

# Chapter 1

## Introduction to e-Governance

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*Omer Awan, Maryam Amin and Katherine Kirkby*

### 1.1 Defining e-government and e-governance

The emergence of the internet and other information and communication technologies (ICTs) has drastically altered traditional service delivery methods and interactions within government and its stakeholders. The expectation is now of services being delivered with greater efficiency and accessibility, and within a shorter time frame. This brings forth the initiative of e-government, which is primarily concerned with the use of ICTs by government agencies to electronically deliver their services (Patel and Jacobson 2008). Now e-government has become an imperative and unavoidable phenomenon in contemporary public administration.

E-government can be described as the use of information technologies to transform relations with citizens, businesses and other sectors of government. It can serve a multitude of purposes including better delivery of government services to citizens; improved communication with business and industry; citizen empowerment through access to information; and more competent government management (World Bank 2005, cited by Dada 2006). According to Abramson and Means (2001), e-government can be defined as the electronic interaction (transaction and information exchange) between the government, the public (citizens and businesses) and employees. Moreover, e-government has been defined as the transformation of the public sector's internal and external relationships through net-enabled operations and ICT, in order to improve government service delivery and citizen participation (Fraga 2002). According to World Bank (2001:1), e-government is the 'government owned or operated systems of information and information technologies that transform relations with citizens, the private sector and/or other government agencies so as to promote citizens' empowerment, improve service delivery, strengthen accountability, increase transparency, or improve government efficiency'.

E-governance is the utilisation of information and communications technology to interact with and provide services to businesses, citizens and other governments with the intent to improve transparency, increase public service efficiency and deepen democracy.

Various terms besides 'e-government' are used to describe this phenomenon of ICT usage by the government, such as 'e-governance', 'online government', 'one-stop government' and 'digital government' (Andersen and Henriksen 2006). While 'government' represents a 'superstructure that deals with decisions, rules, implementation and outputs of its policies' (UNPA and ASPA 2001), 'governance' refers to operations conducted on the basis of processes, objectives, performance, co-ordination and outcomes. Moreover, e-governance is based on four processes – namely, electronic consultation, electronic controllership, electronic engagement and networked societal guidance – whereas e-government refers to the structure that is responsible for electronic service delivery, electronic workflow, electronic voting and electronic productivity. E-governance is the public sector's use of the most innovative information and communication technologies, such as the internet, to deliver to all citizens improved services, reliable information and greater knowledge in order to facilitate access to the governing process and encourage deeper citizen participation (UNPA and ASPA 2001). According to Saxena (2005), e-governance is the outcome of 'effects produced' by public administration, whereas e-government refers to the outputs of 'efforts expended' by the public administration; thus, e-government is apparently a subset of e-governance (ibid).

E-governance aims to make the interaction between government and citizens (G2C), government and its employees (G2E), government and business enterprises (G2B) and inter-agency relationships (G2G) more friendly, convenient, transparent and inexpensive. The goals of e-governance are:

- better service delivery to citizens;
- enhanced transparency and accountability;
- empowering people through information;
- improved efficiency within governments; and
- improved interface with business and industry (NISG 2012).

The above definitions, as well as others, place emphasis on the definition of e-government as primarily the leveraging of new technology channels to transform the way government interacts with society at large, be this with regards to information, service delivery transactions, or the strengthening of democracy through increased transparency and accountability – more recently referred to as 'e-democracy and e-governance'. In essence, e-government is seen as a new means of reforming the way government and its institutions behave.

However, this is argued to be a narrow view of e-government from the perspective of state development. In small and island states, as well as in developing countries, government is usually the largest 'business' and economic player in society. Policy decisions taken by a government perpetually have a far larger impact and ripple effect

on a country's development than one would see in larger and developed countries. Specifically with regards to e-government, a decision by a government to adopt a strategy to implement e-government should be seen beyond the confines of a transformation of the way public institutions deliver services and are held accountable. Rather, e-government provides the platform and the drive to secure further economic and social development through an information society and an information economy.

## 1.2 Why e-governance? – Linking ICTs with governance

In recent years, e-governance has proved itself to be the new path to improvement and success for the public sectors of both developed and developing countries (Dada 2006). It is also credited as having the ability to decrease poverty and corruption (UNDP 2005; Dada 2006; Coursey and Norris 2008) In the case of national and local governments, it is referred to as a source for better service delivery, increasing participation, sustainable development, democracy, transparency and accountability, greater accessibility, growth of revenue and/or cost reductions, and for improved communication between citizens and government in the form of more efficient and responsive national institutions (ibid). There are many successful case studies regarding the role of e-governance and ICTs in achieving such goals. The following subsection will highlight some of the case studies, with reference to the basic pillars of governance.

### 1.2.1 ICTs and increased transparency

ICTs enable the provision of prompt and transparent information online, as well as the creation of visual or analytic tools that simplify complex information. Transparency portals developed by governments around the world provide free and open access to government information and spending, thus promoting public accountability, decreasing corruption and developing a sense of citizen ownership over government spending priorities (Fung et al. 2010). Other non-governmental websites, such as the Budget Tracking Tool in Kenya, enable citizen monitoring of government spending to help to combat corruption. The Commonwealth Secretariat has developed a similar initiative in Sierra Leone, the Transparency Sierra Leone Portal (TSL-P), a dynamic gateway where government records, spanning the full panoply of government activities, are made public. The portal itself focuses on three key aspects of open governance: accountability, engagement and collaboration. It does this by serving as the access point for three key sites: the Government of Sierra Leone (GoSL) Intranet, Project Tracker and Join Our Transformation. The first of these is the GoSL Intranet, which provides a collaborative space where various ministries can interact and search for content, in addition to being the central dashboard for all performance reports. As well as improving internal governance, the intranet will also act as an engine for the portal, constantly providing material that can be deposited onto the TSL-P for public

scrutiny. The Project Tracker is the primary method through which users track the implementation of 'Agenda for Change' projects. Links to reports include key data such as project cost, contractor details and implementation timelines. By building a reliable evidence base citizens act as virtual watchdogs, ensuring their rights are protected, projects are delivered as promised and officials are held to account when funds are misspent. The 'Join Our Transformation' (JOT) site harnesses the full potential of Web 2.0 technologies to encourage a national debate on the government's poverty reduction strategy. Combining authoritative content with community-created content, it establishes a deliberative space where discussions can move from service delivery issues, to addressing larger transformational concerns.

