

E-government: the hard way from political agendas to service improvements

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This contribution distinguishes e-government from e-governance and focuses on the external component of e-government, i.e. the relationship government to citizens, businesses and other government organisations. A review of worldwide efforts to revolutionise service relations on the basis of information and communication technologies (ICT) identifies still big gaps between ambitious goals and real progress in electronic service delivery. Electronic transactions and one-stop service are key elements of service improvement and increased administrative efficiency but their implementation is confronted with big challenges, e.g. in user-oriented service design, reorganisation of administrative processes, universal service access, security and privacy protection, electronic signature infrastructure and related regulatory issues. Examples of advances and barriers draw on recent studies including the ongoing European research project PRISMA.

E-government and e-governance – contents behind buzzwords

The potential of information and communication technologies (ICT) to innovate internal operations of governments as well as services to citizens and businesses has, together with other developments, spurred political initiatives all over the world during the late nineties to implement “electronic” or in short “e-government”. The idea of e-government is reinforced by a number of factors: an increasing pressure on public budgets stimulating new ways to increase efficiency and performance within public agencies; a restructuring of public sector functions and service provision along with the trend towards privatisation and outsourcing (‘reinventing government’); a change of management philosophies and their application on public sector activities (‘New Public Management’); a demand for service improvements by the public in societies getting more and more penetrated by the use of the Internet in all spheres of life and, last not least, a growing demand for government transparency, democratic participation and legitimacy, including the need to convince citizens of political projects and decisions as well as to justify administrative procedures, especially in the European Union (‘a Europe of the citizens’).

The concept of e-government is used with different meanings but basically it stands for a novel and comprehensive mode of using ICT by institutions of the state. This paper conceptualises e-government as made up of an internal and an external component and intends to focus on the latter one (see Aichholzer/Schmutzer 1999: 11). The *internal* component comprises all uses of ICT in what may be called the back office, i.e. from the domains of traditional EDP to more recent applications such as workflow and knowledge management systems. The *external* component, which may be seen as the actual new one, is to employ ICT to deliver services to and interact with mainly three

groups of individuals and organisations *outside* a state agency: citizens, private businesses and other public agencies. In the language of e-commerce the external dimension includes the relation government to citizens (G2C and C2G), government to businesses (G2B and B2G) and government to (other) governments (G2G).

Within this conception of e-government three generic types of electronic services – *information*, *communication* and *transaction* – can be identified as well as three generic application or content areas – *administration*, *political participation*, *everyday needs* (Aichholzer/Schmutzer 1999: 13). As suggested by Gisler/Spahni (2001:22) who build on this conceptualisation, the three application areas can be circumscribed with e-administration, e-democracy and e-assistance (see **Table 1** for illustrations).

On the other hand one has to distinguish between *e-government* and the term *e-governance* which is also widely used, but not unequivocally. Just to indicate the range of meanings: The difference is explicitly addressed, e.g. by Gisler and Spahni who see e-government, largely in line with the conceptualisation above, as the application of ICT by the state (as a *user*) for the production of its services. In contrast to this, e-governance is understood as the way the state acts (as a *designer*) to create favourable framework conditions for the general development of an information society based on e-media – either in cooperation with business and society or without (Gisler/Spahni 2001: 14pp.). A quite different and much more specific understanding of e-governance is suggested for instance by Perri 6 who conceives e-governance as the “digital support for policy making; decision-making; group work between ministers and their juniors, senior civil servants working on policy formulation, development and management, and with policy advisors who are contracted to provide confidential policy support” (Perri 6 2001: 7pp.). None of these two e-governance concepts will be picked up in the present paper. Instead the focus is on e-government understood as the use of electronic media to support the interaction between, on one side, all levels of government and public administration and, on the other side, citizens, businesses and other governments.

	Information services	Communication services	Transaction services
Content areas			
Administration (e-administration)	public service directory, guide to administrative procedures, public registers and databases	email contact with civil servants, politicians, etc.	electronic submission of forms, tax filings, applications for licences or permits
Political participation (e-democracy)	laws, parliamentary papers, political programmes, consultation documents, background information in decision making processes	discussion dedicated to political issues, email contact with politicians	referenda, elections, opinion polls, petitions
Everyday life (e-assistance)	information on work, housing, education, health, culture, transport, environment, etc.	discussion dedicated to questions of everyday-life, jobs or housing bulletin boards, etc.	ticket reservation, course registration, etc.

