1. Introduction

The audit of Information and Communication Technology (ICT) is not a new concept; auditing of e-government is however a relatively new one. Auditing of ICT and e-government has the potential to assist Supreme Audit Institutions (SAIs) in their endeavour to further accountability and transparency for public expenditure and related activities. Furthermore, the use and audit of these tools could enhance the SAIs’ respective governments’ achievement of their socio-economic development goals including the United Nations 2000 Millennium Development Goals (MDGs).

The UN World Public Sector Report of 2003, E-Government at The Crossroads, and a 2004 follow-up report state that e-government has the potential to offer new possibilities for meeting public governance goals and for responding to new political challenges. E-government seems ideally suited for revamping the organization and practices of government at all levels. The World Summit on Information Systems (WSIS) 2003 Action Plan reflects this conviction: “To maximize the social, economic and environmental benefits of the Information Society, governments need to create a trustworthy, transparent and non-discriminatory legal, regulatory and policy environment. Actions include: governments should foster a supportive, transparent, pro-competitive and predictable policy, legal and regulatory framework, which provides the appropriate
incentives to investment and community development in the Information Society; and, governments need to formulate national strategies, which include e-government strategies, to make public administration more transparent, efficient and democratic”.

The UN global measurement of e-government demonstrates that as far as transparency, accountability and participation is concerned, the promise of e-government has not delivered as yet. The reason for this is not so much on the technical side, but rather on the side of the political, social and cultural context into which ICT is being introduced in government operations. By itself, ICT digitizes what exists, even the most corrupt, non-transparent and unaccountable reality. It also opens opportunities for which many societies and governments are not ready, especially from the transparency, accountability, and participation perspectives. Across the world only 11 percent of countries allow and facilitate through e-government applications feedback on policies and encourage on-line debate. In most cases, effectiveness of such measures is still unknown. However, this cannot and should not mean that discarding ICT as a vehicle for deepening participation and democracy is advisable.

On the positive side, the conclusion from the UN research is that it is possible to bring promise and reality together and that it is possible to bridge the tension between new technology (ICT) and society to bring about e-participation and ultimately e-democracy.

For SAIs, the increased use of ICT by governments has the potential to increase openness and participation in auditing and as a consequence, enhance the cost-effectiveness and timeliness in auditing. Many SAIs have carried out audits of e-government to assess the accrued benefits at the operational level, such as cost-effectiveness, quality, integrity, reliability and timeliness in the delivery of services and goods. Many have also made inroads in the auditing of e-procurement and public bidding and in e-taxation.

Much however remains to be done to promote the audit of the real or potential benefits of e-government in terms of transparency and accountability to the public, citizen empowerment and the furthering of socio-economic and human development.

In recent years the United Nations Department of Economic and Social Affairs’ Division for Public Adminstration and Development Management (UN-DESA/DPADM) has been endeavouring to promote citizen-based auditing as a means of empowering people to achieve social change. ICT is being regarded as one of many tools that can be used to contribute to the information accessibility and empowerment of citizens.

This paper proposes that SAIs not only focus on the highly complex technical ITC audit issues and trends concerned with e-government, but also on the advantages of e-government in creating “public good” and in furthering human development and other socio-economic goals encapsulated in the United Nations Millennium Development Goals.

In the context of auditing e-government as a tool to empower citizens and further socio-economic and human development, following are some suggested areas for audit:
• The audit of current approaches and techniques in the use of ICT in various public processes as a tool to enhance participation, transparency and citizen empowerment (e-participation);
• The audit of current approaches and techniques in the use of ICT in various public processes as a tool to increase the cost-effectiveness, quality, integrity, reliability and timeliness in the delivery of services and goods, and human resource capacities;
• The audit of e-management of development assistance and socio-economic programmes;
• The audit of e-government as it relates to humanitarian affairs e.g. relief efforts for the Tsunami disaster;
• The audit of e-government as a tool towards greater cost-effectiveness in public spending and related disclosure and reporting;
• The audit of the national e-government strategy;
• The audit of e-government readiness;
• The audit of the feasibility, cost-effectiveness and sustainability of e-initiatives in developing countries;
• The audit of the e-government system as a tool for auditors and citizens to verify if funds earmarked for a specific purpose were used for the intended purpose;
• The audit of the e-government system as a tool to minimize the risks of corruption; and
• The audit of misuse or abuse of the e-government e.g. showing erroneous or inflated operational and financial results or using it as a propaganda tool.