However, creating such websites is one step: citizens must also be able to access, understand and use this information. Adequate ICT infrastructure, broadband access and digital literacy are some prerequisite conditions. Community Information Centres in India have improved access to information and to a variety of public services via kiosks in villages all over the country. This has not only facilitated access in rural areas and decreased corruption, but has also resulted in significant economic gains for local people.

### **Box 1.1 Transparency Portal (Brazil)**

Brazil's Transparency Portal is a general gateway where budgetary information is presented in a user-friendly format and updated daily. Citizen awareness of the portal and how to use it was promoted. Citizens can interact with the portal's team through surveys, and can report misconducts and crimes through a whistle-blower channel.

**Impact:** The portal has received international awards, including being recognised by the UN Office on Drugs and Crime (UNODC) as one of the five best initiatives in the world related to corruption prevention. The number of citizens accessing the portal has grown from 10,000 to 260,000 per month, and the media has made extensive use of the website in order to investigate corruption schemes and frauds involving federal resources (Sobrinh 2011). Regional neighbours such as Peru, Bolivia and Chile have launched their own transparency portals, as have countries throughout Africa and Asia – including recently Sierra Leone, with support from the Commonwealth Secretariat.

**Box 1.2 The Budget Tracking Tool (Kenya)**

Constituency Development Fund (CDF) money has been controversial in Kenya because it is under the control of Members of Parliament (MPs); there have been many instances of misuse and theft. The Budget Tracking Tool is a collaborative platform that allows citizens to view projects and expenditures of the CDF, allowing grassroots communities to see whether MPs are following through on their promises (Heacock 2010).

**Impact:** The system gets 5,700 short message service (SMS) and web queries per month about development projects, and citizens have used the information obtained to expose corruption at local as well as national levels of government. One example was the uncovering of a major corruption scandal at the Ministry of Water, which led to the firing of a number of public officials involved.

**Box 1.3 Community Information Centres (India)**

Community Services Centres (CSCs) are delivery points for multiple government, private and social sector services to rural citizens in India, who otherwise have to face logistical and financial costs to access such services. CSCs are run by a local entrepreneur, who can generate income from users.

**Impact:** As of 30 April 2012, a total of 88,995 CSCs were operational in 33 states. One hundred per cent of CSCs have been rolled out in twelve states (UNESCO 2005). CSCs charge users nominal amounts for services, yet substantive revenue generation has been achieved by many, and this pays the salaries of operators and supports sustainability. Keeping in view the scope of the project in terms of its coverage and scope of services offered to citizens, it has created an immense impact in terms of effective service delivery to rural areas of India.

**1.2.2 ICTs and improving public service delivery through monitoring and feedback**

Improving the access and quality of public services is a political, social and economic imperative for all developing countries. Through the World Development Report 2004, the World Bank highlighted that too often services fail the poor, and recommended that in order to improve service delivery, institutions need to be developed that strengthen the accountability relationship between policy-makers, service providers and citizens.

A key route to improving the availability, quality and responsiveness of public services is to augment citizen monitoring and feedback (Gaventa 2010). The following case studies illustrate how water, education and health service delivery can be made transparent and accountable by empowering stakeholders with information and monitoring tools.

#### **Box 1.4 Raising the Water Pressure (Tanzania)**

More than half of Tanzania's rural water points are malfunctioning, despite increases in government funding and population growth, and less than half of new funding was going to wards with below average coverage of water facilities. In a citizen survey in 2008, water supply was identified by citizens as one of the top three priorities for government to address. The 'Raising the Water Pressure' programme enables citizens in rural areas to send feedback or grievances about their local water supply through their mobile phones. This information is forwarded to the appropriate district officials and the local media. Local media can then interact with district officials to determine their plan of action regarding the poor water service.

**Impact:** As of 2011, 18,829 texts had been sent to the water database, information which was used to get 12 water points in 3 districts repaired, improving water access to up to 24,000 people. The programme has created incentives for government to be more responsive to citizens and deliver services. As a result of its success, a similar initiative is being developed for the education and health sectors (Daraja 2011).

#### **Box 1.5 Stop Stockouts (Kenya and Uganda)**

The 'Stop Stockouts' campaign lobbies African governments to meet their obligations to provide essential medicines by increasing the national budgetary allocation for the purchase of these medicines, and by ensuring efficiency and transparency in the procurement, supply and distribution of medicines.

Stop Stockouts uses FrontlineSMS technology in its monitoring activities – such as 'Pill Checks', where researchers visit public health institutions to check on the availability of essential medicines. Stop Stockouts states that FrontlineSMS technology has greatly improved its communications, reducing time spent, and enabling online mapping of results for easy comprehension and sharing. The results have been highly impactful, and governments are also currently using SMS to collect their own data and monitor facilities.

