of the enterprise creation process, from idea development to business plan and beginning of operations. The initiative is designed for the particular needs of students of higher education institutions and researchers of these or other scientific institutions. Neotec is implemented through the Innovation Agency, a company owned by the Portuguese State through FCT – Foundation for Science and Technology of the Ministry of Science, Technology and Higher Education, IAPMEI – Institute for Small and Medium Enterprises and Investment, and PME Investimentos – Small and Medium Enterprises Investments, both of the Ministry of Economy and Innovation.
Public e-Procurement (www.compras.gov.pt)	<p>The main objectives of the National e-Procurement Program are: to increase efficiency and transparency, to generate savings, and promote the adoption of e-commerce. During the last year, the focus was on the characterisation of the expense and the reformulation of procedures, whereby new processes were adopted, such as sourcing, aggregation and negotiation. In the pilot phase the project involved eight ministries and a few public bodies and product categories.</p> <p>One of the objectives of the e-Procurement Program is to enable the access of small and medium enterprises to the public market. While the program was still only in its first year, the achieved savings for the public administration largely surpassed the investment. Presently, the process is at a generalisation and enlargement phase to all public bodies/ministries, and other product categories.</p>

<i>Program</i>	<i>Description</i>
	The program directly involved 8 ministries, 132 public bodies, 907 users, and 27 aggregation and negotiation processes, with 12 million euros negotiated and 30% estimated savings. Total savings expected from the ongoing expansion of this initiative to all ministries amount to 250 million euros per year (source: AT Kearney).

### **Government to Government**

Digital Cities and Digital Regions ( <a href="http://www.cidadesdigitais.pt">www.cidadesdigitais.pt</a> )	The Digital Cities initiative was launched in the beginning of 1998 with pilot projects in a few cities in Portugal. Each Digital City project included several lines of activity that cover the main lines thought relevant to increase the use of information and communication technologies (ICT) to improve the quality of life and developed the economy. More than 25 projects for the development of Digital Cities and Digital Regions are being publicly supported, with a total investment over 200 million euros. The projects involve electronic government solutions for local public administrations, conditions for reinforcing the competitiveness of small and medium enterprises, and a wide variety of citizen centred services (e.g. information, health, education, safety).
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### **Benchmarking**

Information and Knowledge Society Observatory ( <a href="http://www.osic.umic.pt/">www.osic.umic.pt/</a> )	The Information and Knowledge Society Observatory is the part of UMIC – Knowledge Society Agency in charge statistical indicators and studies on the Information Society and the use of Information and Communication Technologies (ICT) in Portugal. It assures regular surveys and studies on the use of ICT by families, enterprises, hotels, hospitals, schools, public administration, and other sectors, as well as on the employment in the ICT sector, the quality of public administration websites and other matters of interest to monitor the development of the Information Society in Portugal and compare it with the development observed in other countries. This part of UMIC assures the representation of Portugal in international organisations that deal with indicators and statistics related to the information society or TIC, such as EUROSTAT, OECD and the DG Information Society of the European Commission.
Web@x ( <a href="http://www.aceso.umic.pt/webax/index.php">www.aceso.umic.pt/webax/index.php</a> )	Benchmarking of the web accessibility of the Portuguese Public Administration



According to Mulgan, each wave of technology has changed the options available for governmental organisation, determining how much can be managed, delegated, commanded or coordinated. There has been a co-evolution of techniques of governance through times (professional know-how, methods of increasing taxes, quantification and monitoring) and of communications technology, such as scripts, roads, telegraphs, satellites and more recently the web and the network grid.

As Fountain<sup>5</sup> points out, the effects of ICT on governance are still playing out slowly, perhaps in the order of a generation rather than changes occurring at 'Internet speed', not only due to lack of market mechanisms but also due to the complexities of government bureaucracies and their tasks as well as to the importance of related governance questions – such as accountability, jurisdiction, distributions of power, and equity – that must be debated, contested and resolved democratically.