2. The potential contribution of ICT to the mission of SAIs

Public expectations of government are changing, with demand of zero tolerance for corruption and a desire for enhanced and demonstrated results, and improved responsiveness. The current trends and challenges to which governments have to respond and that have no boundaries include: long-term fiscal imbalance, national security, global interdependence, changing economy, demographics, science and technology, quality of life and environment, and last but not least governance.

Consequently, the challenges facing SAIs are also constantly evolving. We have taken note of the excellent work the INTOSAI membership has been doing since its inception to respond to emerging trends, such as creating committees and working groups to deal with auditing of environmental issues, public debt, and indeed IT. The INTOSAI website on the Committee on IT Audit lists audit reports related to IT and includes excellent resource materials such as the IT Journal and capacity building tools and materials.

The emerging issues for public administrations were presented and deliberated on 4 to 8 April 2005 at the Fourth Meeting of the United Nations Committee of Experts in Public Administration (CEPA), the proceedings and documents of which can be accessed on the
Division for Public Administration and Development Management’s interactive website www.unpan.org. One of the main themes discussed pertains to Integrity, Transparency and Accountability (ITA), a theme which has been at the core of the SAIs’ mission for decades. The overarching framework for the discussions was the achievement of the 2000 Millennium Development Goals (MDGs) by 2015 endorsed by all UN Member states, with a focus on poverty reduction and social orientation to development (7 out of 8 goals), and on partnership for development between the private and public sectors and between Government and the citizen.

The following points deliberated by CEPA are in many ways linked to the theme of the Seminar:

- Citizen demands for better delivery of services and more equity has increased, as has the demand for strong, open and participatory monitoring, evaluation, audit and information sharing;
- Many of the existing standards and norms pertaining to ITA are either outdated or not institutionalized and the flurry of recent national, regional international commitments, conventions and treaties related to ethics, corruption and money laundering and integrity demonstrate the urgency of addressing ITA issues—in many countries the adopted conventions remain to be ratified, implemented, monitored and enforced;
- Information and communication technology (ICT) has created opportunities for information sharing and wider stakeholder response and participation/input in public policy and decision-making.

Against this backdrop it becomes clear that the mission of an independent and responsive SAI has to evolve towards the following roles:

- Assist parliament to carry out its constitutional responsibilities and legislative oversight;
- Assist in improving the performance of government; and
- Assure accountability and transparency of government for the benefit of the citizens.

Adopting such roles necessarily implies that SAIs cannot hide behind the past, and must use their audits of past performance and activities to draw lessons for today and tomorrow. It also implies that in addition to preventing and detecting fraud, waste, and abuse, and assisting the government to become more efficient and effective, SAIs examine the role of government, albeit within the boundaries of their mandate. Some SAIs have already enshrined the latter focus in their legislations, e.g. the newly created Office of the Auditor General of Mali, where one of their main missions is to evaluate government policy.

Moreover, a modern outlook on SAIs’ roles would also imply that they lead by example and promote best practices by observing protocols, employ a constructive engagement
approach with audited entities, and partner with fellow oversight and accountability organizations as well as with selected “good governance” institutions. Most importantly, to achieve real impact for the benefit of the citizens would imply some degree of engagement of the citizens and their perspectives in the audit processes. However, in the same way that most public administration systems remain introverted and lack inclusiveness in decision-making processes, many audit offices and their operations have remained a mystery and mystique and are shielded from the public eye and scrutiny.

**ICT holds the potential to assist SAIs in adopting a more pro-active mission. Indeed, some SAIs have already successfully used ICT in order to become more efficient, more engaging, and more accountable and transparent, or to assist the audited entities to become so.**

From an audit perspective, ICT could be discussed or examined along the following three lines:

1. **The efficiency of ICT as a support to audit processes;**
2. **The effectiveness and user-friendliness of ICT to disclose the SAI’s mandate, mission, operations, performance, cost and impact, and to seek increased engagement of and interaction with the legislature and the citizens; and**
3. **The audit of ICT in various public processes through e-government as a tool to**
   - increase the cost-effectiveness, quality, integrity, reliability and timeliness in the delivery of services and goods
   - encourage citizen participation in decision-making and scrutiny of public spending
   - improve the way public servants use public resources to support the society, and account for them
   - strengthen human resource capacities, and increase the transparency and accountability of socio-economic development programmes.