**Source:** <http://stopstockouts.org> (accessed 22 March 2013).

**Box 1.6 CU@SCHOOL (Uganda)**

Teachers' absenteeism in Uganda is one of the highest in the world, with rates of 20–30 per cent, costing the government US\$30 million every year and with obvious implications for the quality of education. In addition, 27 per cent of Ugandan children are not in school at any given moment, despite free universal education (Twawesa 2010). Despite these dramatic figures, no routine data is available on pupil and teacher attendance.

The CU@SCHOOL pilot project uses mobile phones to monitor teacher and pupil attendance and absenteeism in 100 primary schools on a weekly basis. This information is mapped and sent to newspapers and radio shows, school management and district officials. Mobile phone coverage is exceptional in Uganda: almost one in three people own a phone, and mobile networks reach 90 per cent of the country. Provided the pilot is successful, measured using a randomised control trial methodology, the aim is to integrate the use of mobile technology into Uganda's new Education Management Information System. The information will support short-, medium- and long-term planning.

**Box 1.7 E-governance in Seychelles**

In 2012 the United Nations Public Administration Network's e-government index ranked Seychelles as number one in the African region. Citizens in Seychelles can now interact with and obtain government services in the comfort of their homes through the use of information and communications technology (ICT).

The Commonwealth Secretariat provided a comprehensive package of assistance consisting of strategy and policy formulation; capacity building in key areas such as service management and government process re-engineering; and hands-on advice to implement some of these processes. The assistance provided by the Secretariat resulted in a big picture view of e-government, clarity on the way forward, building sustainable capacity development and robust implementation support. E-government is not a technology project but a government transformation initiative. Seychelles now has a clear understanding of the importance of re-engineering ineffective processes and how to achieve this using technology.

**Sustainability**

Seychelles developed a robust training programme to build the in-house capacity required to sustain the e-government platform, and encouraged the spread of ICT knowledge by providing subsidised laptop computers to high school students. The ICT department partnered with the Ministry of Finance to secure funding for the programme and its maintenance. To sustain and continue with the programme, Seychelles built strategic partnerships with international organisations and the private sector to provide additional support and resources.

### 1.2.3 ICTs and increasing citizen-led government accountability and responsiveness

Participation is defined as ‘a process through which stakeholders influence and share control over development initiatives and the decisions and resources which affect them’ (World Bank 1994). Citizen engagement and participation has been evidenced to increase civic and political knowledge, foster a greater sense of empowerment, deepen networks, increase access to state services and resources, and enhance state responsiveness (Gaventa and Barret 2010). However, to allow for a more equitable development process, disadvantaged stakeholders need to be empowered to increase their level of knowledge, influence and control over their own livelihoods, including development initiatives affecting them.

ICTs can facilitate both transparency and participation in public service delivery, which can lead to increases in efficiency and responsiveness, as well as improvements in the government’s ability to correctly prioritise government services to correspond with citizen desires. Not only can public trust in government be enhanced, but inclusion and empowerment of groups often excluded from the policy process can be increased through extension of information access and capability to all citizens, as evidenced by the ICT4GOV programme in the DR Congo (see Box 1.8).

Mobile phones have enabled ‘crowdsourcing’, or the gathering of information from large numbers of people, which can help to solve potential problems ranging from public service delivery issues to election riots or crime. Ushahidi used crowdsourcing to enable citizens to provide quick geo-referenced information during elections to mobilise government help (see Box 1.9). The mobility, ease of use, flexible deployment and affordability of wireless technologies enables their use by citizens even in rural populations with low levels of income and literacy, as well as their adaptation to a variety of applications.

Moreover, developing countries look upon e-governance as a new way to increase their involvement in the world economy through the production and distribution of new information and knowledge products (UNDP 2005). The global market for ICT services and ICT-enabled services is large and growing, creating new opportunities for economic growth, social empowerment and grassroots innovation in developing countries. Through building an appropriate legal and regulatory framework and developing ICT infrastructure, an environment can be created where the private sector, communities and individuals can make the most of ICTs in all areas of society. There is also a direct impact on the economy, as in the case of e-procurement, which creates wider competition and more participants in the public sector marketplace.

ICTs can also be utilised to promote new solutions for existing development challenges. For example, technology has been used to reduce social exclusion by providing residents of deprived and remote areas with access to the same services and information that were only previously available to the residents of privileged areas. In this way, e-governance acts as a spur towards the building of an ICT-enriched human capital- and knowledge-based society by diffusing technology and bridging digital divides.



**Box 1.8 ICT4GOV (DR Congo)**

With the support of the World Bank, the Congolese government launched an ICT for Governance (ICT4GOV) pilot programme in 2009 in South Kivu province, which suffered from years of civil conflict, political instability, mismanagement and corruption. The initiative aimed to facilitate decentralisation by empowering stakeholders to participate in the process of ICT-based participatory budgeting. Citizens were enabled to vote via SMS or at voting stations on a shortlist of budget priorities for the district, as well as to receive updates about how the budget was allocated and to give feedback about the project's implementation.

**Impact:** In some areas, more than US\$80,000 was invested in interventions such as school building, health clinics, roads or irrigation structures; in most cases, this was the first time that any real investment was made in the districts. For instance, Ibanda, a rural community, went from not having any investment budget to having 40 per cent of its budget devoted to investments. Levels of local tax collection have increased following the process, suggesting that citizens became more willing to pay their taxes as they believed that government would actually use their tax dollars to deliver services (World Bank 2012). The programme is now being scaled-up country wide.

**Box 1.9 Ushahidi (Kenya)**

Following the post-election crisis in Kenya, there was a need to accurately and efficiently monitor election fraud and rioting in order to mobilise support to prevent or mitigate such situations. Ushahidi created a crowdsourcing information and internet-mapping site that allowed users to submit eye-witness accounts of election fraud and riots via web, email, text or Twitter, in order to help mobilise support for preventing or mitigating crisis situations. Information sent via SMS or through the media was verified, mapped for the public to view online and communicated to public authorities, which could respond to the reports.