In fact, Portuguese government still follows a Weberian hierarchical, vertically-organised model and, therefore, remains traditionally organised into what Mulgan designates as functional silos. On one hand, it is true that the bureaucratic state is not outmoded as Fountain points out,<sup>6</sup> remaining critical to standard setting, integrity of processes, accountability and rule by systemic trust.<sup>7</sup> On the other hand, the rigidity of the vertical model of organisation might be a huge setback when transversal policies and measures are being implemented. One critical example has been the definition of the priorities of the technological plan by the Portuguese Government, which hasn't been uncontested. The heads of two ministries, Economy and Science and Technology, seem to come out in public with two, if not totally different, at least somewhat divergent strategies.

Another identifiable trend is the emergence of organisations and agencies that work as isolated islands – although networked to the Internet – within the public administration, what we have called 'Networked Archipelagos' that reflect the governmental organisation by functional silos. With these examples, we stress the usefulness of Fountain's technology enactment framework that takes into account structural and institutional realities. This framework emphasises the influences of organisational and 'soft' normative structures on the design, development, implementation and use of technology. In many cases, organisations use ICT to reinforce the political status quo. ICT enactment expects the tendency of certain actors to implement new technologies in ways that reproduce and strengthen, institutionalised socio-structural mechanisms even when such employment may lead to apparently irrational and sub-optimal use of technology. For example, websites might mirror the (dis)organisation of the departments causing the navigation to be a mystery. Indeed, the same information system in different organisational contexts leads to different results or, in other words, the same system might produce beneficial effects in one organisational context and negative effects in a different context. Therefore, embeddedness and cultures have to be taken into account in the employment of ICT. Embeddedness refers to the fact that information systems are situated in the context of complex organisational histories, social and political relationships, regulations and rules, and operational procedures.

Policy makers have to bear in mind that it is not a straightforward process to change an information system when it is embedded in a complex organisational and institutional system.

In fact, the implementation of ICT within the public administration faces a series of challenges. First of all, public executives may face 'perverse' incentives for networked governance, as the efficiency of new information systems might enact a situation in which their budget and resources are decreased, redundancies across agencies and programmes threaten public servants' positions, and inter-agency systems challenge the autonomy of departments. Furthermore, there is the issue of misuse of capital and labour substitution when introducing ICT in organisations.

### **ICT-supported forms of interaction between citizens and the Portuguese government**

The widespread public access to ICTs within the development of a global era of information has contributed to the awareness of the difficulties and inadequacies of traditional actors, procedures and institutions to face daily problems. Indeed, technology can potentially change the character of the dialogue between state and citizen, making it more reciprocal, open and nuanced,<sup>8</sup> and provide the chance for them to intervene more regularly and directly in the policy process.

Many support the idea that democracies are undergoing a crisis of representation characterised by the emergence of new non-governmental actors and pressure groups in the political sphere,<sup>9</sup> the breakdown of trust in traditional institutions, the weakening of procedures and a profound change in the values underpinning democracy.<sup>10</sup> These strained conditions in democratic governance and representation need to be balanced with a capacity to respond to the emerging challenges, and new ICTs are expected to play an important role in their reform and reinvention.

In the new client-oriented model of public administration, ICTs were conceived as a doubled-edged solution to the growing representative deficit of modern democracies. At first, the diverse 'cyberoptimist' views<sup>11</sup> expected ICTs to bridge the distance between public decisions and processes and citizens' needs, promoting their direct involvement and support for democracy and thus strengthening the overall performance of representative institutions. In addition, they were sought to boost bureaucratic efficiency and effectiveness and to have an impact on parliamentary actors, institutions and processes in the perspective of upcoming institutional reforms.

One of the main constraints on the development of ICT-supported forms of interaction between citizens and the Portuguese government are the low qualification levels of the Portuguese population and hence of the public servants themselves. This is the real core of the digital divide in Portugal, a deep-rooted structural problem that constitutes a factor of inertia to social programmes such as *ConnectingPortugal*, aimed at stimulating the perception of the Portuguese citizens regarding the relevance of ICTs and to provide training programmes and incentives of affordable or free computers and free access to the Internet.

But citizens are only part of the equation. The other part is, of course, formed by the various organisations of the public administration and politicians. Table 11.2 shows the synthesis of the main indicators of the Survey of the Central Public Administration’s Usage of ICTs applied by UMIC’s Information and Knowledge Society Observatory.<sup>12</sup>

The introduction of ICTs in the Portuguese public administration had the highest impact in frequent or regular digital communications within the administration itself. 84 per cent of the public organisations surveyed kept frequent or regular internal communications between the departments of the same ministry, and 83 per cent showed Internet activity between, and external communications with, other organisations of the public administration. The percentage of organisations that maintained frequent or regular external communications with businesses and citizens was 67 and 58 per cent, respectively.