Table 1: Generic service types and content areas of electronic government

E-government ranks high on the political agenda

Governments worldwide have set very ambitious targets for the implementation of electronic service delivery and benchmarking progress in e-government is used as a key instrument mainly to motivate public sector efforts through a sense of competition. In

Europe this is reinforced by the European Commission who has launched a big *eEurope* initiative in 1999, with the key objectives of “bringing every citizen, school, business and administration on-line; creating a digitally literate Europe, supported by an entrepreneurial culture ready to finance; ensuring that the whole process is socially inclusive, builds consumer trust and strengthens social cohesion” (EC 1999: 2). Subsequent action plans (EC 2000, 2001) stress *Government online* as one of 10 priority areas with measures to ensure that citizens have easy access to government information, services and decision-making procedures on-line. Specified *targets* include e.g. that “all basic transactions with the European Commission must be available online (e.g. funding, research contracts, recruitment, procurement” by end 2001, and “Member States to ensure generalised electronic access to main basic public services” by end 2002/3. Several initiatives for a systematic benchmarking with standard indicators, national progress reports and performance reviews have followed since.ⁱ

Similar programmes, measures and goals to promote e-government can be found on other supra-national (G8, OECD) as well as national and local government levels in nearly all Member States (such as “Modernising Government” in the UK, “The Digital Denmark”, “OL 2000” in the Netherlands, etc.). The British Prime Minister announced in 1997 that in Britain by 2002 25% of governmental transaction services should be capable of electronic delivery, and 100% by 2008 (CITU 1999); meanwhile the 100% target has been revised to be achieved even earlier, i.e. by 2005. More and more countries have followed the British example: All G7 countries and many others including the Netherlands, Ireland, Finland, Austria, Australia, Hongkong and even China aspire at most or all administrative services being carried out electronically until 2005 at the latest (OeE 2001: 6pp.). A certain vagueness in goal definition allows for some scope of interpretation, e.g. in the case of Ireland, electronic service delivery for “all but most complex of integrated services by end of 2001”. Some countries like the Netherlands, UK and Australia have established a systematic measurement or monitoring of progress and at EU level a “Web-based Survey on electronic Public Services” in all Member States is being prepared with recent a call for tender.

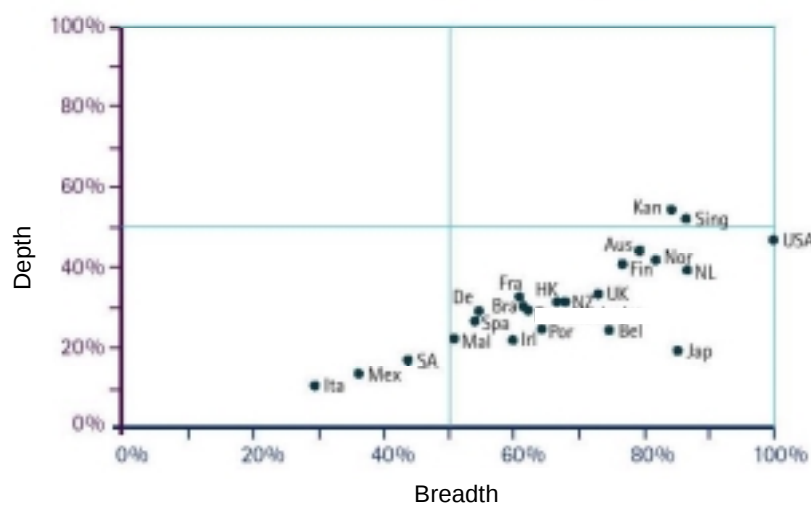
The gap between ambitious goals and implementation of electronic service delivery

At present, scientifically sound results of progress measurements are only available for some countries and existing comparative benchmarking results across countries often lack a transparent description of the methods employed. A systematic quantitative study for the Netherlands was commissioned to NEI whose conceptualisation of four levels of e-government services (information, electronic forms, electronic aids and electronic transactions) became largely a model for the eEurope benchmarking project (MIKR 2001). Its results are summarised in an overview on several countries provided by the UK Office of the e-Envoy:

In the Netherlands 18% of services to citizens and 19% of services to business are carried out electronically (Dec. 2000), in the UK 42% (Autumn 2000), in Hong Kong “65% of those services amenable to ESD are on-line” and for Australia the result is more vaguely stated: “Federal government agencies are on track to provide all appropriate services online by the end of 2001” (OeE 2001: 6).

The outcome is that the share of services carried out on-line is still rather low or masked by soft indicator formulations. Moreover, these benchmark data are rather rough

indicators, they lack information on the different degrees to which particular services are delivered electronically and are hardly comparable across countries. Therefore a more differentiated benchmarking approach which attempts to measure both breadth and depth of electronic service delivery with a standardised procedure across countries would be desirable. Such an approach underlies a recent study by Accenture the results of which provide a comparison of electronic service offerings both in terms of breadth and width across 22 countries (Accenture 2001). “*Breadth*” means the volume (percentage) of government services offered on-line and “*depth*” the maturity or completeness of electronic delivery, i.e. how far the offering has proceeded from mere information provision to full transactions. An overview on results is given in Figure 1.