**Impact:** Between 30 December 2007 and 1 April 2008, the platform had 45,000 unique visits, 173,000 page views and 220 incident reports (Hanna 2012). Ushahidi is often cited as an example of how mobile phones provide a good complement to government-led governance. The platform has been deployed in other countries, including Uchaguzi in Uganda, Sudan Vote Monitor, Cuidemos el Voto in Mexico, Eleitor2010 in Brazil and Amatora mu Mahoro in Burundi. Furthermore, the platform has been adapted for other reporting objectives, such as a child violence reporting programme in Benin, and Stop Stockouts' 'Pill Check Week' in countries around Africa.

Moreover, according to Ciborra (2005) the improved perceptions of good governance and increased development that arise from implementing e-governance initiatives lead to small and developing states benefitting as recipients of increased aid from richer, larger and more developed nations (Dada 2006).

Such case studies show how e-governance initiatives contribute to increasing state responsiveness, the lowering of corruption, building new democratic spaces for citizen engagement and empowering local voices. However, they also reveal how transparency does not automatically lead to greater social accountability and better governance. Any conclusions on the impact of transparency and accountability initiatives must also be located within a broader discussion of the contexts within which these occur, as context affects which transparency or accountability initiatives are feasible, the internal effectiveness of initiatives, and their interaction with broader external factors (McGee and Gaventa 2010).

### 1.3 Complexity of e-governance – is it all about ICTs?

The case studies mentioned above highlight how e-governance initiatives contribute to increasing state responsiveness, lowering of corruption, building new democratic spaces for citizen engagement and empowering local voices. However, they also reveal how transparency does not automatically lead to greater social accountability and better governance. Any conclusions on the impact of transparency and accountability initiatives must also be located within a broader discussion of the contexts within which these occur, as context affects which transparency or accountability initiatives are feasible, the internal effectiveness of initiatives and their interaction with broader external factors (McGee and Gaventa 2010). Nonetheless, through such case study research it is possible to identify lessons in terms of the enabling conditions that support the development and implementation of successful e-governance.

Although it has been considered that e-governance is all about the application of ICTs in the public sector, the overall process is much more complex and requires multiple factors to be taken into account. It is due to such ignorance that although an estimated US\$3 trillion was spent during the first decade of the twenty-first century on government information systems (Gubbins 2004), recent studies suggest between 60 and 80 per cent of e-government projects fail in some way leading to ‘a massive wastage of financial, human and political resources, and an inability to deliver the potential benefits of e-governance to its beneficiaries’ (Heeks 2006: 3).

The complexity of the e-governance can be determined by the following key challenges and external factors, which play an important role in the success and failure of e-governance interventions (see Chapter 3 for further details).

#### 1.3.1 Political commitment and responsiveness

E-governance implies changes in the culture of government and how it relates to citizens as clients, requiring not only citizen participation but also the ability and

incentives of the public sector to listen to citizens and respond to feedback. To this end, secure political commitment and technical competencies to engage citizens, manage change and open government, leverage social networks, and integrate knowledge from multiple participants, is central to most e-governance initiatives (Hanna 2012). Without political will, transparency – including the creation of transparency portals or the provision of open data – is difficult. Initiatives such as the Budget Tracking Tool in Kenya have experienced challenges due to inaccessibility of public data (Heacock 2010).

However, even the existence of committed political leaders may not be enough to bring about desired changes if there are structural constraints, such as lack of financial and political autonomy to carry out reforms or take action against corrupt officials (McGee and Gaventa 2010). Therefore, it is also essential that there exist mechanisms and resources for government to act based on citizen feedback, citizen demands or corruption allegations.

### **1.3.2 Capabilities and motivation for citizen participation**

If citizens are not able to process, analyse or use information gained from greater transparency initiatives, such information cannot be used effectively. These capabilities can be strengthened by a number of factors, including increased access (e.g. Community Information Centres in India); an active media (e.g. ‘Raising the Water Pressure’ in Tanzania); social mobilisation; the existence of coalitions and ‘infomediaries’ (Hanna 2012). It is also important to adapt e-governance initiatives to education level, culture, language, gender and other characteristics, as well as to facilitate participation through decreasing the costs (time, money, uncertainty, insecurity) and increasing the benefits (rewards, change and capacity building) of such participation (Murillo 2012).

The approach and focus of e-governance initiatives should be tailored to the specific country context, including the types, motives, incentives and capabilities of potential users – both citizens (who can provide feedback on improving public services) and organisations or journalists (who are better positioned in some ways to put pressure on government) (Hanna 2012). A number of studies show that transparency and accountability mechanisms gain more traction when linked to other mobilisation strategies, such as advocacy, litigation, electoral pressure or protest movements (McGee and Gaventa 2010).

### **1.3.3 ICT infrastructure**

The effectiveness of e-governance initiatives in reaching citizens and businesses depends greatly on the availability of ICT infrastructure, including connectivity and broadband penetration and access. Mobile telephony, wireless access and other technological options should be explored by policy-makers with regard to coverage and cost, with the recognition that strategic e-governance may be a key catalyst in reaching development targets and equitable public services for remote communities (McGee and Gaventa 2010).

As demonstrated in the case studies, a variety of ICT tools can be applied to increase capacity building, curb corruption and improve public service delivery. These include

websites (e.g. transparency portals), crowdsourcing and geospatial technologies (e.g. Ushahidi or Stop Stockouts), kiosks (e.g. CSCs in India) and mobile devices (e.g. 'Raising the Water Pressure' or ICT4GOV). Tools need to be chosen in terms of their suitability, accessibility, affordability, mobility and user-friendliness. Rather than using ICT tools in isolation, ICT technologies can be fused within initiatives to maximise citizen participation (Kuriyan et al. 2011).