The services provided on the website by public organisations are largely based around the availability of information that can, in some cases, be a substitute for face-to-face interaction. Ninety-six per cent of the central administration’s organisations have institutional information on their websites, 91 per cent information of the services in place, 84 per cent information about their internal organisation and 79 per cent about legislation.

But there is still much work to do on the provision of other online services. Fifty-eight per cent of public organisations’ websites provide forms to download, but

Table 11.2 Synthesis of the main indicators

	2000 (%)	2002 (%)	2003 (%)	2004 (%)	Average rate of annual growth (%)
Departments that have Internet access	98	98	99	100	1
Departments that have an internet connection superior to 512 kbps	—	—	42	53	26
Departments that have e-mail	90	92	95	93	1
Departments with websites	71	81	87	86	5
Departments that have a policy of free access to internet to all the workers	50	—	72	76	11
Departments that buy goods and/or services through the Internet	—	—	—	19	—
Departments with personnel placed exclusively to ICT’s	—	—	72	75	4

Sources: OCT, Instituto de Informática do Ministério das Finanças, “Inquérito à Utilização das TIC na Administração Pública Central, 2000”; OCT, “Inquérito à Utilização das TIC na Administração Pública Central, 2002”; OSIC/UMIC, Instituto de Informática do Ministério das Finanças, “Inquérito à Utilização das TIC na Administração Pública Central, 2003–2004”.

only 29 per cent permit the completion and submission of forms online. Also, payments online and the sale of services or products in a digital format is far from being an alternative to paper based interactions as only 8 per cent of organisations have those services available via their websites.

Other possibilities of online interaction that can be improved are the access to databases (available on 47 per cent of public websites), provision of free online services or products (46 per cent of websites) and recruitment opportunities (20 per cent of websites). Measurement of user satisfaction only happens totally on 14 per cent of websites and partially on 25 per cent. Other usual forms of interaction such as support to the user (helpdesks, FAQs) are only fully available on 28 per cent of websites.

As for local administration, 91 per cent of city halls have a website. Of those that have no Internet presence, 96 per cent state that a website is under construction. 97 per cent state that the reason behind the decision to construct a website is the promotion of tourism and local culture, 96 per cent the straightforward diffusion of institutional information and 78 per cent the ability to strengthen relationships with citizens. Sixty-seven per cent of city halls answered they had a specific strategy on the development of ICTs. Eighty-four per cent give priority to online services aimed to serve the citizen, 80 per cent to the implementation of security policy in the use of ICTs and 46 per cent to training in ICTs. e-Commerce was far behind with only 18 per cent of organisations citing it as a reason to introduce a web presence.

As usual, in Portugal, local administration is behind central administration in terms of innovation, as shown in the provision of online services with only 49 per cent of city hall websites providing them and only 9 per cent allowing citizens to fill in and submit online forms, although 49 per cent provide the option to download the forms. In terms of interactivity 74 per cent provide an e-mail address for the submission of suggestions and complaints, but only 6 per cent allow voting online.

Portugal has been registering a fall in ranking concerning ICT indicators, such as the provision of basic public services, in terms of quantity as well of quality of the services provided. But the supply of the services isn't the only important thing. Policies that stimulate the demand of those services by citizens are also needed.

In addition, there is the fact that five million Portuguese citizens don't have academic qualifications correspondent to compulsory education. Thus, the provision of public services needs to be segmented according to the specific needs and demands of different users, especially of the under-qualified segments of the population. Only 20 per cent of Portuguese citizens have completed secondary school, a number that is far surpassed by the new EU members from Eastern Europe. Coupled with the lack of ICT competencies of a significant portion of the Portuguese population, what we are witnessing is the creation of conditions that will lead to a new gap, this time an electronic one.

## **Adoption of e-government practices in Portugal and future developments**

The United Nations Global E-government Readiness Report 2005 provides an assessment of the countries according to their state of e-government readiness and the extent of e-participation. The assessment is made taking into account a quantitative composite index of e-readiness based on website assessment, telecommunication infrastructure and human resource endowment.

