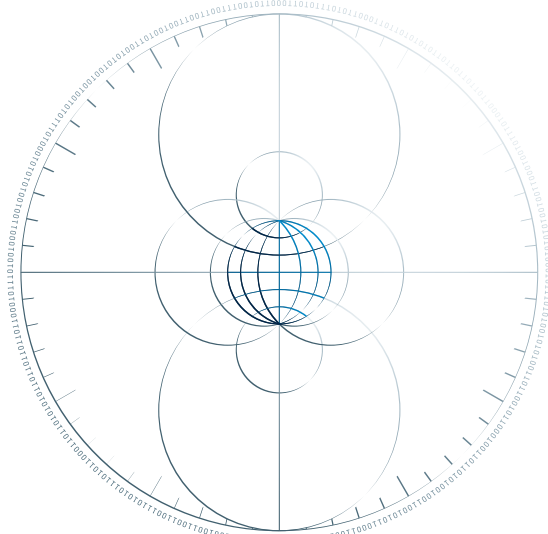# Introduction

E-government is a powerful tool for human development and essential to the achievement of the internationally agreed development goals including the Millennium Development Goals. Many countries are experiencing its transformative power in revitalizing public administration, overhauling public management, fostering inclusive leadership and moving civil service towards higher efficiency, transparency and accountability. They recognize e-government as a way of realizing the vision of a global information society. In contrast, countries slow to embrace e-government tend to remain mired in the typical institutional pathologies of supply-driven services and procedures, remoteness between government and citizen, and opaque decision-making processes.

Taking as its theme the most pressing challenge of recent times, the United Nations E-Government Survey 2010 focuses on the global financial and economic crisis. Part One of this report is dedicated to a discussion of the ways in which e-government can be leveraged to mitigate the effects of the financial and economic crisis on development. Its three chapters examine e-government in light of three stated priorities of United Nations Member States. Part Two is a report on the results of a global survey.

E-government at a time of financial and economic crisis

E-government is a means of enhancing the capacity of the public sector, together with citizens, to address particular development issues. It is never an end in itself. Can e-government help policy makers to respond to the global financial and economic crisis? Certainly, the effect of the crisis on the public sector has been profound. Although financial markets stabilized in 2009 due to massive and internationally coordinated government intervention, the real economy is still in a state of shock with high rates of unemployment and a tremendous squeeze on government revenues in many countries.

"Make the stimulus work for all"

In June 2009, government leaders and senior ministers converged at the United Nations to discuss the crisis and its impact on development. Member States called for action and encouraged governments to "make the stimulus work for all". By October 2009, more than 50 countries had committed $2.6 trillion to fiscal stimulus and pledged another $18 trillion in public funds to underwriting the financial sector and other industries. Next came the challenge of assessing whether or not the stimulus was indeed working for all, as Member States had hoped, and of assuaging public unease about the distribution of these huge sums.

In response to the crisis, governments have been exploiting online tools to enhance transparency and track stimulus spending – and they stand to gain much more if they tap the potential of open data. Chapter One describes the ways in which e-government tools are being used to monitor the crisis response funds, based on a study of 115 websites built on official government information. While there is a relatively high degree of transparency in stimulus initiatives, the real potential of e-government lies in the free sharing of government information based on common standards. otherwise known as open data services. Most governments are not yet taking advantage of the simple practice of sharing information in this way, yet it would enable independent actors to deepen their own analyses of government policy and action at very low cost to the public.

"Improved regulation and monitoring"

Deficiencies in financial supervision revealed by the crisis spurred Member States to express an interest in "improved regulation and monitoring". The experiences of the Great Depression and the Asian financial crisis show how alike the current crisis is in terms of financial causes as well as the behaviours that unfold as financial markets unravel. In each case, the systemic risks resulting from the neglect of analysts and regulators might have been mitigated if governments had promoted information and communication technology designed to reduce the opacity of the financial sector.

What is the role of e-government in financial regulation and monitoring? Chapter Two looks at these important historical analogies from the 1930s and 1990s, and then defines the potential of e-government to address structural problems in the financial system. Regulatory reform aims to promote transparency, integrity and efficiency in the financial sector. This is exactly what e-government is highly capable of doing. It can also add agility and provide real-time responsiveness to regulatory needs. While the capacity of e-government to handle speed and complexity is in the end no substitute for good policy, it may at least give citizens the power to question regulators and bring systemic issues forward.

"Contain the effects of the crisis and improve future global resilience"

Finally, Member States have signaled the need to "contain the effects of the crisis and improve future global resilience" by ensuring that governments take internationally-agreed development goals into account when they respond to it. Stronger social safety nets and measures to protect social expenditures are required if goals for poverty eradication, employment, environmental protection, gender equality, food security, health and education objectives are to be met alongside sustained economic growth. Stimulus funds can only go so far. To avert deep cuts in public spending (or even to avoid devaluing currencies and defaulting on public debt), governments may have no choice but to enhance efficiency and effectiveness if provision of public services is to be assured.