#### **1.3.4 Organisational partnerships**

In all the case studies, organisational partnerships were a key ingredient for success. Such initiatives require partnerships between government, policy-makers, regulators, network operators and service providers, hardware manufacturers, content providers, application developers, the media, donors and civil society (Hanna 2012). Civil society in particular can facilitate the implementation of large-scale projects to less accessible areas and at the grassroots level (UNESCO 2007), while telecommunications companies or ICT specialists can help in the implementation of projects, such as Airtel in the DR Congo case study (Box 1.8).

Many of the case study initiatives worked with the media in order to inform citizens about initiatives – for instance, in the initiation of the Transparency Portal in Brazil – and to publicise the findings or feedback gained from the initiatives – for instance, in 'Raising the Water Pressure' in Tanzania to increase pressure on government. A free media is also therefore an important component for the success of open government initiatives.

#### **1.3.5 Sustainability**

Many e-governance tools and initiatives are funded by external donors or government budgets and for specific periods of time. After the expiry period, there is a risk that these initiatives may come to a standstill. This was evidenced in ICT electoral tools such as the Ugandan Election Watch 2011 and Uchaguzi (Hanna 2012). This not only raises the problem of measuring their impact, but can also sour citizens' appetite for engaging with similar tools in the future (World Bank 2012). There may also be too many of the same types of platforms created by various organisations, leading to a duplication of efforts and citizen confusion. Sustainability needs to be an intention of ICT initiatives right from the start and should be designed into the initiative (Gaventa and Barrett 2010). Consistent political commitment is one way to increase sustainability, exemplified by the commitment of the Brazilian government to constantly improving its Transparency Portal, as is increasing the self-sufficiency of e-governance tools, such as the locally-owned, revenue-producing CSCs in India.

### **1.4 Governance before e-governance**

E-governance is a tool, a facilitator and an enabler for government change and improvement, rather than an end in itself. It catalyses the public service, so that it can achieve its broader goals.

Governance is the outcome of the interaction of government, the public service and citizens throughout the political process, policy development, programme design and service delivery. E-governance supports fundamental elements of good governance such as: democracy, democratic processes and institutions that reflect national circumstances; fundamental human rights, the rule of law and independence of the judiciary; effective, just and honest government; openness and participation; inclusiveness; accountability and effectiveness. Good fit governance goals dictate the design and share of e-tools for improving governance outcomes and processes. The purpose of implementing e-governance is to improve governance processes and outcomes with a view to improving the delivery of public services to citizens. Commitment to governance issues and a good governance model must therefore precede the development of e-governance.

E-governance is not a 'quick-fix' solution; the journey to attain e-governance is generational, requiring various stages of maturity. It is also an iterative process, as plans and strategies have to be updated to reflect new government priorities and innovative technologies. It therefore requires both short-term strategies and long-term planning.

The importance of the planning stage of e-governance cannot be stressed enough. Technology needs to be adapted to government needs and local context, and incorporated into existing strategies for change.

As the public sector draws upon technologies to reform structural processes and institutions for greater efficiency and better service delivery, it is essential for there to be a deep understanding of the structures, relationships, institutional spaces, interests and incentives that underpin current processes (IDS 2010) before applying e-tools. Policy-makers should be alert to ways in which the design of public programmes, including e-governance initiatives, influences opportunities and incentives for collective action.

## 1.5 Developing e-governance initiatives – two basic pillars

### 1.5.1 National ICT strategy

A crucial prerequisite for the realisation of ICTs for governance is the creation of a coherent national ICT strategy that integrates ICTs with national development plans and conceives a policy framework in which to embed various public sector reform initiatives. National ICT strategies are important in that they:

- elevate ICT for development as a priority;
- link ICT to the achievement of a country's national policies and, at a global level, to the Millennium Development Goals (MDGs);
- generate economic growth and create job opportunities;

- create a roadmap to chart the course for a well-orchestrated introduction of large ICT investments; and
- provide a coherent framework for utilising ICTs in multiple sectors to facilitate efficient public service delivery and develop a knowledge-based society.

A national ICT strategy is also necessary to obtain government/political buy-in. Governments require long implementation timeframes and extensive multi-stakeholder consultations. Although national ICT strategic development is a comprehensive process, there are two common stages/prerequisites for the development of such a strategy:

- a) **E-readiness.** Before embarking on the design of a national ICT strategy, a country should refer to the results of an e-readiness assessment – of which there are numerous definitions. Generally ‘e-readiness’ depends upon an assessment of the current level of ICT sophistication, including infrastructure, industry competitiveness, skills development, the legal and regulatory environment, and e-government initiatives already underway. E-readiness assessments often include a SWOT (strengths, weaknesses, opportunities, threats) analysis of the ICT sector, as well as a collection of primary and secondary data for internationally and nationally recognised indicators.

However, according to Veizi and Bimar (2009) an ‘e-ready’ society is one that has: the necessary physical infrastructure (high bandwidth, reliability and affordable prices); integrated current ICTs throughout businesses (e-commerce, local ICT sector), communities (local content, many organisations online, ICTs used in everyday life, ICTs taught in schools) and the government (e-government); strong telecommunications competition; independent regulation with a commitment to universal access; and no limits on trade or foreign investment.

Various international organisations, such as the UN, World Bank and Economics Intelligence Unit, carry out e-readiness surveys and publish rankings to assist countries in identifying their current standings in the sectors mentioned above.