According to the Report, Portugal is in 30th place in the e-government readiness index. In the European context, Portugal is in 21<sup>st</sup> place while Denmark is in the lead. In terms of the offer of online payment facilities for any public service, Portugal ranks in 40th while the lead belongs to the United States followed by the UK. The Report suggests that resource availability appears to be a critical factor inhibiting e-government initiatives, and part of the reason for the high e-readiness in the leading European countries is past investment in, and development of, infrastructure, which might explain the setbacks of Portugal in the European context.

Portugal is in the middle ranking on the provision of online services.<sup>13</sup> Nevertheless, according to an annual report from Cap Gemini on the use of electronic public services in Europe, despite the recent evolution of sophisticated online services in Portugal, the gap as measured against the European average has been growing. Services destined for citizens and businesses have had the greatest development, permitting consultation and printing of forms, but still not covering total procedures. Still, Portugal marked its presence in the eGovernment Good Practice Framework,<sup>14</sup> created by the European Commission with several initiatives, including the Virtual Campus programme (e-U), the electronic Vote, the Citizens' Portal or the Public e-Procurement.

The Portuguese government continues to provide public services through multiple channels: face-to-face, telephone, mail, and Internet, which means it has to tackle the strategic and operational complexities of employing multiple channels for services. But, it seems necessary to avoid the elimination of paper-based channels and a radical move to e-government because of the demographic differences in Internet use. Despite the technological possibilities for e-government, the social decision to take into account the information excluded such as the elderly and other groups within the population prevails.

The policy of implementation of e-government measures in Portugal needs the revision of the model of interaction with citizens and enterprises, and a client-oriented view of citizens in the public administration. That entails the development of a system of quality management in public services, producing measurement indicators from the citizens' expectations that are accessible to aid the comparability of the quality of the various public services. This transversal logic of comparability is being set in the Common Network of Knowledge, with the aim of gathering the knowledge produced by public administration in terms of modernisation, innovation and administrative simplification in a single a database available to all public institutions and to citizens and economic agents. Through this network it will possible to re-utilise knowledge and avoid unnecessary duplication of information.

The implementation of a transversal and networking logic is also present in the interesting initiative so-called Digital Cities Programme, a major programme to extend the use of ICT applications at the local level aimed at improving the quality of life of citizens, using ICTs in a whole range of policy areas, such as healthcare, education, employment, e-commerce, administrative reform and leisure/culture. At an initial stage the Digital Cities Programme developed along four major action lines: firstly, improving life in cities; secondly, developing peripheral areas by enabling easier and more efficient access to the Local Administration (that is to say, reduce 'red tape' and simplify administrative processes for citizens and companies); thirdly improving the competitiveness of local economy and employment (that is to say, access to new markets, improve productivity of companies, create incentives to e-commerce and tele-work); and fourthly, the implementation of measures aimed at fighting cyber-exclusion and helping citizens with special needs (for example, the handicapped, elderly citizens, people in hospitals, and social minorities). In 2000, the programme entered a second stage aimed at reinforcing partnership programmes and initiatives between local public and private entities (mainly Small and Medium Enterprises – SMEs). Nevertheless, there has been reluctance from the candidate projects to include sub-projects in providing online services of the administration due to the 'complexity of doing it'.

Another interesting initiative bridging and networking various departments is one of the most emblematic e-government projects promoted by the UMIC: the website *Citizen's Portal*. This portal is an online interface of the most requested public administration services available to citizens and enterprises (50 services at the outset). Through a single website, citizens have access to several administrative services and are able to pay online avoiding the long queues at administration desks.

The prevalent philosophy of initiatives such as the *Solidarity Network* and the *Health Portal* might be the seed of an e-government that functions as an infrastructure enabling citizens or social agents. The *Solidarity Network* encourages connected NGOs concerned with people with special needs (elderly and impaired) to use an infrastructure of e-government to proceed with their own initiatives. In the *Health Portal*, information related to health issues and some services are centralised on a single website. The integration of an encyclopaedia of health that covers useful information about nutrition, ageing, diseases, oral and mental health or the prevention of illnesses might enable the citizens to follow healthier habits or to, for example, carry out a self-diagnosis in the case of simple flu and avoid the unnecessary use of healthcare facilities.