**UNDESA proposes to INTOSAI to concentrate on the audit of ICT and e-government not only with a view to promote efficiency of government operations, but equally as a tool to further transparency, participation and accountability of socio-economic development and spending, themes that are at the core of the United Nations goals.**

Besides the highly complex technical ITC audit issues concerned with e-government, UNDESA also proposes that INTOSAI focus on the advantages of e-government in creating "public good" and in furthering human development and other socio-economic goals encapsulated in the United Nations Millennium Development Goals.

**3. What is e-government?**

When referring to e-government, people in general tend to think, first and foremost, of the ICT side of the equation. We should, nonetheless, stress that the key element, in e-
government, is not the “e” [electronic], but “government.” The “e” is just an enabler that can catapult governments to deliver services in a more efficient, transparent and cost-effective manner. Through e-government, public administrations are called upon to use ICT to streamline their procedures, minimise operational costs, increase and improve their interaction with citizens and businesses, thus enhancing the potential for their participation in the decision-making process, and creating the right atmosphere for attracting national and foreign investment and for promoting socio-economic development and empowerment.

Potential benefits include increased speed of transactions, cost-effectiveness, less geographical barriers, and new ranges of services. In addition, a properly implemented e-government strategy should ensure that policies and programmes can be influenced by citizen input, and that their implementation can be monitored, scrutinized and evaluated in a more transparent and participative manner.

Besides its potential for providing relatively cheaper and more efficient services, e-government reduces the direct interaction between citizens and State agents, thus minimizing risks of corruption, which undermines public trust and national economic growth. On the other hand, e-government also runs the risk of being misused e.g. by showing erroneous or inflated operational and financial results or by using it as a propaganda tool.

A well thought-out e-government strategy will enable the proper functioning of the “Government-to-Government (G2G), Government to Business (G2B) and Government to Citizen (G2C)” triangle, by establishing mechanisms and approaches which contribute to the development of inter- and intra-institutional networks that support public and private organisations and communities to go about their specific business, most of which is essential to the reduction of absolute poverty in the country. International experience has clearly shown that a good e-government strategy can make a very substantial contribution not only towards good governance and improved service delivery to citizens and businesses but also towards the development of the ICT industry as a whole.

4. ITC, citizen empowerment and socio-economic and human development

Citizen empowerment and participation are not new themes to the global discussion on public administration and governance, but they have recently acquired new urgency. At the same time, the introduction of ICT to operation of governments (e-government) has promised decisive breakthroughs in this area.

The urgency stems from several reasons.

There is a growing understanding of the pivotal role that governments play in the system of social institutions responsible for human development. For instance, the UN Millennium Declaration (2000) focusing on human development, and especially on poverty eradication, puts solid public administration structures and good governance as
the necessary condition to achieve each of the Millennium Development Goals (MDG). The Heads of State and Government pledged in the Declaration “To work collectively for more inclusive political processes, allowing genuine participation by all citizens in all (...) countries”.

On the economic side, today, the three critical roles of a state are to create an enabling environment for participating effectively in a global economy so that all segments of the population are able to benefit from international trade and investment; to focus on pro-poor policies that combat poverty and enhance the capacities of the poor to participate in productive activities; and to strengthen the capacity of public institutions to promote socially equitable economic growth. For a state to achieve the goals of people-centred growth and development, participation of people in governance and transparency that enables good governance seem crucial.

And finally, as we have entered the Age of Knowledge, with all the hopes and concerns that it brings, only genuine participation seems to constitute an adequate tool for demanding and executing the needed transformations of social institutions, so that people and information - two main assets of the Knowledge Society - can develop; and, that the great resource of knowledge is used to support high level of quality and safety of life.

Therefore, the pressure on governments to reform social institutions, to govern in a more participatory way comes from many different directions. It is only natural that the option of using ICT in various public processes, including those relevant to participation in decision-making and scrutiny of socio-economic development and spending, has been embraced by many as a possible solution.

4. Challenges faced by governments in an information age society

The challenges in an information age society are more daunting than anything governments had to face in the past. Governments have traditionally been known to adapt slowly to change; hence meeting the needs of an Internet savvy society presents major problems to most governments.

Today, we see citizen discussions and advocacy affecting policy development and budget formulation in many countries. With the easy access of information and knowledge in the information age, the notion of e-citizen is taking root. Therefore governments will have to decide how they will add value through e-government to the daily lives of the citizens.

United Nations and other studies of e-government suggest that e-government applications have proven instrumental in raising the efficiency and effectiveness of public administration. However, they recommend that much more has to be done to fully realize their promise and potential to deepen deliberative democracy. This particular application of e-government remains of great interest to the United Nations as it is a precondition for good governance and therefore constitutes one of the prerequisites for building a just
world conducive to social development, as envisioned in the 2000 United Nations Millennium Declaration.