- b) **Benchmarking.** Based on e-readiness assessments, a government needs to set targets – or benchmark. Benchmarking defines the gap between the current and future state, and thus informs the development of a roadmap to move a country towards the future state. ICT baseline indicators (international rankings, reference countries, best practices/centres of excellence) are used to track progress to achieving goals.

Following this, a roadmap is created with the aim of bridging the gap – the national ICT strategy. This roadmap does not focus only on IT infrastructure; rather a coherent and well-established national ICT strategy provides a holistic overview of linkages between using ICTs in achieving national development goals including education, health and agriculture etc. The strategy includes resource and funding

requirements and sources for sustainability, as well as a monitoring, evaluation and reporting mechanism. It sets out pathfinder projects, or starting projects, which will be implemented to demonstrate progress and build momentum.

A typical, well-developed national ICT strategy covers multiple areas, and also depends on the development goals and priorities of specific countries. However, there are certain common key considerations in the design of a coherent and well-targeted national ICT strategy. These include:

- producing and using ICTs for social and economic advantage;
- developing human resources for effective national ICT strategies;
- promoting and financing investment in ICTs;
- creating and accessing scientific and technical knowledge;
- managing ICTs for development – linking ICTs with national development goals (e-business, e-learning, e-health, e-employment, e-environment, e-agriculture and e-science); and
- e-governance – focus on improving the effectiveness and transparency of public administration activities by making use of ICT in government-to-government, government-to-citizen and government-to-business relations (Crede and Mansell 1998; ITU 2011).

The approval and commitment of senior executives in government, as well as other stakeholders, is essential for buy-in and success of the strategy. To achieve this, establishing a senior minister as a strong sponsor for the initiative and identifying champions within each ministry has been shown to be a successful tactic. Moreover, broad national engagement involving government, industry, and academic and civil society is a must. The national ICT strategy should be viewed and positioned as a national development initiative – not as a government IT initiative. It should also be directly linked to national goals and development objectives.

### **1.5.2 E-governance strategy**

All developing countries have introduced, and many have successfully implemented, e-government visions and strategies. Once a more comprehensive national ICT strategy is in place, which also covers the investment in basic ICT infrastructure as well as a roadmap for ICT development in the country, developing a strategic plan for e-governance is essential for leaders to guide their ministries. Strategic planning efforts are useful because they help the government to develop a vision of how to deploy e-governance services and a roadmap to follow to deliver services. The goal of the e-governance strategic plan is to ensure that managers have a clear approach for managing the ICT department, in spite of their limited knowledge of ICT. The plan develops an inventory of the computing needs of each department, categorises the components of the ICT infrastructure, provides guidance on how to protect the

security and emergency management of all ICT-enabled services, and creates a timetable to integrate fragmented application programmes into enterprise architecture (ITU 2008).

Undoubtedly each country's strategy is driven by its own value system, as well as political, social and economic drivers. A study carried out by Parisopoluous et al. (2007) that analysed e-government strategies introduced in the European Union, identified 29 main objectives that are usually pursued by e-government strategies and refer to a wide spectrum of e-government aspects at all levels: government-to-citizen (G2C), government-to-business (G2B) and government-to-government (G2G). The design of the e-governance strategy reflects the level of maturity of a country's ability to implement e-governance; therefore, the scope and number of objectives varies. Having said that, there are ten strategic objectives that reappear in most of the strategies studied (see Box 1.10). This shows that the compelling drivers that lead nations to design holistic e-governance strategies and embark on comprehensive implementation programmes tend to be consistent. They are compelling reasons for the adoption of an e-governance strategy, irrespective of whether they are applied to advanced or developing small states.

#### **Box 1.10 Common strategic objectives**

1. The set-up of a single access point (portal) in order to deliver e-government services
2. The enhancement of ICT skills, both for civil employees and society in general
3. The guaranteed trust, transparency and accountability of government, privacy and security for transactions with government
4. The delivery of public services 24/7
5. Borderless access to government information
6. The use of common standards by all government entities
7. The development of appropriate infrastructure for the implementation of e-governance
8. Assuring efficiency of the public sector
9. Securing competitiveness of the national economy
10. And above all, the improvement of services delivered to citizens and businesses in terms of quality, quantity, cost and access



Nevertheless, small states face considerable challenges and obstacles they must overcome if they are to embrace e-governance holistically – not least of which are: costs of technology; lack of infrastructure; limited human capital; and a weak private sector. These constraints will inhibit the design, scope and extent of the strategy. Should the strategy focus on ad hoc projects targeting the resolution of a particular issue or issues in the country, or should it embark upon a holistic approach? To what extent will the design of the strategy be restricted by accessibility to finance? Are smaller projects more likely to be implemented, due to the strong possibility of securing donor assistance, than a holistic e-governance approach?

Small, ad hoc and stand-alone e-governance initiatives are the norm in least developed countries, which often lack a well thought out e-strategy within their national development plans. However, this is not the right approach. An e-governance strategy requires a consistent and interoperable approach if it is to be successful. Ad hoc initiatives will prove far more costly to retrofit for interoperability – and if interoperability cannot be attained, e-governance will not be achieved.

Can the challenges that small states face in achieving e-governance be overcome? A well-designed e-governance strategy that interlinks with human and economic development can act as a powerful catalyst that will secure, over time, the attainment of e-governance.

