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2012 United Nations E-Government Survey: Towards a More Citizen-Centric Approach

Report of the Expert Group Meeting

Expert Group Meeting

Towards a More Citizen-centric Approach

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DESA

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Acknowledgements

Foreword

The United Nations e-Government Survey is one of the major recurrent flagship publications of the Division for Public Administration and Development Management (DPADM) of the United Nations Department of Economic and Social Affairs (DESA). It has consistently ranked as one of the top 10 downloaded publications of DESA.

Given the high profile nature of the Survey and in an effort to improve its methodological aspects, DPADM organized an Expert Group Meeting (EGM) entitled "E-Government Survey: Towards a More Citizen-centric Approach. It was held at United Nations headquarters in New York, USA, from 6 to 7 December 2010.

The meeting was attended by 12 participants, including academics, consultants and researchers, drawn from various fields of expertise (see Annex 2 for the list of participants). This allowed for an exchange of different perspectives on the conundrum of e-government analysis and measurement, hence helping to enrich the discussion.

A review paper of the methodology used in the current Survey, which was prepared by a consultant, framed and aided a discussion on the ways of enhancing the quantitative part of the Survey. In particular, it concentrated on the development and improvement of measurable indicators that could be put forth in a question format for the Survey and for which data on national websites/portals could be obtained. The indicators in question relate to six important initiatives in e-government, namely: 1) user take-up and training; 2) accessibility of Internet or mobile connectivity; 3) accessibility of services to vulnerable groups; 4) multi-channel service provision; 5) whole of government (WOG) and one-stop service provision; and, 6) assessing the environment.

The EGM also served as a forum to review and update the current Survey questionnaire to respond more accurately to current and foreseeable trends of government online service provision. In this way, the meeting aimed to help add another dimension to the 2012 Survey, so that it would better reflect the complexity of rating e-government efforts and their measurement.

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I. Background

The *United Nations E-Government Survey* is a flagship publication of the Division and has been published at regular intervals since 2003 (see http://www2.unpan.org/egovkb/global_reports/05report.htm). The Survey aims to identify and help address disparities among countries around the world; especially, in support of a move towards a more inclusive information society, as envisaged in the World Summit on the Information Society (WSIS).

The Survey tracks the progress of the 192 Member States in implementing e-Government programmes. It measures and compares their state of e-Government readiness via a benchmarking tool, namely, the *Global E-Government Readiness Index*.

The index measures each Member State's use of the Internet and the World Wide Web (WWW) for the provision of information, products and services; plus the level of telecommunication and human capital infrastructure development. It is a composite measure made up of a Telecommunication (connectivity) Infrastructure Index, a Human Capital Index and a Web Measure Index, which is based on a *quantitative* analysis of the 192 Member States' web presence/features.

The prime focus of the Survey will remain the Web Measure Index, in which a team of researchers (assisted by translators) examines each country's main national website(s), as well as five ministry/department websites.

In order to avoid the pitfalls of subjective value judgment, the *Global E-Government Readiness Index* is not designed to assess the services offered on a qualitative basis; and the web measure index allows only for indicator variables denoting the presence/absence of specific website attributes. The resulting e-Government readiness rankings are a measure of the progress of a country relative to all other countries.

The primary site assessed is the National Portal or the official homepage of the government, along with the websites of five ministries (i.e., education, health, labor, social welfare and finance). Underlying the index is the following, five-stage model of progression of e-Government sophistication, which encompasses the stages of emerging, enhanced, transactional and connected presences:

In *emerging* presence, e-Government is limited, offering basic information on-line. In *enhanced* presence, e-Government provides greater sources of information as well as e-tools and e-services such as downloadable forms. In *transactional* presence, two-way interactive applications provide citizens with opportunities for on-line, financial and non-financial transactions (e.g., on-line filing for taxes). *Connected* presence is the most sophisticated level of on-line e-Government and is characterized by better coherence, integration and coordination of processes and systems within and across government agencies.

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A particular objective of the EGM was the development of new indicators for the 2012 survey with regard to six important initiatives in e-government, namely:1) user take-up and training; 2) accessibility of Internet or mobile connectivity to all; 3) accessibility of services to vulnerable groups; 4) multi-channel service provision; 5) whole of government (WOG) and one-stop service provision; and, 6) assessing the environment.

II. Overall Framework for the Deliberations

In the absence of Ms. Haiyan Qian, Director of the Division for Public Administration and Development Management (DPADM), Mr. Vincenzo Aquaro, the Chief of the E-Government Branch, opened the meeting. (Ms. Qian's opening remarks can be found in Annex 4).

The primary goal of the EGM, Mr. Aquaro explained, was to make specific suggestions for new indicators with regard to the six initiatives considered for the 2012 survey and which the consultant had just highlighted in his presentation of the overview paper. This would be accomplished in the six working sessions that started on day one in the afternoon (the final agenda can be found in Annex 3). Each of these sessions lasted only 60 minutes and as a result there was a need to focus on the objectives at hand. In this regard, all facilitators were expected to adhere to a specific structure for these sessions.

Mr. Aquaro explained that each of the six working sessions would be led by a DPADM staff person who would act as an internal facilitator and who would be supported by an expert. At the beginning of each 60 minute session, the consultant would give a brief presentation of the topic in light of the overview paper. A general discussion of no more than 20 minutes would follow whereby the consultant's suggested indicators from the overview paper would be reviewed. The group would modify his suggestions, delete them and add new ones.