Governments play a critical role in the development of the online world. WSIS recommended that they develop, incorporate and adapt a national e-government strategy and related technologies if participatory democracy is to be expanded. The challenge for governments is how to meet the needs of this new empowered constituent, and how to move from focusing on service delivery to providing people-centred tools and applications.

SAIs are well positioned to play a role in this respect. They could for example audit whether the following necessary activities have been undertaken by their respective governments in preparation of a national e-government strategy, as well as assess the quality of each of the steps:

- Take stock of the country’s e-government programme and projects;
- Undertake an e-government readiness survey;
- Identify e-values that e-government would bring to the people of the country;
- Identify, describe and analyse the operational phases that must be undertaken to make it possible to provide public services based on the wide and effective use of information technologies in government;
- Propose an approach of e-government that could be adopted by the government in such a way as to cover the whole of the citizen’s and business’ life cycles;
- Propose an outline for the e-government strategy that is in tune with the country’s current ICT policy and implementation strategies as well as with any initiatives and strategies for public sector reform in the country;
- Propose an action plan for the formulation of the e-government strategy;
- Discuss the proposed e-government strategy with all stakeholders; and
- Ensure the adoption of the e-government strategy by the Government.


In the World Public sector Report 2003: E-Government at the Crossroads, “public value refers to the value created by governments through provision of services, the passing of laws and regulations and other actions”. “Only the public can determine what is truly of value to society. In a representative democracy, value is determined by people’s preferences, expressed through a variety of means and refracted through the decisions of elected politician. (…) Citizen’s engagement in public affairs is desirable precisely because it challenges and changes underlying preferences”.

The report outlines 15 guiding principles for successful e-government solutions, including the following:
• Efficiency and effectiveness: the link between ICT applications, optimization of government operations and achievement of important social development goals is a convincing argument for continued development of e-government.
• Access and skills: actual use should be made accessible in terms of time, cost and effort for the potential user, a major issue being equity in access for all citizens.
• The other guiding principles include availability of funding, coordination within and between government agencies, existence of an ICT infrastructure, legal framework, skills and culture of the civil service, and long-term political commitment.

From the government’s perspective, e-government poses challenges concerning access and integration, information security, privacy and financial resources. From the citizen’s perspective, the barriers to e-government continue to be the perception that it is difficult for users to find information that they require in a timely and efficient manner. In countries with low Internet connectivity citizens continue to prefer a human contact when dealing with the government.

**E-government readiness profile of UN Member States.** Governments have made rapid progress worldwide in embracing ICT technologies for e-government in the past 10 to 15 years. In 2001, the UN E-government Survey listed 143 Member States as using the Internet in some capacity; by 2004, 93 per cent or 178 out of 191 Member States had a website presence.

Broad trends of e-government development around the world in 2004 reaffirm that political ideology, economic and social systems; level of development; resource availability, human and technological infrastructure; institutional framework and cultural patterns all have a bearing on how, and how well, an e-government initiative is utilized.

Around 85 to 92 per cent of all countries on-line now provide some of its databases and or laws, policies and other documents. However, only about one third of all countries provided public services on-line. Notwithstanding improvement since 2001, a fuller spectrum of transactional services on-line, however, is still scarce and has remained limited to mostly the developed countries. Whereas more than three fourths of countries (170 countries) allow for downloading of forms for services such as drivers license, etc only 18 percent (32 countries) offer the citizen the facility of making payment by a credit card.

An important finding of the 2003 Survey was that not many countries utilized the full potential of e-government to provide information and services to their citizens. This still holds for the majority of the countries in the 2004 survey. What is different in one year is that the handful of developed countries, which till last year were providing only some transactional services, surged forward. Their utilization levels rose tremendously.

Exploring the access divide elements the Access Model illustrates that the majority of the developing country population of more than 5 billion faces a grave challenge from the
new technological revolution. Whereas some of the developing countries which have in place the right mix of reforms, institutions and programs will no doubt benefit from ICT, most are likely to be mired in a cycle of low income, poverty and a growing disparity in access to modern technology.

**Disparity in access to ICT: The Access-for-Opportunity Framework.** Exploring the “access divide” the 2004 report illustrates that the majority of the developing country population of more than 5 billion faces a grave challenge from the technological revolution. Whereas some of the developing countries which have in place the right mix of reforms, institutions and programs will no doubt benefit from ICT, most are likely to be mired in a cycle of low income, poverty and a growing disparity in access to modern technology.