Other initiatives are aimed at promoting the diffusion of the Internet for educational purposes and scientific and technological production. One such initiative, as suggested by the Green Paper for the Information Society, was the exploration of the Internet as a teaching/learning medium which led to the consequent creation of the Science, Technology and Society Network (RCTS). This network was designed to disseminate information across all centres for scientific investigation, universities, polytechnics, elementary and secondary schools, municipal libraries, museums and archives. A new *Virtual Campus* programme (e-U) has also been

adopted to promote the expansion of wireless connections within higher-level education institutions and to make portable computers more affordable to students and academic staff.<sup>15</sup> An additional project is *b-On*, a digital library with an online databank including almost 2200 international scientific publications available for consultation.

Another issue is the trust of citizens on the reliance of the system. The failure of the Ministry of Education in 2004 to develop an efficient ICT based system to allocate teachers to the schools is a significant example of how an inadequate response results in a greater public distrust of the new systems being implemented, threatening the rule by systemic trust of the bureaucratic system supported by ICT. In effect this systemic trust is essential to governance activities such as raising taxes, changing procedures, electoral success and the daily functioning of government.

Another issue in terms of trust is confidence in government's commitment to confidentiality. According to the UMIC's Information and Knowledge Society Observatory, in 2004 only 13 per cent of public organs and 6 per cent of city halls were fully capable of guaranteeing safe transactions via their websites. It may require stronger principles or mechanisms to support the use of personal data in Portugal. Those mechanisms could be the control of the identifiable personal data by the individual concerned or guarantees of total anonymity to organisations and citizens providing data to governments and the regulation of sanctions for misuse of data.

An important obstacle arises from the complexity of the legal framework, which presents the administration with a very complex and resource-consuming decision process due to the intricate complexity needed to cope with all possible situations.<sup>16</sup> Central and municipal government bodies tend to generate a significant amount of legislative and regulatory work, burdening the bureaucratic administration with an added complexity that is difficult to deal with. The constant changes in the legal framework from year-to-year entail ongoing upgrades to the information systems, adding costs and the potential inclusion of errors. This system also leads to a less transparent and democratic framework with potentially less transparent decisions. In some cases, creating an opaque wall for less-favoured citizens and for small and medium enterprises that do not have the resources to deal with its complexity.

A worrying indicator is that in a country where there is lack of qualified human resources, only 9 per cent of the central administration's organisations carry out frequent or regular human resources training programmes or e-learning initiatives.<sup>17</sup> Indeed, 39 per cent of city halls consider that the lack of dedicated ICT personnel has negatively constrained the development of their activities.<sup>18</sup>

A greater interaction with other organisations of the central administration is also needed. Only 11 per cent of them are involved in frequent or regular inter-departmental initiatives that promote a centralised online attendance and a transversal logic throughout the administration. Just 13 per cent of organisations provide online services and information relating to databases of other public organisations, and only 16 per cent carry out research and development activities, co-operating and sharing resources with other bodies on a regular basis.

Portals, websites, formularies and tax declarations through the Internet don't translate immediately into a new culture within public administration. Indeed, the tendency to 'put a web interface on top of what exists' might reflect the department's bureaucratic intricacy or inefficiency and even add to the complexity of the public service. Organisational innovation through the reengineering of the administration or of administrative processes is also necessary to allow a form of co-evolution between technology and organisation.

## **Conclusions**

During the last ten years, several identifiable steps towards new forms of governance enhanced by ICTs in the domain of public administration have occurred. However, a significant amount of work still has to be done and many obstacles have to be faced. We have argued that there is a lack of culture of collaboration and networking within the public administration and that a true transversal policy that could establish a new trend in governance promoted by the ICTs has yet to be enacted.

Indeed, there are few initiatives that are transversal in terms of their application in the public administration. One of the main problems arises from the extremely complex organisation of the public administration and from the very rigid structure of the Portuguese administration and its tradition of working as an 'archipelago of isolated islands', even inside the same ministry.