After each session, the goal was to have written suggestions for the consultant to take into account as he prepared a proposed 2012 e-government survey questionnaire which DPADM would take into consideration in the development of the next report.

In addition to the development of new indicators around the six initiatives, the group would also review the existing survey for potential modification of current indicators.

But before starting the working sessions, all experts were allowed to present their own proposals and ideas for about five minutes, followed by an interactive discussion of about 30 minutes.

After all presentations were completed, Mr. Aquaro thanked everyone and noted that it was a really interesting discussion with some excellent proposals. He noted that some really important topics had been mentioned and said they would be discussed in the afternoon on day two after the work on the six initiatives and the existing survey had finished. He also said that notes had been taken and that all suggestions would be taken into consideration.

III. Expert's overview paper [1]

This is an abridged and revised version of the original expert overview paper prepared to enhance the quantitative and methodological part of the Survey

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[1] This chapter is based on the expert overview paper prepared by Mr. Kim Andreasson, Managing Director, DAKA advisory. (kim@kimandreasson.com).

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1. Introduction

For those attending the EGM, the overview paper was an important background document to review in order to fully contribute at the working sessions (see sections 1.3 and 6.1 for details). As the expert did not seek to replicate previous efforts here, participants were also advised to read Jeremy Millard's overview paper prepared for the 2008 EGM (Millard 2008). The objective of this paper was to build on Jeremy's excellent original contribution and provide an update between then and now. For this reason, however, the expert frequently refers to key points made in his paper (hereinafter referred to as "the 2008 paper" or as referenced).

The expert spent four years at Civic Resource Group, an e-government consulting company, where, among other things, he served as project manager for the United Nations Global E-Readiness Reports in 2003, 2004, and 2005. In this capacity, he recruited and supervised the research team.

Subsequently, he spent three years at The Economist Group where, among other things, he was a co-editor for the Economist Intelligence Unit's (EIU) e-readiness reports, written in co-operation with the IBM Institute for Business Value, in 2008, 2009 and 2010.

1.1 Purpose and scope

The purpose and scope of the EGM is to conduct a review of the United Nations e-government survey, which is an ongoing assessment of the 192 UN Member States' e-government development according to a quantitative composite index consisting of an online service index, previously known as the web measure index (including an e-participation index), a telecommunication infrastructure index, and a human capital index.

The goal of the review is to make concrete suggestions for enhancements to the UN Survey with regard to six important initiatives (section 2 of this paper), methodology (section 3), survey implementation (section 4), and potential modification of existing, or addition of new, indicators (section 5 and appendices). Based on the EGM, the consultant would prepare a proposed 2012 e-government survey questionnaire.

1.2 Recent e-government trends and UN survey developments

1.2.1 Recent e-government trends

The **Brookings Institute** (2008) e-government reports (previously known as the Brown University reports going back to the year 2000) have not been updated. The report may be updated next year.
The **International Telecommunication Union**'s ICT Opportunity Index (2007) has not been updated.

The **European Commission** (EC) website that deals with EU policy with regard to e-government lists several completed reports in 2009 and 2010 (EC eGovernment website). Especially prominent, of course, is the 8th Benchmark Measurement, *Smarter, Faster, Better eGovernment* (CapGemini, et al. 2009). While it still measures maturity across "20 basic public services" (12 citizen and 8 business services), a staple since the original 2001 report, the latest assessment also continues a more recent trend towards a focus on the use of services and uptake (demand) rather than simply availability (supply). It doesn't matter how many, and how sophisticated services are offered, if nobody is using them.

To assess this area, the report takes two different approaches. First, the "User Experience" pilot indicator, which is a new initiative based on desk research and information provided by the Member States, uses five sub-indicators: accessibility, usability, user satisfaction monitoring, one-stop-shop approach, and user-focused portal design. It finds that there is a significant variance in performance where achievements range from average scores of 34% to 81%. The second user approach relies on survey data, primarily from Eurostat. It finds low levels of adoption. Specifically, according to the report, the online sophistication in 2009 was 83%, compared to a 53% uptake, according to the 2008 Eurostat survey "Individuals or Businesses Using the Internet for interaction with Public Authorities" (CapGemini, et al. 2009).

Increased focus on, and involvement of, the customer in service delivery is a common theme. In terms of trends, the report identifies features such as personalization, access through multiple channels, participation in service delivery, and progress tracking.

Another key point in the report is the rising maturity levels against the 20 basic services, which necessitates further development of the measurement system. While the User Experience pilot is one attempt, future reports, it says, may move beyond web measurement in order to more fully capture government efficiency and effectiveness. Important topics that are currently not being properly assessed, according to the report, include trust, privacy, openness, and transparency.