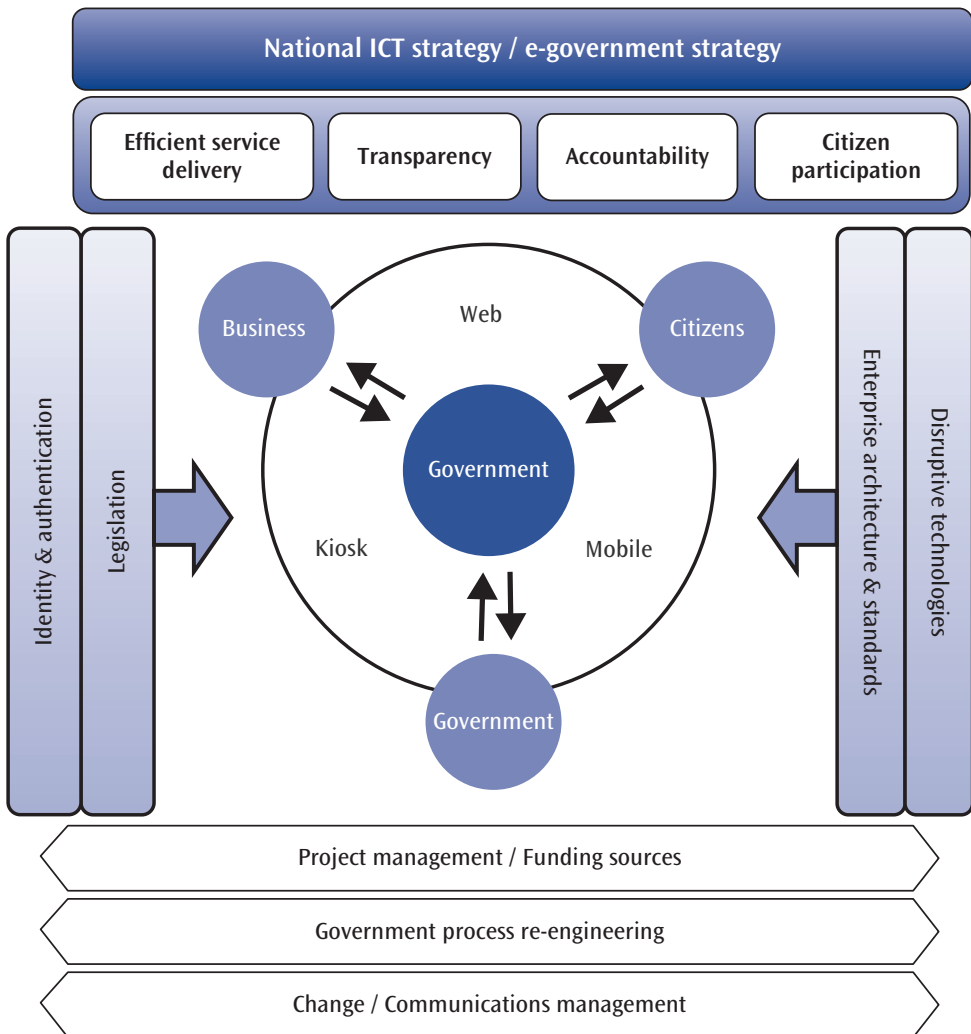
### ***E-governance framework***

A well-designed e-governance strategy should be based on a comprehensive framework. An e-governance framework is introduced here to highlight a complete range of components for a coherent e-governance strategy (see Figure 1.1).

- **The e-governance strategy** is a component of the national ICT strategy. While the national ICT strategy may focus on wide goals of developing and improving ICT infrastructure, encouraging industry growth and economic development and enhancing ICT education, an e-governance strategy focuses on the use of ICTs in government to enable the delivery of **more efficient public services**, allow greater public access to information, make government more **accountable to citizens** and **increase citizen participation** in government decision-making processes. ICTs can be used by governments for public service delivery – from speeding up transactions by providing them online or via mobile devices, to enabling monitoring and feedback of service delivery, which can lead to increases in efficiency and responsiveness. Not only can public trust in government be enhanced, but inclusion and empowerment of groups often excluded from the policy process can be increased through extension of information access and capability to all citizens. Governments can, and should, draw upon the ability of ICTs to facilitate the provision of prompt and **transparent** information online. Transparency portals developed by governments around the world provide free and open access to government information and spending, thus promoting public accountability, decreasing corruption and developing a sense of citizen ownership

over government spending priorities (Fung et al. 2010). Transparency is linked to increased accountability, where improvements in the ability to measure government performance through transparency and in the awareness of citizens and civil society through ICTs and the media can enable both vertical and horizontal accountability of government. E-governance programmes describe and project a distinct conceptualisation of the citizen – not only as a customer or consumer, but also as a participant. Citizen-centricity is essential in the delivery of public services, in increasing access to the governing process and in promoting citizen-led government accountability.

Figure 1.1 E-governance framework



- E-governance is about government using ICTs such as **the internet, mobile devices and kiosks or telecentres** to transform relations with **citizens, the private sector and other government agencies**. However, a specific **citizen identity and authentication** process is important for all secure financial and non-financial transactions of e-governance. Similarly, specific **ICT legislation and technical enterprise architecture** are essential if government is to effectively use ICTs and ensure the legal validity of e-services, the safety of personal and government data, the equal access of electronic services to citizens and the optimal performance of information systems.
- New **disruptive technologies**, including cloud computing, mobile technologies and Web 2.0 offer solutions to many cost- and accessibility-related issues.
- Key to the process of rolling out and sustaining e-governance are good **project management, change and communications management and process re-engineering**.

E-governance can only be successfully delivered if citizens have access to the technology, can afford the technology and are able to use the technology. A state-of-the-art e-governance framework will fail unless such fundamentals are in place.

### 1.5.3 Stages of e-governance

The field of ICT is dominated by normative rather than factual models showing the different stages of e-government evolution. In 2001, Ronaghan offered a model that was part of an international e-government benchmarking effort undertaken by the United Nations and the American Society for Public Administration (Figure 1.2). The model explains five different stages on the path of e-government.