Economic and social empowerment today rests on the ability to access, gather, analyze and utilize information and knowledge to widen individual choices for political, economic, social, cultural and behavioral decisions. ICT is the conduit which transmits information and knowledge. By integrating technology into development planning, more effective and speedy solutions can be found for economic growth and sustainable human development.

However, the reality is that access to - and the distribution of - the tools for knowledge and wealth creation are highly unequal both among, and between, countries of the world. The disparities in access to ICT-related development are large and likely to become larger, at the current rate of technological advancement – and adoption – in a select few countries of the world. As more of the services in an economy come on-line those without access will be marginalized.

**The e-government readiness index.** The UN Global E Government Survey 2004 presents a comparative ranking of the countries of the world according to two primary indicators: i) the state of e-government readiness; and ii) the extent of e-participation. Constructing a model for the measurement of digitized services, the Survey assesses the 191 member states of the UN according to a quantitative composite index of e-government readiness based on website assessment, telecommunication infrastructure and human resource endowment.

As countries progress in both coverage and sophistication of their state-provided e-service and e-product availability they are ranked higher according to a numerical classification corresponding to the five stages of Emerging presence; Enhanced presence; Interactive presence; Transactional presence and Networked presence.

According to the e-government readiness rankings the United States (0.913) is the world leader followed by Denmark (0.904), the United Kingdom (0.885) and Sweden (0.874). The United States, as also North America, leads the world ranking in delivering information and services through the internet combined with the infrastructure needed to dispense them. It is followed by Denmark, United Kingdom, Sweden and the Republic of
Korea, Estonia, Malta and Chile are also among the top 25 e-ready countries. As a region, Europe follows North America while South-Central Asia and Africa rank last.

Notwithstanding much progress in the last one year, there remained wide disparities between, and among, regions and countries in their e-government programme offerings. Governments in the high income countries are far advanced in their provision of public information, on-line services, communications and outreach to citizens, and overall electronic access to government. The bottom 40 countries show little relative progress.

**The e-participation index.** The e-participation index assesses the quality, relevance, usefulness and the willingness of government websites for providing online information and participatory tools and services to the people.

In terms of participative decision making, though many countries encourage e-participation a few remained limited in their provision of relevant and qualitative mechanisms tools for user feedback. Forty three member states out of 178, which maintained a government website, had a clear e-government policy statement encouraging people to participate in public policy making; however, only 20 – or 11 per cent – had an actual provision for user feedback on citizen participation. When ranked by e-participation, the United Kingdom was the top followed by the United States, Canada, Singapore and the Netherlands.

- For further details on e-services see the UN Global E-government Surveys at [http://www.unpan.org/egovernment4.asp](http://www.unpan.org/egovernment4.asp)

6. Conclusion

There is no doubt that participation, equal access and transparency are the cornerstones of an effective e-government strategy. ICT has the potential to make e-participation and e-democracy a reality. The UN 2003 survey of 191 Member States and a 2004 follow-up show the resistance by governments to engage citizens online in political debate and decision making. However, as technology becomes more efficient and accessible, governments may well be increasingly forced to engage the e-citizen in all aspects of the governance process including scrutiny of public expenditures as they relate to socio-economic and human development.

From an audit perspective, ICT could be discussed or examined along the following three lines:
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3. The audit of ICT in various public processes through e-government as a tool to
   - increase the cost-effectiveness, quality, integrity, reliability and timeliness in the delivery of services and goods
UNDESA proposes to INTOSAI to concentrate on the audit of ICT and e-government not only with a view to promote efficiency of government operations, but equally as a tool to further transparency, participation and accountability of socio-economic development and spending, themes that are at the core of the United Nations goals.

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- The audit of the national e-government strategy;
- The audit of e-government readiness;
- The audit of the feasibility, cost-effectiveness and sustainability of e-initiatives in developing countries;
- The audit of the e-government system as a tool for auditors and citizens to verify if funds earmarked for a specific purpose were used for the intended purpose;
- The audit of the e-government system as a tool to minimize the risks of corruption; and
- The audit of misuse or abuse of the e-government e.g. showing erroneous or inflated operational and financial results or using it as a propaganda tool.
SAIs could play a pivotal role, through the audit of e-government, in the global community’s transition to a Knowledge Society with its potential for optimizing service delivery, increasing transparency, encouraging the participation of constituencies, strengthening people-centered governance and transform socio-economic and human development institutions.