Just as ICT can introduce speed, agility and insight into regulatory functions, so too can e-services help governments to respond to an expanded set of demands even as revenues fall short. In Chapter Three, to help governments build on the practical experiences of others, recent e-government actions are described with possible solutions suggested for addressing employment, education, gender equality, health and environmental protection goals – five priorities of the Millennium Development Goals.

Global trends in e-government development

The United Nations E-Government Survey is recognized for providing a comprehensive assessment of national online services, telecommunication infrastructure and human capital. In Chapter Four, the results of the biennial global survey are presented together with insights into the "whats" and "whys" of e-government development in particular situations.

The watchword of e-government is 'citizen-centric practice'. For a country to be assessed favourably in relation to other countries, there needs to be solid evidence of an approach to e-government development that places citizens at the centre. The survey will show, for example, the availability of electronic and mobile services designed with citizens in mind. The explosive growth of broadband access in developed regions and mobile cellular subscriptions in developing countries are trends that governments are reflecting in their use of ICT, to varying degrees. Chapter Five provides an assessment of the use of e-government tools to promote citizen empowerment and inclusion, including women's equality. The focus is on the availability of e-services and the use of e-government techniques to enhance participation in decision-making.

Another word to watch is 'development', which in this edition replaces 'readiness'. The term 'e-government development' describes how far governments have actually advanced in this field instead of how ready or able they might be to do so, which was how 'e-government readiness' described national capacity. More countries than ever before are adopting national e-government strategies and

multi-year action plans. From the most to the least developed, countries can be seen responding to expectations that governments both participate in and enable the information society by communicating and interacting more effectively with increasingly technology-savvy citizens. They are ready, and it is their level of development in this regard that must be assessed.

Key findings from the 2010 Survey

On-demand access to information, services and social networks on the Internet through a personal computer is no longer considered cutting-edge in developed regions but a norm that many people take for granted. The same may soon be true of the more advanced middle income countries. Cellular telephones and personal digital assistants have the potential to play the same role for developing countries if governments are able to come to terms with the changing face of technology and innovate with a citizen-centric mindset.

For example, alerts sent through short message services ('text messages') are being used to notify citizens that a request for assistance has been processed, that a permit needs to be renewed or that an emergency advisory notice has been issued. Cellular telephones are also being used in a more dynamic fashion to browse public services, authorize payments and engage in micro-volunteerism. Cell phones are used, for example, to provide government agencies with images or descriptions of local environmental conditions and to respond to social surveys.

The mobile revolution and growth of high-speed broadband and wireless access is beginning to have a measurable economic impact, reinforced by expansion of e-government capacity in the public sector, even in least developed countries with limited economies of scale. Mobile cellular subscriptions have grown exponentially in developing regions in the last 10 years but most governments are not exploiting this technology fully in public service delivery.

Returning to the question of online services, middle-income countries in particular have made significant advances, to the point where a number of them have usurped positions held in the past by high-income countries in the e-government development index. This has occurred despite the relative advantage enjoyed by developed regions

in telecommunications infrastructure, which accounts for a third of a country's index value. This may be explained by a combination of government leaders who understand the potential of ICT, a willingness to invest and comprehensive e-government policies designed with all segments of society in mind. Many of these countries have revamped their national and ministry websites as tightly integrated portals providing citizens with a single point of entry to all e-government services.

By contrast, e-government development remains a distant hope for many of the least developed countries due to the cost of technology, lack of infrastructure, limited human capital and a weak private sector. A paucity of public sector resources clearly imposes a drag on government innovation. Small ad-hoc and stand-alone projects are the norm in least developed countries, which often lack a well-thought e-strategy within their national development plans. Once initial funding for these projects ends, they are usually at high risk of simply shutting down. However, there are a few notable exceptions, such as e-education in Bangladesh and Ethiopia, and m-health in Rwanda. The experiences of these three countries demonstrate that significant gains can be realized in the least developed countries where there are enabling legal and regulatory frameworks in place, including specifically an e-government strategy with clearly identified sectoral priorities aligned with national development goals.

Consider Ethiopia – a landlocked country with limited access to international telecommunications lines, low adult literacy levels and a resource-poor public sector. On the surface it seems ill-equipped to profit from the information revolution, yet in 2005 the Government of Ethiopia adopted a national information and communications technology (ICT) policy and in 2006 launched a five-year ICT action plan to help diversify the country's economy, promote public sector reform and improve opportunities in education, health, small business development and agricultural modernization. The country has now connected nearly 600 local administrations to regional and federal offices, linked 450 secondary schools to a national education network, and provided some 16,000 villages with access to broadband services.

Problems of resources are in no way limited to developing countries. The 2010 assessment of government websites has revealed that many national governments continue to focus on online and mobile dissemination of information rather than expansion of interactive services often because of the expense and complexity of rethinking systems, procedures and staffing behind the scenes. An antidote might be found in incremental expansion of e-services guided by sound institutional principles with a core objective of integration. Even simple solutions to discrete problems can result in substantial local efficiency gains and increased public satisfaction.