**Figure 1.2 Ronaghan's model of the stages of e-government**

Emerging	An official government online presence is established.
Enhanced	Government sites increase; information becomes more dynamic.
Interactive	Users can download forms, email officials and interact through the web.
Transactional	Users can actually pay for services and other transactions online.
Seamless	Full integration of e-services across administrative boundaries.

**Source:** Ronaghan 2001: 2

Ronaghan's model explains that the first stage is just 'a cursory presence on the web'. In this initial stage, a country, state or local government has an official presence on the internet through a limited number of individual governmental pages (mostly developed by single governmental agencies). Governments at this stage usually provide static information about their agencies and some of the public services they offer.

This presence gains more substance during the second stage, where there is 'an enhanced presence in which governmental information is made available on an official website 24/7', and this information is regularly updated. At this stage, a government's official site sometimes serves as an entry point with links to pages of other branches of government, ministries, secretariats, departments and subnational administrative bodies. Some governments also start using electronic mail or search engines at this stage to interact with citizens, businesses and other stakeholders.

The third and fourth stages are interactive and transactional respectively, where people are provided with the means to contribute to government processes by 'interacting' with governmental organisations and officials online and by carrying out 'transactions' on government websites.

During the 'interactive' stage, governments provide access to services in various agencies through a state-wide or national portal. The interaction between citizens and different government agencies increases in this stage, and citizens and businesses can access information according to their different interests. In some cases, passwords are used to access more customised and secure services.

During the 'transactional' stage, citizens and businesses can personalise or customise a national or state-wide portal, which becomes a unique showcase of all the governmental services available in the relevant area of interest. The design of and access to this portal are based according to the needs of different constituencies, while government structures and functions are only secondary criteria. Secure electronic payments can be made through this portal, which facilitates transactions such as tax, fines and services payments.

By the final stage of e-government, there is a seamless horizontal and vertical integration of governmental information and services and the whole of the government system is digitised. Therefore, starting from a basic web presence, e-government initiatives move on to transform into sophisticated mechanisms where all aspects of government information and services are available online and enable all government functions to be carried out on the web. Furthermore, there is inter-departmental and intra-governmental integration of similar services provided by different levels of government. This integration can be virtual, physical or both. At this stage, a reformation of government structures and/or processes begins so that a comprehensive and fundamental vision of the government as a whole can be developed.

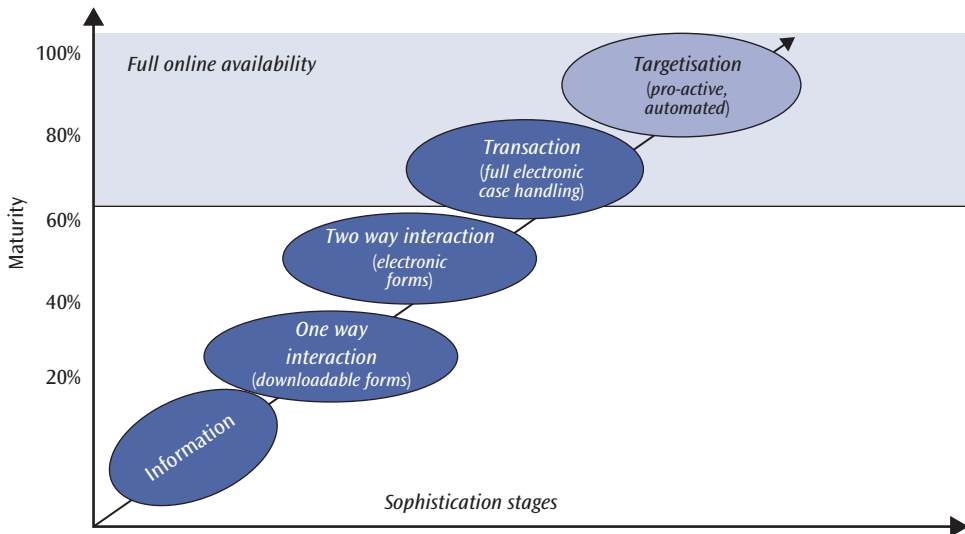
It is also relevant to note that the sophistication of the ICTs applied increases at each stage of the e-governance maturity level until the public service system becomes fully

integrated and pro-active (Figure 1.3). The model also reflects how businesses and citizens can interact with public authorities (Capgemini et al. 2009). At the initial stage where only basic information is available, the level of maturity is at 20 per cent, graduating to 40 per cent, 60 per cent, 80 per cent and 100 per cent in the consecutive stages. It is the fifth stage where e-governance services reach their maximum level of maturity and sophistication and government services are fully integrated. At this stage, governments take on institutional and administrative reforms that fully utilise the potential of ICTs. The aim is to ensure increased transparency, accountability, efficient service delivery and enhanced citizen participation.

## 1.6 Conclusion

While debate on the role of ICTs in governance has been growing over the last decade, there is also a general emerging consensus that e-governance is not just about ICTs. It is more holistic in approach and although ICTs are the fundamental enabling factors of any e-governance intervention, many non-ICT factors are equally important prerequisites. These include political will, citizen participation, partnerships and financial sustainability. There are three key strategic guidelines for a successful journey of e-governance. First, to establish governance structures before implementing e-governance: institutes, processes and laws to ensure efficient governance should be

**Figure 1.3** The benchmark's five-stage maturity model



Source: Capgemini et al., 2009: 20

in place before developing any ICT-based interventions. Second, ICT should always be used as an enabler and means, instead of an outcome or end for efficient governance. Third, each e-governance intervention should be based on linking ICTs with the basic pillars of governance such as transparency, accountability, public service delivery and citizen's participation.

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