Beyond actual measurement, Europe has also seen two important events that will affect its e-government development strategy over the next five to ten years. First, in 2009 in Malmö, Sweden, European Ministers created a new vision of policy priorities for e-government in Europe referred to as eGovernment 2015 Declaration. The EC has since engaged in discussions to translate this vision into practical policies, one example being the *Study on eGovernment scenarios for 2020 and the preparation of the 2015 Action Plan* (RAND Europe 2010). The second event was the launch in 2010 of the *Digital*

Agenda, the successor of the i2010 initiative. The Digital Agenda is Europe's strategy for a successful digital economy by 2020, which centers around seven key areas: a vibrant digital Single Market, interoperability and standards, trust and security, fast and ultra fast internet access, research and innovation, enhancing digital literacy, skills and inclusion, and ICT-enabled benefits for EU society (EC Digital Agenda website).

The **Organisation for Economic Co-operation and Development** (OECD) has continued to release several relevant reports over the past two years. Especially prominent was the launch of *Government at a Glance 2009*, a new publication that provides more than 30 data points on various elements of government performance, including e-government, across the OECD countries (OECD 2009a). A key finding was the discrepancy between the large amount of available e-government services (supply) and the low citizen usage of them (demand). Specifically, the report notes that, in 2006, only between 10% and 60% of citizens across OECD countries used e-government services, compared to 55% to 90% of businesses (OECD 2009a). Another key finding was the increasing prominence of transparency to central governments. Transparency rose to the third most important core value (behind impartiality and legality) in the 2009 survey, and was by far the fastest rising option, having almost doubled in selection between 2000 and 2009 (OECD 2009a).

Unsatisfactory usage is also the theme of *Rethinking e-Government Services: User-centred Approaches*, another relevant recent OECD publication (OECD 2009b). It notes that despite the availability of online services, less than half of Europe's people actually use them. For example, it points out that in Greece, Italy and Portugal the number is less than 20%. As the shift from a government-centric approach to a user-centric one, continues, such low numbers are a concern and the report offers insights on the challenges of uptake in the OECD countries and various approaches to counter them, including formal measurement frameworks.

The **Economist Intelligence Unit** (EIU) continues to publish its annual e-readiness ranking of the world's largest economies. Here too, a few key themes emerged during the two most recent reports. In *E-readiness rankings 2009: The usage imperative* (EIU 2009), the EIU focused on the demand side of e-readiness by capturing the extent to which populations use digital channels. To do so, it added three "usage" indicators, scored by the company's country analysts, to the more than 100 quantitative and qualitative data points already in its model. They were (EIU 2009, quoted from page 4):

- Use of Internet by consumers: The range of Internet features used by individuals—such as e-mail, transactional sites and social networking sites—and the extent of online purchasing.
- Use of online public services by citizens: The extent to which citizens use available e-government services such as tax filing, job search or car registration, among others.

- Use of online public services by businesses: The extent to which businesses make use of digital platforms for VAT filing, company registration, online procurement and other forms of government interaction.

The report found that while e-readiness scores fell across the board, except for a handful of countries, due to the deteriorating business environment at the time, relatively low usage scores also contributed to the decline. While usage tends to lag technology availability, the report noted, it needs to improve in order for countries to reap the full benefits of ICT. Another noteworthy change to the EIU model in 2009 was the addition of the UN's e-participation index, something which, again, put user engagement at the forefront.

In the *Digital economy rankings 2010: Beyond e-readiness* (EIU 2010), the EIU illustrated how far the world has progressed in digital measures by renaming its decade old publication. Modifications to the benchmark model particularly reflected the development in the "quality" of broadband and mobile availability. They were (EIU 2010, quoted from page 5):

- A new "broadband quality" indicator has been added, which measures, as a proxy for quality, the share of fibre-optic access lines in a country's total broadband access lines.
- A new "mobile quality" indicator assesses the share of 3G and 4G (third generation and fourth generation) mobile subscriptions in a country's total mobile subscriptions.
- In measuring "broadband affordability", the lowest DSL (digital subscriber line) connection speed for which prices are considered is now 256 kilobytes per second (kbps). Previously this was 128 kbps.
- The scoring scale for "Internet user penetration" has been adjusted, with 100% of the population now representing the highest penetration achievable in a country. This had previously been 75%.

Strong growth in digital channels over the past decade, the report concludes, makes these indicators essential to success in today's world; yet another indication of the level of maturity.

The **World Economic Forum** (WEF) continues to measure digital progress primarily through its Networked Readiness Index (NRI) as presented in *The Global Information Technology Report 2009-2010*, which is produced in cooperation with INSEAD (World Economic Forum 2010). The NRI measures the extent to which 133 economies leverage information and communications technology (ICT) for development and seeks to benchmark that performance over time and against others. The composite NRI index rests on numerous variables based around three key three pillars: the environment for ICT, the readiness of an economy's key stakeholders to use ICT, and actual ICT usage. But here too change is under way. While the NRI framework has been kept fairly consistent since 2002, it is, according to the most recent report, currently being revised in order to

improve the measurement of recent trends in ICT. Separately, it is worth noting that the World Economic Forum, like the EIU, is also using the UN's e-participation index in its model.

A key theme in this year's report is ICT and sustainability in its broadest sense: from economic, environmental and social sustainability at a high level to more specific topics, such the sustainable competitiveness of cities, metrics, and the role of chief information officers (CIOs), among others.

The *International e-Government Ranking 2009* from **Waseda University** analyzes the development of government websites and ICT initiatives, as well as the relationship between governments and their stakeholders, across 34 countries around the world (Waseda 2009). The primary categories of indicators used in the benchmarking model continue to include network preparedness, required interface-functioning applications, management optimization, National portal, CIO in government, and e-government promotion with 28 specific indicators.