The survey found that some progress has been made in addressing the disconnection between e-government supply and demand although there is still a lot of room for improvement globally. In places where citizens may not be aware of the existence of e-government services, or prefer not to use them, governments would do well to ask them why. One reason may be ineffective marketing. Another may be that the majority of ICT initiatives are designed as efficiency measures (e.g. to automate complex functions such as income tax collection, school registration and processing of social benefits) with little input from the intended beneficiaries. Most surveys have shown that users prefer localized and personalized services, attributes that usually call for interdepartmental cooperation, back-office reorganization and reallocation of both human and financial resources. These requirements are not often taken into account.

E-participation remains in a nascent state in many countries, a finding that is related to the disconnection between government and citizens described above. Many governments include polls and feedback forms on their websites, but few sponsor discussion forums or blogs or post information to social networking sites. This is especially true for developing countries. Governments may need to be more creative about the ways in which they interact with the public, perhaps by creating integrated 'one-stop shop' portals or actively soliciting views that can be used to design public services or to shape public policy. Here, the Governments of Australia, Bahrain, Canada, Kazakhstan, the Republic of Korea, Singapore, the United Kingdom and the United States have been leading the charge.

Despite technological progress, the lack of ICT professionals (i.e. human capital) remains a major shortcoming in both middle- and low-income countries. Few civil services are able to compete with private sector salaries, with the inevitable result that top information technology personnel in developing countries tend to gravitate towards commercial firms. Even in cases where governments are able to recruit highly skilled information technology workers, these young men and women tend to stay only long enough in their government jobs to acquire enough experience to make them marketable in the more lucrative private sector. Similar capacity gaps exist at the management level. Developing country governments often find themselves in the position of having to hire expatriate management consultants and other information technology professionals to develop domestic e-government services.

Future prospects

The value of e-government will increasingly be defined by its contribution to development for all. Citizen-centricity, inclusiveness, connected government, universal access and use of new technologies such as mobile devices are the benchmarks against which electronic and other innovative forms of public service delivery will be assessed. A conceptual framework is presented in Chapter Six that grounds the future survey and sets the stage for further study by answering the question: What is e-government and how is it measured?

In the constantly evolving world of the Internet, research methods need to be updated regularly if the findings they underpin are to remain valid and relevant. More importantly, an international standard is needed in order to model, analyse and monitor the state of e-government across economic sectors and jurisdictions. Intergovernmental and expert bodies of the United Nations system could usefully examine the relationship between indicators of e-government and internationally agreed development goals. Such an exercise could deepen understanding of the impact of ICT in the public sector on development.

Indicators of e-government are the focus of efforts at the working level led by an international partnership of organizations. The group includes the United Nations Department of Economic and Social Affairs, the International Telecommunication Union, World Bank, Organisation for Economic Co-operation and Development, United Nations Conference on Trade and Development United Nations Educational, Scientific and Cultural Organization and others. While some progress has been made, a common set of e-government indicators would greatly facilitate international comparability and avoid unnecessary duplication in assessment of e-government development.

It is important to bear in mind the resistance that reformers might face when confronted with an entrenched public sector. Beyond changes of a technological nature, deeper transformations may be necessary behind the scenes. This is particularly so in contexts where esprit de corps is deeply rooted, where information-sharing is the exception rather than the rule, and where government ICT capacity is limited. In order for a country to excel at e-government, policy makers will usually need to join forces with public administrators to change mindsets and behaviours while offering civil servants the opportunity to acquire the skills needed in the modern organization.

Looking ahead, international cooperation in e-government may be driven by economic integration policies, as experienced recently in the Caribbean, Europe and Western Asia. The Caribbean Centre for Development Administration, an agency of the Caribbean Community, prepared a draft regional e-government strategy for 2010 to 2014 to outline a common e-government vision, set of goals, strategic initiatives, immediate outcomes and implementation plan for English-speaking countries of the Caribbean. In the European Union, ministers responsible for e-government policy issued the "Ministerial Declaration on eGovernment" to articulate a common vision, objectives and priorities for 2011 to 2015. The Gulf Cooperation Council developed e-government standards and structures that are common among Arab States of the Persian Gulf, and holds a regional e-government conference with national awards.

Elsewhere, the African Union convened a high-level summit in February 2010 on challenges and prospects for information and communication technologies in Africa, while the International Telecommunication Union has plans to organize a series of summits over the course of 2010 to promote regional ICT strategies and products as part of its "Connect the World by 2015" initiative.

Such efforts at harmonizing e-government at the regional level would be strengthened by global cooperation, in the spirit of the World Summit on the Information Society. Fundamentally, e-government is not about "e", but about promotion of citizen-centric and participatory governance – helping people to improve their lives and have a voice in decisions affecting their future. Global collaboration is needed to succeed. With the leadership of United Nations Member States, e-government can become a global priority, creating opportunities for all. ■