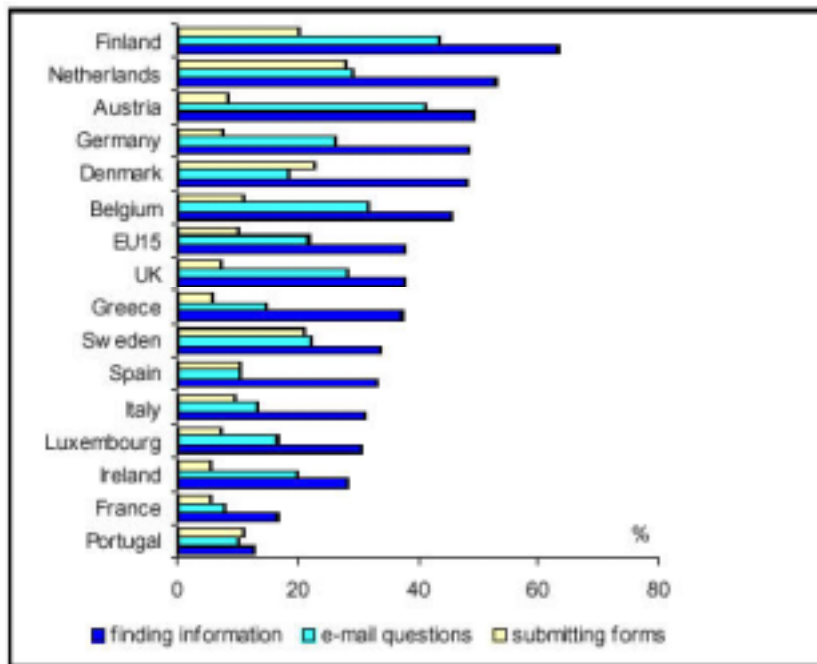
Source: Adapted from Accenture 2001, 7.

Figure 1: Progress of electronic government services in terms of breadth and depth of on-line offerings

The results must be viewed with some caution because a more detailed description of the method employed is lacking and because of some puzzling details. But they seem worth to be taken into account as an information which needs to be checked in further studies. What seems surprising at first sight are the high scores for the majority of countries in the breadth of electronic service offerings, with the USA reaching even 100% and at the other extreme Italy with less than 30% which is rather unexpected among the given mix of countries. But overall the picture conveyed with regard to breadth of on-line offerings is a rather optimistic one. In contrast to this, progress in depth or maturity of on-line services is much lower: Only Canada and Singapore have a score of slightly more than 50% and even the USA, the leader in breadth of on-line services, doesn't reach that level. This suggests that in 20 of the 22 countries included in the study the vast majority of on-line services by public administrations is still limited to more simple stages of on-line offerings such as information and communication services but not advanced to allowing full electronic transaction of administrative affairs.

This is substantiated by additional evidence from surveys both for citizens and businesses: In the most progressed cases within the EU around a half of the *citizens*

have on-line experience with their public administrations, variations between countries are enormous, and the vast majority had these contacts only to find information (Figure 2).



Source: Eurobarometer, October 2000

Figure 2: Online interaction of citizens with public administrations

For *businesses* a survey by UNICE gives a similar picture: the great majority of EU Member States has made little or limited progress in electronic capability as concerns transaction services such as paying company income tax, VAT, filing annual accounts or obtaining licences for setting up a new company or retail store UNICE (2001: 19pp.). Explanations for this big gap between targets stated and implementation of advanced electronic services cannot only be sought in deliberately declared higher targets in order to spur effort and commitment. Much more important is the dependence of advanced transaction and one-stop services on complex requirements beyond available technologies.

Electronic transaction and one-stop services

Main effects *expected* from advanced e-government services are higher service quality to citizens and businesses (including responding to their needs in a more direct way), increased administrative efficiency and lower costs of government (with cost savings for the taxpayer), and a higher quality of democracy through greater openness of government and enhanced opportunities for political participation. Improvements of service quality and administrative efficiency enjoy priority in many e-government initiatives. The progression from mere information services to fully electronic transaction services, in combination with increased self-service and one-stop service arrangements are key elements to achieve this.