The report is also interesting because the theme of this fifth anniversary edition is "Review and Foresight". Summing up the previous five years of measurement, the report outlines key trends, including the move from "agent-centric" to "citizen-centric" e-government, as well as the increasingly high levels of network preparedness for the countries surveyed. While the report notes that many countries are increasing their efforts in e-government promotional activities, improving usage remains a key task. In fact, the report even argues that "enhanced citizen participation should be the core objective of e-Government initiatives."

A number of other organizations offer their own reports in this area, including **Accenture**. The consultancy does not rank countries per se, but rather seeks to determine strategic adoption, most recently with regard to new technologies, such as Web 2.0 (Accenture 2009a; Accenture 2009b). The current Accenture framework uses four key dimensions: outcomes, balance, engagement, and accountability (transparency).

1.2.2 Summary of trends

This is an exciting time for e-government. There is so much going on that it is almost unfair to try and sum it up; however, trends in the above mentioned reports include, though are not limited to:

a) **Development**: There is broad agreement that the world of measurement needs to move from "readiness" to "maturity". Several reports cite the need for major overhaul to their models and one even changed its name to reflect this trend, as the EIU's e-readiness rankings became the digital economy rankings. While methodological progress is important, of course, studies have not changed

radically, to date at least. One reason is that they attempt to balance progress while retaining consistent measurement over time.

b) **Usage**: While the tendency to look at demand for e-government is more than a recent phenomenon, the focus on users, whether it is a user-driven environment for businesses or a citizen-centric approach for governments, is increasingly noticeable. The EC, OECD, and the EIU, among others, have all added specific usage measurements to their models. Measurement of usage is conducted primarily offline through the use of analysts or traditional survey method such as phone interviews.

c) **Transparency**: "Open government" initiatives and transparency projects are increasingly common at all government levels and across the world. It is now a central tenet in several reports (Accenture, EC, OECD). This trend also extends beyond actual measurement models. President Obama, for example, ran on a platform to use technology to "open up the federal government" and "creating a new level of transparency"; once elected, he proclaimed that his administration was committed to instituting "an unprecedented level of openness in government" (Obama 2007; Obama 2009, respectively). In Europe too, it's a clear trend. The 2009 Ministerial Declaration on eGovernment in Malmö, Sweden, for example, called for the strengthening of transparency as a way of promoting accountability and trust in government (EC 2009a). More recently, the Belgian Presidency unveiled specific initiatives on open government (EC Open Government website).

d) **The next phase**: New technology, an ever increasing supply of services and the demand for them, and improved transparency across government, all seem to converge in a trend, implicit or explicit, that can be described as user engagement. It puts the user at the center and offers him or her Web 2.0 technology tools, such as personalized offerings and mash-ups, which significantly affect a wide range of e-government services (Osimo 2008). Governments are trying to meet this new demand through a variety of channels (online, mobile, etc.) by using improved interoperability of systems and operations, such as cloud computing. The result is a holistic approach to e-government, from back-end strategy to front-end availability and user demand. The work on linking public sector engagement to policy outcomes is gaining attention. The EC conceptual benchmarking framework specifically points towards the importance (and difficulties) of linking ICT to impact (EC 2009b), while it was a key theme in a recent OECD workshop (OECD 2010).

1.2.3 UN survey developments

The two most recent UN reports on e-government capture recent trends as well. In *E-Government to Connected Governance*, the analysis focused on Web 2.0, service delivery and improving effectiveness using back-office integration, all constituting steps towards

holistic e-government (UN 2008). In *Leveraging E-government at a Time of Financial and Economic Crisis*, a case was made for improving public trust through greater transparency based on open standards and the sharing of government information (UN 2010). The report also turned the focus on users, in a variety of ways, including citizen empowerment, inclusiveness and participation. Reflective of the readiness to maturity trend, the most recent UN report also changed the name of its main model, from "e-readiness" to "development." Specifically, the report explains, "[t]he 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" (UN 2010, page 3).

2. Six e-government initiatives for 2012

This section will define the concept and scope of six important initiatives in e-government, as pre-determined by the UN, in order to provide a background for the methodological review (section 3) generally and the development of new indicators for the 2012 survey specifically (section 5).[2]

At the EGM we will discuss each initiative in turn, along with suggestions for how to measure them through the e-government survey. As such, this section is meant to give participants the basic information they need in order to make valuable contributions at the working sessions whereas section 5 provides concrete suggestions for comment. The initiatives to be considered at the EGM follow.

2.1 Initiative A: User take-up and training

User take-up is currently a key focus in e-government development, and for good reason (sections 1.4.1 and 1.4.2). Even in the Republic of Korea, the country that leads the world in e-government according to the most recent UN survey, citizens do not utilize online services to a large extent. A recent report shows that while 73% of its citizens are aware of e-government, only 47% actually use it (The Korea Times 2010). In Europe, comparative figures are even lower. In 2009, only 30% of individuals used the Internet for interaction with public authorities in the EU 27, according to Eurostat (Eurostat 2009).