Another obstacle to the implementation of transversal e-governance is the lack of standardisation between departments, that is, each department uses its own vocabulary, policies and rules. The public administration utilises many different logics from department to department, even sometimes within the same ministry. The existence of a 'legislative shell' resulting from the accumulation of rules and laws that have been altered through the years constitutes another obstacle. Policies applied to the whole public administration are sometimes disconnected or uncoordinated, resulting in many incremental reforms, each of them adding further complexity on top of the previous ones. The inability, until 2006, to bring into public administration a model of evaluation of performance that might trigger a culture of responsibility within the civil service constitutes another level of complexity that has not helped the introduction of ICTs have any visible impact of transformation of organisational routines. Finally, we have to take into account that administration is, in the end, the provision of services by people, and that when those people have low qualifications and digital illiteracy the obstacles to success increase.

The *raison d'être* of the 'Alt-Tab' metaphor that gives title to this analysis is that without organisational innovation, the introduction of ICTs in public administration can only mean, at best, an upgrade in a system with many logics and differentiated realities.

Many instances of the implementation of ICTs in public administration reflect the traditional bureaucratic organisations already in existence. More services online might guarantee their inter-connectivity but they should also be



accompanied by a change in methods of organisation, such as the capacity to work in a network or the capacity of a department to be autonomous but to co-operate with other departments. To face the challenges such as the diversification, complexity and global nature of policy issues<sup>19</sup> and the crisis of the Welfare State,<sup>20</sup> it is necessary to create a public administration with a transversal networking logic.

In addition, the traditional sovereignty of national governments is faced today by a more complex system of regional co-decision and shared-responsibility – that is to say, the so-called multi-level and polycentric governance<sup>21</sup> or Network State.<sup>22</sup> For the implementation of these changes the public administration should breed a culture of benchmarking, where successes and difficulties are jointly discussed and information, resources and services are shared.

The Portuguese government still follows the ideal of an hierarchical model organised vertically, following the Weberian bureaucracy. A digital policy and government model should follow the constitution of an open state that reshapes itself to be less a structure that provides services or achieves outcomes directly and more an infrastructure,<sup>23</sup> managing complex systems with capacities for self-organisation, working together with citizens and civil society at large in the co-creation of outcomes. This certainly entails agreements over common protocols, supporting user-friendly public systems with clear underlying rules and simpler interfaces, albeit with the complexity of the underlying processes.

A digital governance model might make the government less visible, more modular and customisable, enabling more variation and personalisation within the system. However, this undoubtedly comprises a great challenge for the state to reconceptualise fundamental aspects of governance such as accountability and oversight into a new digital model of 'open-source' governance based on networked relationships.

On the basis of all that has been said on the characteristics of Portugal, our difficulties in the transition to an e-government system seems to need a response other than a voluntaristic approach centred on the restricted aspects directly represented by the conventional figures and indicators. But that doesn't mean that as long as all other structural obstacles to development remain we are condemned to be stuck in terms of implementing e-government initiatives. The clear formulation of strategic guidelines and, above all, making decisions at the right time and on the basis of knowledge of the current economic and social trends, are absolutely crucial for stimulating and monitoring the necessary changes.

In other words, full exploitation of the ICTs with a view to modernising the public administration and the state itself can only be achieved if, before this, in each one of the principal fields of economic and social life, the main barriers associated with the conventional organisational models and modes of operation are examined.

Portugal, a society in transition to a network society, is a fine example of the limitations of the technological innovations standing by themselves. On the contrary, it will always be the organisational innovation and the emergence of new institutional models that will lead to the development of the potential of the new

technologies. Without organisational innovation, technological innovation will never constitute an effective development factor and a source of competitiveness.