Transaction services are usually understood as allowing for crucial, and in the end, all components of an administrative act (application, declaration, notification, payment) to be processed online.ⁱⁱ They range from issuing of personal documents, announcement of moving and electronic tax declaration to booking of training courses, registration of a new company and obtaining licences and permits. It is this level of e-service (together with increased self-service) which impacts on the value chain more than any other does. But the complexity is also increasing from information to transaction services, both with respect to the technical and organisational implementation as well as the conditions of use. Therefore e-government projects often start with information services while more complex services are being developed later. In contrast to information and communication services it is essential that transaction services are closely integrated with the internal technical and organisational structures of the service provider. Comprehensive process re-engineering is therefore just one requirement and barrier which makes the implementation of transaction services a big challenge to e-government.

The same holds true for the implementation of *one-stop service*. Basically, it stands for avoiding the need to contact many different administrative bodies in case of a single request like moving and seeks improvements by integrating services at one access point (either a physical location or a 'virtual window' on the Internet, a public access kiosk or a call-centre). An almost European-wide survey of one-stop government projects shows that this goal is pursued across a variety of public administration services (Hagen/Kubicek 2000). It provides numerous case studies and examples as well as insights into (largely organisational) difficulties to achieve this. One-stop service is typically based on the use of ICT and can be found in three different degrees of sophistication: as *first-stop* (e.g. the Austrian public service assistant 'help.gv.at'), as *convenience store* (e.g. 'One-Stop Shop Finland', or as *true one-stop* (i.e. all services needed to complete an administrative act are available at one physical or virtual site, e.g. 'Centre for Work and Income of Ede, NL').

The provision of services in a seamless manner requires the integration of various services and administrative procedures across a range of public agencies and domains (e.g. health, social services, education and training, permits and licences, transport, etc.) and hence cooperation, coordination of change processes, compliance with legal frameworks as well as security and privacy concerns and are absolutely critical issues which prevent fast solutions. If electronic transaction functions are to be implemented as integral part, the development of a reliable public key infrastructure (electronic signature) adds to the crucial challenges to be tackled. Regular reports by the UK Office of the e-Envoy which monitor the implementation of e-government world-wide provide plenty of examples that these issues do play important roles as problems to be solved. Many further points summarised among the lessons learned give a clue why progress to advanced e-government services is slow and illustrate various challenges: understanding client needs and integrating them into design; change in mindset of the civil service and changing traditional, bureaucratic service culture; process re-engineering rather than simply transferring existing processes to the Internet; coherent investment strategies; removing barriers to equitable access to the online world (OeE 2001: 9 pp.). Experience from a major innovation projectⁱⁱⁱ which builds on integrating e-government and e-commerce, *Bremen Online Services*, lets conclude that three principles are especially crucial for the successful implementation and take-up of e-government services (Kubicek/Hagen 2001: 179 pp.): (1) "Electronic transactions must be more useful or

less laborious than the present method of personal appearance, phoning or writing a letter”, (2) A common platform for public and private services is necessary to minimise unavoidable “additional burdens like special technical equipment, new skills, costs and changes of habits”, (3) “It is important to gather a critical mass of users in a limited period of time. This requires a strategic selection of attractive application bundles, an effective marketing and a professional moderation of the varied cooperation processes.” Finally, a requirement for all e-government projects is to guarantee wide accessibility, to provide technical and non-technical options (multi-channel delivery) to avoid unacceptable service gaps for parts of the population due to the existing ‘digital divide’.

Conclusion

The contribution has drawn on results from various benchmarking studies allowing for international comparisons of the progress in e-government, with a focus on EU-Europe. It has been shown that implementation is a long and demanding process, that political targets seem to be over-ambitious and even in countries which are most progressed in e-government, real service improvements for citizens and businesses are still limited in reach. Despite the many initiatives and a number of outstanding advances it will take considerable time to come to terms with existing organisational, social and regulatory challenges. It will certainly take longer than expected by most political targets until electronic interaction in all contacts with public administrations will become a routine matter for the great majority of the population.

Notes

ⁱ See http://europa.eu.int/information_society/eeurope/index_en.htm

ⁱⁱⁱⁱ In a UK government publication, transactions are narrowly defined “as any two-way dealing between a government office and a citizen: one-way processes are excluded, for instance a citizen just phoning a department for information or accessing a government Web site”. “By contrast ‘electronic’ transactions (are) very broadly defined by CITU and the Cabinet Office as any which systematically employ phone, video, electronic data interchange (EDI), computer payment, a kiosk or ATM (automatic teller machine), or a Web or Internet connection (NAO 1999: 55).

ⁱⁱⁱ It is one of the case studies in good practice in the ongoing project PRISMA which is supported by the European IST-Programme (see Aichholzer et al. 2001).

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