While it is important to understand why usage is higher in some countries than in others, the primary debate focus is on the reasons for low take-up figures; a few recent suggestions include:

- Popular e-government services either offer an easy solution to a requirement, such as online tax filing, or provide immediate benefits, such as ease of registration, whereas fringe online services get little attention (EIU 2010);
- User confidence is low, only 12% of European users feel completely safe in making transactions online (EC Digital Agenda website);
- Government promotion of e-government needs to increase (Waseda 2009; The Korea Times 2010); and,

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[2] These initiatives are considered specifically for the 2012 survey, though there are parallels to the five dimensions of e-government from two years ago (back office management in government; mobile access to government online services and Web 2.0 government; inclusiveness of e-government; citizen's usage of government online services; and, e-participation). While there is a degree of overlap between the new initiatives and the previous dimensions, this paper will not replicate previous efforts but rather focus on the task at hand and simply provide an update, where necessary, between now and then. Interested EGM participants should refer to the 2008 overview paper for Jeremy Millard's background review of the dimensions.

- User experience needs to improve (CapGemini 2009).

The range, and numbers, of suggestions as to why usage is low indicates that actual measurement in this area is complex. First, website statistics are either hidden from public view, not collected at all, or do not appear to be a priority. In part because of these issues, measurement of user take-up must extend beyond front-end website analysis. Secondly, surveys of usage, whether online or offline, are not conducted in all countries. Even if they are, the data may not be comparable across countries (and regions). Third, areas of usage may be affected by definitions and cultural norms. For example, to declare taxes via SMS is common in Sweden, but that also means the tax website is used less. In California one can declare taxes online but only if the Franchise Tax Board (FTB) has first sent a special pin code in the mail.

Because of the issues involved in measurement, it is unrealistic to assume that usage can be assessed only through website analysis. If evaluation of take-up is desired, therefore, the survey implementation methodology must extend beyond the online component. Section 4.4.4 provides alternatives for discussion in this regard. But this doesn't mean that an online assessment can't be useful. Section 5.1 provides suggestions on how website analysis can use proxy indicators to assess user take-up, such as a government's demonstrated interest in user training and whether websites are designed to maximize the user's experience. Training and design initiatives in this regard may be complementary: websites that use "how to" guides, screenshots, FAQs, or similar explanations for specific online services can be considered as educational as in-person training.

2.2 Initiative B: Accessibility of Internet or mobile connectivity to all

In part, lack of access is a digital divide issue. In the United States, for example, broadband adoption data show that significant gaps remain between groups according to socioeconomic factors (U.S. Department of Commerce 2010). But accessibility is also a broad topic that overlaps with e-inclusion (see initiative C in section 2.3) and multi-channel service provision (section 2.4) in that mobile technology plays the role of an important potential equalizer. What distinguishes accessibility of Internet or mobile connectivity to all, however, is the specific focus on enhancing Internet penetration.

If individuals do not have access to e-government, they cannot use it. To put things in perspective: 50% of Europeans use the Internet daily but 30% have never used it (EC Digital Agenda website). Similarly, in the U.S. almost one-quarter of all households did not have an Internet user in 2009 (U.S. Department of Commerce 2010). Progress has been made over the past decade but more needs to be done. Ironically, it is perhaps because impressive gains in access have been made, that it overshadows the need to make even greater improvements. In 2002, 39% of households in the EU 15 had Internet access; in 2010, the equivalent figure is 68% (Eurostat 2010).

Lack of Internet access is also a particularly acute problem in low income countries where only about 5 out of every 100 people are Internet users (World Bank 2010). Lower middle income (about 14 Internet users per 100 people) and upper middle income (31) countries fare better although a majority of their populations are still not online. Even high income countries (69) have some ways to go. Places such as Switzerland (76), the UK (76) and the U.S. (76) all have a sizeable numbers of Internet users, yet about a quarter of their populations remain offline.

While the common notion of accessibility assumes a computer, either at home or at a remote location such as at an office or an Internet café, mobile technology is increasingly important in this area. Cell phone infrastructure investment is relatively low, affordability high, and access to smart phones ubiquitous. Mobile connectivity to government, or m-government, is an alternative e-government access platform that can help countries leapfrog traditional development, and it also enables its citizens to get online faster. Technological development helps: according to one estimate, it took six years to reach 100 million 3G subscribers; 4G is predicted to reach the same number in only four years (Pyramid Research 2009). 4G network speed is also about five times as fast as 3G.

There is no reason why improving accessibility could not be promoted methodologically. The EIU, for example, revised the target for "Internet user penetration" from 75% to 100% of the population in order for countries to get a maximum score in this category in 2010 (EIU 2010). Section 3.2.1 provides methodological suggestions with regard to an improved focus on accessibility, both in terms of penetration but also in terms of "quality" of mobile access. Section 5.2 offers more specific suggestions for assessing primarily mobile access.

2.3 Initiative C: Accessibility of services to vulnerable groups

E-inclusion, the participation of all in e-government, is fundamental to promote economic and social empowerment through ICTs for all citizens, including vulnerable groups pre-identified by the UN: poor, illiterate, blind, old, young, immigrants and women.