## Notes

- 1 [www.aceso.mct.pt/docs/lverde.htm](http://www.aceso.mct.pt/docs/lverde.htm)
- 2 [www.portugal.gov.pt/pt/Programa+do+Governo/programa\\_p023.htm](http://www.portugal.gov.pt/pt/Programa+do+Governo/programa_p023.htm)
- 3 Vasconcelos, D. (2002) 'O e-government e a construção da cidadania num mundo globalizado', communication to the VII Reunion of Presidency Ministers of the Ibero-American Community of Nations, Lisbon, 9 September.
- 4 Mulgan, G. (2006) 'Reshaping the State and its Relationship with Citizens: the Short, Medium and Long-term Potential of ICTs and E-government', in Castells, M. and Cardoso, G. (eds) *The Network Society – From Knowledge to Policy*. Washington, DC: Johns Hopkins Center for Transatlantic Relations.
- 5 Fountain, J. (2006) 'Central Issues in the Political Development of the Virtual State', in Castells, M. and Cardoso, G. (eds) *The Network Society – From Knowledge to Policy*. Washington, DC: Johns Hopkins Center for Transatlantic Relations.
- 6 Fountain, J. (2006) 'Central Issues in the Political Development of the Virtual State'.
- 7 Luhmann, N. (1979) *Trust and Power*. New York, John Wiley; Giddens, A. (1991) *The Consequences of Modernity*. Cambridge: Polity Press.
- 8 Mulgan, G. (2006) 'Reshaping the State and its Relationship with Citizens'.
- 9 Burns, T. (2000) 'The Future of Parliamentary Democracy', Green Paper prepared for the Conference of the Speakers of EU Parliaments, Rome, 22–24 September 2000. Available at [www.camera.it/~cppueg/ing/conferenza\\_odg\\_Conclusioni\\_gruppoesperti.as](http://www.camera.it/~cppueg/ing/conferenza_odg_Conclusioni_gruppoesperti.as)
- 10 Johnston, M. (1991) 'Political Corruption: Historical Conflict and the Rise of Standards', in *Journal of Democracy* 2: 48–60; Mény, Y. (1996) 'Corruption «Fin de Siècle»: Changement, Crise et Transformation des Valeurs' in *Revue Internationale des Sciences Sociales*, vol.149 (September), United Nations in collaboration with éditions Erès, pp. 359–70; Putnam, R. and Pharr, S. (eds) (2000) *Disaffected Democracies: What's Troubling the Trilateral Countries?* Princeton, NJ: Princeton University Press.
- 11 Norris, P. (2000) 'Democratic Divide? The Impact of the Internet on Parliaments Worldwide', paper for presentation at the *Political Communications Panel 'Media Virtue and Disdain'*, American Political Association annual meeting, Washington, DC, August 31. Available at [ksghome.harvard.edu/~pnorris.shorenstein.ksg/acrobat/apsa2000demdiv.pdf](http://ksghome.harvard.edu/~pnorris.shorenstein.ksg/acrobat/apsa2000demdiv.pdf)
- 12 This survey was carried out between September and December 2004 and its focus was all Central Administration organizations in Continental Portugal. The survey was sent by surface mail and online and the response rate was 74%.
- 13 *Jornal de Negócios*, 11 March 2005.
- 14 This purports to be a database that has the support of every member-State as a locale for the exchange of experiences between coordinating teams of e-government in the various countries.
- 15 Fifty-four higher-level education institutions have already applied to this programme.
- 16 Veiga, P. (2006) 'A Reforma Organizacional e Modernização Tecnológica no Sector Público em Portugal' in Castells, M. and Cardoso, G. (eds) *A Sociedade em Rede – Do Conhecimento à Acção Política*. Lisboa: INCM.
- 17 UMIC's Information and Knowledge Society Observatory (2005).
- 18 *Semana Informática*, 'Autarquias estão todas ligadas à Web', Week No. 725, 14–20 January 2005.
- 19 Burns, T. (2000) 'The Future of Parliamentary Democracy'.
- 20 Rhodes, M. (1997) 'Southern European Welfare States, Identity, Problems and Prospects for Reform', in Rhodes, M. (ed.) *Southern European Welfare States, between crisis and reform*. London: Frank Cass, pp. 1–22.

- 21 Schmitter, P. (2001) ‘What is There to Legitimize in the European Union, and How Might this be Accomplished?’, in *Europe 2004 – Le Grand Debate. Setting the Agenda and Outlining the Options*, symposium proceedings 16 October 2001. Brussels: European Commission.
- 22 Castells, M. (2001) *The Internet Galaxy: Reflections on the Internet, Business and Society*. Oxford: Oxford University Press.
- 23 Mulgan, G. (2006) ‘Reshaping the State and its Relationship with Citizens’.