Unfortunately, evidence of a digital divide has long been considered "substantial and unequivocal" and the challenge continues (Bimber 2003, page 4). For example, it was recently found that socioeconomic and geographic variables explain lags in broadband adoption among people with disabilities in America (U.S. Department of Commerce 2010). While women are generally found to have the same level of usage as men, differences in their socioeconomic status may affect access (Bimber 2000). In the EU 15, 36% of males use the Internet for interaction with public authorities compared with 31% of females, according to Eurostat (Eurostat 2009). The lack of accessibility for vulnerable groups from online services is especially unfortunate because they are often already excluded from other opportunities in society (Mossberger, Tolbert and Stansbury 2003).

Given the ongoing e-government evolution, in which government functions are increasingly moved online, improvements in e-inclusion and an increase in online participation of all citizens, including those who are disadvantaged, need to receive attention both from an individual perspective but also through an institutional approach (Reece and Andreasson 2009).

In this regard, countries can use multi-channel strategies in order to ensure delivery of services to vulnerable groups (EC 2009a; see also initiative D in section 2.4). For example, one EC directive notes that "inclusive eGovernment policies shall address how best to combine online services together with other channels, such as human intermediaries who need to be equipped with state-of-the- art ICT tools" (EC 2007).

In practice, it means improving access and making it easier to acquire digital knowledge (Wilhelm 2004). Such trends are perhaps especially prominent in Europe. A recent example is the "no citizen left behind" policy that seeks to engage citizens through a user centered service provision as a foundation towards trust and confidence, ultimately helping to increase online participation (CapGemini 2009). E-inclusion, specifically enhancing digital literacy, skills and inclusion, is also one of seven central pillars in the Digital Agenda (EC Digital Agenda website). Encouragingly, e-inclusion efforts are also starting to spread beyond developed countries into emerging markets (EIU 2010).

Improving accessibility, including for vulnerable groups, should be promoted methodologically. One suggestion includes the separation of adult literacy rates as described in section 3.3.1.

In an online environment, bridging the gap usually means taking a user centered approach to stimulate access for everyone and enhancing the user experience for all. Such endeavor includes simplified design, multi-channel options, thematic and life-event segmentations, and personalization. Section 5.3 provides specific suggestions for new indicators.

2.4 Initiative D: Multi-channel service provision

Multi-channel service provision, the delivery of government services through a wide variety of online and offline means, is increasingly important as citizens come to see themselves as customers of the government. They want the same options for interaction from the public sector as they get from the private sector. If a mobile operator can offer customers to pay their bill online, over the counter, over the phone, at a kiosk, or via the mobile phone itself, then why shouldn't the same options be possible for a parking ticket?

The topic is important because it affects other initiatives, such as e-inclusion (see initiative C in section 2.3). But the multi-channel service approach extends beyond inclusion efforts as well. A particularly important aspect is the rise of m-government (see also initiative B in section 2.2), which has been labeled as one of the hottest areas in e-government (Waseda 2009). It is especially exciting because it provides countries without a comprehensive ICT infrastructure with an opportunity to leapfrog (The Economist

2008). Encouragingly, developing countries are keen on mobile adoption. The ten largest mobile operators in Africa and the Middle East, for example, report adding more than 12 million new customers every three months, according to Pyramid Research (EIU 2009). Governments, meanwhile, are doing their part. Last year, Bahrain unveiled its m-government portal, enabling access to 50 services via mobile phone (FutureGov 2009).

For purposes of the EGM,, a key development over the past two years is the increasingly blurred line on what constitutes mobile access. Previously, a WAP feature might have been required to browse a text-only version of a website on a phone; today, full-fledged operating systems and browsers make the task seamless, with the iPhone being one example. While text-only versions and services such as SMS-text continue to be important, the question is how "smart" devices will affect future e and m-government development.

While m-government is a central component to multi-channel delivery, it is important not to lose track of other options. Research on inclusion, for example, shows that face to face interaction remains important (EC 2009c). Multi-channel service provision requires governments to be both inclusive and flexible to meet specific demands. For people who are digitally excluded, removing over the counter service or shutting down a telephone help line can prove disastrous. Conversely, the addition of public kiosks can make a positive difference. In Andhra Pradesh, a state in southern India, a private company manages a network of public service centers, e-seva, which helps citizens pay bills online, something which has drastically improved both service delivery and the customer experience (The Economist. 2008). It highlights the importance of multiple channels for communication and also points to the private sector as a potentially important partner.

Evaluations of multi-channel delivery may appear to be largely an offline activity; however, if done appropriately, the online component should inform citizens of other ways of transacting services, just as an offline interaction should inform of online services. As such, section 5.4 provides suggestions for online assessment. In addition, section 3.2.1 provides methodological suggestions to improve the focus on mobile accessibility, both in terms of penetration but also in terms of "quality" of mobile access.

2.5 Initiative E: Whole of government (WOG) and one-stop service provision

The concepts of whole of government and one-stop service provision rely on back office management, a topic described in the 2008 overview paper. Conceptually they point to the same trend: the transformation of government operations from a traditional departmentalized approach into a modern structure that puts users (citizens) first.

On the back-end, whole of government requires greater cooperation and connectedness between various government agencies across issues such as cloud computing, open

government, horizontal and vertical integration, etc. (Millard 2008). The enhanced structure should make government more effective while increasing efficiency for citizens.