## Further reading

- Cardoso, G. and Neto, P. (2003) ‘Mass Media Driven Mobilization and On-line Protest: ICTs and the Pro East-Timor Movement in Portugal’, in Van De Donk, W., Loader, B., Nixon P. and Rucht, D. (eds) *CYBERPROTEST. New Media, Citizens and Social Movements*. London: Routledge.
- Cardoso, G., Cunha, C. and Nascimento, S. (2003) ‘O Parlamento Português Na Construção de Uma Democracia Digital’, in *Sociologia Problemas e Práticas* 42, Oeiras: Celta.
- Cardoso, G., Hespanha R., Morgado, A. and Nascimento, S. (2005) *Democracia Digital – Eleitos e Eleitores na Era da Informação*. Oeiras: Celta.
- Castells, M. (1997) *The Information Age: Economy, Society and Culture: The Power of Identity* (volume 2). Massachusetts: Blackwell.
- Cheta, R. (2004) ‘Disembodied Citizenship? Re-@ccessing Disabled People’s Voices in Portugal’, in Van De Donk, W., Loader, B., Nixon P. and Rucht, D. (eds) *CYBERPROTEST. New Media, Citizens and Social Movements*. London: Routledge.
- Costa, A.F., Cardoso, G., Gomes, M. do C. and Conceição, C.P. (2003) *A Sociedade em Rede em Portugal*. Lisboa, Centro de Investigação e Estudos de Sociologia (CIES) – Instituto Superior de Ciências do Trabalho e da Empresa (ISCTE).
- Cunha, C. (2002) ‘Political Campaigning with New Information Communication Technologies in Portugal’, *Information and Communication Technology (ICTs) and Political Organizations Research Meeting*, May 30/June 1, Sweden, University of Malmo.
- De Sousa, L. and Cardoso G. (2003) ‘Country report: Portugal’, in Trechsel A., Kies, R., Mendez, F., and Schmitter, P. (eds) *Evaluation of the Use of New Technologies in Order to Facilitate Democracy in Europe: E-democratizing the Parliaments and Parties of Europe*. Publication for STOA (Scientific and Technological Option Assessment), European Parliament, Directorate-General for Research (research report).
- Hacker, K. L. and van Dijk, J. (eds) (2000) *Digital Democracy: Issues of Theory and Practice*. London: Sage.
- GUIA/PASIG (*Portuguese Accessibility Special Interest Group*). Available at [www.acessibilidade.net](http://www.acessibilidade.net)
- Inquérito à Utilização das Tecnologias da Informação e da Comunicação pela População Portuguesa* (2001) Ministério da Ciência e da Tecnologia, available at [www.si.mct.pt/file?src=1&mid=1137&bid=868](http://www.si.mct.pt/file?src=1&mid=1137&bid=868)
- Livro Verde para a Sociedade da Informação*, Ministério da Ciência e da Tecnologia, available at [www.acesso.mct.pt/docs/lverde.htm](http://www.acesso.mct.pt/docs/lverde.htm)
- OSIC/UMIC (2005) Administração Pública Central 2004 – Inquérito à Utilização das Tecnologias da Informação e da Comunicação, UMIC, Observatory of the Information and Knowledge Society. Available at [compras.gov.pt/NR/rdonlyres/0C99CAC9-DD9F-4786-BD44-C86E6772447A/3941/APCentral2004.pdf](http://compras.gov.pt/NR/rdonlyres/0C99CAC9-DD9F-4786-BD44-C86E6772447A/3941/APCentral2004.pdf)
- Semana Informática* ‘Autarquias estão todas ligadas à Web’, Week No. 725 from 14–20 January 2005, available at [www.semanainformatica.xl.pt/725/act/100.shtml](http://www.semanainformatica.xl.pt/725/act/100.shtml)

UMIC Knowledge Society Agency, Portugal (2004) 'e-Health'. Retrieved January 26, 2005.

Available at [www.infosociety.gov.pt/egov/ehealth.aspx](http://www.infosociety.gov.pt/egov/ehealth.aspx)

UN Global E-government Readiness Report 2005 – From E-government to E-inclusion, United Nations. Available at [unpan1.un.org/intradoc/groups/public/documents/un/unpan021888.pdf](http://unpan1.un.org/intradoc/groups/public/documents/un/unpan021888.pdf)