On the front-end, users should not need to know which agency, or what level of government, is offering the service they need. Instead, a one-stop service provision should allow them to visit a website that is supported by many government agencies and serve as single point of access to all services within a given topic, a concept also known as a one-stop-shop or a portal. To be clear, a portal can be defined as a unique site, with its own URL, which targets a specific audience or presents a specific topic and collects in one place all relevant information from several agencies or departments. For large countries, topics may be limited in scope. Forms.gov, a U.S. portal that offers a collection of government forms, is an early one-stop service example that was cited as a notable site by the 2005 survey (UN 2005). For small countries, it may be possible to collect more services in one place. The Australian government national portal offers a modern example of the whole-of-government concept, at least from the front-end.[3] The search engine covers all of government and the site offers a single sign-on account from which citizens can access multiple agencies, with their data and preferences already in place.

The increasing prominence of portals was cited as a major finding by the 2003 survey even though only 26% of countries had them at the time and the ability of governments to present them was called uneven (UN 2003a). It now seems inevitable that the next phase of back office management involves increased interoperability and openness of government information and data where the boundaries of what users can do will be pushed to new heights (section 1.4.2; Millard 2008).

While implementation continues to progress greatly, the basic conundrum for assessment remains the same. In theory, the better the back office, the less obvious it should be. But it would also be incorrect to draw the opposite conclusion, that if a portal is bad, then so is the back office. To properly measure back office management, more than a front-end approach is needed (CapGemini 2009). But that is not to say that an online approach is fruitless. To the contrary, it is possible to assess general trends in how whole of government is adopted in practice from a user perspective. Section 5.5 adds suggestions to what is already covered in the survey, asking questions such as whether the national portal helps users locate local services.

2.6 Initiative F: Assessing the environment

In light of the UN Conference on Sustainable Development 2012, also known as Rio+20, the UN is considering the addition of an e-environment component to the online service index. It is a timely suggestion. Businesses and governments alike are recognizing the

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[3] http://www.australia.gov.au

importance of sustainable development as they seek to assess progress, establish objectives and identify challenges.[4]

In the private sector, 78% of executives say sustainability initiatives are important to current business strategy while 74% say it can help improve profits at their company (EIU 2009b; EIU 2008a). Yet, when it comes to the environment, only 6% rate their companies as outstanding in terms of reducing greenhouse gases, waste and pollution (EIU 2008a). Companies are looking to governments for help; 40% of executives say more regulation is needed to tackle environmental and social challenges (EIU 2008a).

Given the timeliness of the topic, it certainly makes sense to incorporate an e-environment component into the assessment. In fact, comparative reports are also receptive to this. ICT and sustainability, including environmental concerns, is a key theme in the most recent WEF report (WEF 2010). The latest EC report, meanwhile, notes that "contemporary topics like energy, environment, transport and the like" may be added as additional components to future assessments (CapGemini 2009, page 9). Seemingly, the UN faces three options with regard to an e-environment component:

a) Add the Ministry of Environment, or its equivalent, to sites to be reviewed; or,
b) Integrate questions into the main survey, similar to the e-participation index; or,
c) Create an entirely separate module of questions.

Option A would create a future foundation by adding a valuable component to the online service index and reflect the Millennium Development Goals (MDGs); however, formally adding another ministry seems contradictory to the desire to move away from surveying the ministries (see section 3.4 for this point).

Option B is beneficial because it maximizes return on investment in terms of time as it broadens the scope of the existing survey while also providing a separate index. The risk with this approach is the unknown: if something goes wrong it jeopardizes both efforts.

Option C is beneficial because it allows more flexibility. If successful in 2012, the component can be integrated in future surveys; if inconsistent or questionable results are discovered, it won't affect the overall index. The risk with this approach is if there are not enough questions to form an index. To confirm feasibility, therefore, a Google search was performed, which found that most countries have a Ministry of the Environment, or its equivalent, available. As such, it is feasible to go beyond only a handful of questions and to create a separate module. This may make option C preferable to B. Section 5.6 provides suggestions for potential indicators.

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[4] The objectives of the conference can be found on its website: http://www.uncsd2012.org/

3. Review of methodology

This section takes a broad view of the e-government program and places the online service index into context by summarizing current UN methodology.[5] While the basic model has not changed since its inception in 2003, each existing index is discussed in brief whereby refinements to the existing methodological approaches are recommended. The details of implementation are addressed in section 4.

3.1 E-Government survey

Previously known as the e-government readiness index, the objective of the overarching e-government survey remains the same: to measure "the willingness and capacity of countries to use online and mobile technology in the execution of government functions" (UN 2010).

To do so, the e-government survey uses a composite index based on the weighted average of three normalized indices where 1/3 is derived from a telecommunications infrastructure index (see section 3.2 below), 1/3 from a human capital index (3.3), and 1/3 from the online service index (3.4), which includes an e-participation index (3.5).

The ongoing assessment of e-government development is meant to rate the performance of the 192 UN Member States relative to each other as opposed to being an absolute measurement. This is an important distinction because it also implies that it is a comparative framework that seeks to encompass various approaches that may evolve over time instead of advocating a linear path with an absolute goal.

This is analogous to other measurement frameworks, such as the EIU, which evaluate the world's largest economies on their ability to leverage information and communications technology (ICT) for socioeconomic benefits (EIU 2010). Similarly, the WEF, measures the degree to which a national environment is conducive to ICT by taking into account a number of features of the broad business environment (WEF 2010). However, reflective of its mission, the UN focus is on citizens. It is manifested in the establishment, and approach, of the web measure supply-side assessment and makes the survey unique.

3.1.1 Recommendation(s)

The basic composition of the e-government survey should remain the same. There is no particular reason for change and it will allow for comparability. To add additional indices simply for the sake of doing so serves no purpose.

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[5] For the complete methodology, please refer to pages 109-113 of the most recent report (UN 2010).

The temptation for revision is greater within the composite indices. It is important to note, however, that any new indicator(s) suggested for addition to any composite index warrants data for 192 Member States in order to reflect the UN mission.

3.2 Telecommunication infrastructure index

All data for the telecommunication infrastructure index is provided by the International Telecommunication Union (ITU). Five normalized indicators form a composite index based on the arithmetic mean of each of where the telecommunication infrastructure index =

- number of personal computers per 100 persons;
- number of Internet users per 100 persons;
- number of telephone lines per 100 persons;
- number of mobile cellular subscriptions per 100 persons; and,
- number of fixed broadband subscribers per 100 persons.

3.2.1 Recommendation(s)

While the construction of the index is transparent, its customization is not fully explained. Specifically, the UN report does not explain how the ITU gathers the information and the frequency of updates. This needs to be addressed in the next update.

The 2008 overview paper suggested the index be replaced with the ITU's ICT Opportunity Index. This hasn't proved feasible, however, because that index is not being updated (see section 1.4.1 of this paper).

Instead of replacing it with something else, therefore, it is recommended that the current index is kept, but refined to reflect ICT development. Specifically, it is suggested that the index be broadened to include the quality of infrastructure in addition to current measures of quantity. This will reflect the move from "readiness" to "maturity" and also incorporate the desire to promote m-government and improved accessibility (sections 2.2 and 2.4). Potential indicators include 3G and 4G mobile subscriptions as a percentage of all mobile subscriptions and a measure on international Internet bandwidth. Such data is provided by the World Bank and Pyramid Research.

Further, it currently appears that all indicators have an equal weight in the index. It is suggested that this is reviewed. For example, to promote inclusion and to narrow the digital divide, it could be useful to give greater weight to the Internet penetration rate (for this point, see also section 4.2.8). In addition, a measure of broadband affordability could also be used to promote interest in bridging the digital divide.

3.3 Human capital index

The United Nations Educational, Scientific and Cultural Organization (UNESCO) is the primary source of data for the human capital index, with gaps being filled to the extent possible by the United Nations Development Programme (UNDP) Human Development Report, most recently the 2009 version.

Two normalized indicators form this composite index: adult literacy rate and the combined primary, secondary, and tertiary gross enrolment ratio in education. Adult literacy is assigned a weight of 2/3 and gross enrolment 1/3.

3.3.1 Recommendation(s)

Compared with technical infrastructure, which can change rapidly in a year or two, improvements to human capital happen slowly. The index already captures the most common indicators of educational achievement. One potential addition, however, would be school life expectancy, which is also measured by UNESCO.

Further, given the desire to promote the inclusion of vulnerable groups in e-government, it is suggested that details around adult literacy are itemized by youth and adult rates, as well as creating separate reporting for women. World Bank data contain these measures. Such effort will highlight these groups and call attention to them; should it not have the desired effect, one can envision weighing these groups more heavily in the index in the future.

3.4 Online service index

Its weight may be equal to the telecommunications and human capital indices, but the online service index seems to matter more. And arguably, it does, because the movement is greater. To improve gross enrolment in education can take decades; to build broadband infrastructure can take years; but to implement e-government applications and solutions can be done quickly. As a result, the online service index constantly shifts and countries can improve drastically from one survey to the next, affecting the overall e-government survey rankings as well.

It is important to reiterate that the web measure is purely quantitative. Researchers use a survey questionnaire to evaluate the national portal, or other official homepage, as well as five pre-determined ministries and assign a binary value to each question based on the absence or presence of the specific item measured. By nature, the national site questionnaire is more extensive while a shorter set of questions are used for all ministries.

The survey must be quantitative in order to avoid bias. And while the national portal is an obvious choice for assessment, the ministries are chosen for a reason as well. Since the

primary objective is to measure e-government development in support of human development, they are reflective of the MDGs (UN 2003b). As such, the five pre-determined ministries are: health, education, social welfare, labour and finance.

Recently, however, the UN has indicated a desire to move away from surveying the ministries and instead only assess the national portal, or gateway to government services, whether it is the national site or not. It would be a shift from a website-specific approach to a service-specific approach, indicative of the trend that users should not need to know where a service is coming from as long as they can easily access it (see section 2.5).

3.4.1 Recommendation(s)

The online service index is the most prominent component of the e-government survey and it is what makes the UN assessment unique. As the 2008 overview paper noted, no other international framework offers such extensive coverage of government websites using supply-side analysis. Everyone agrees this is the fundamental tenet of the survey. Assumptions made two years ago should still guide the discussion: that the focus of the survey "should remain citizen services and participation" from a web feature analysis perspective, and, that the aim is to stay within "'reasonable' cost and maximum comparability" while, at the same time, "this should not compromise the need for new thinking and better measurement…" (Millard 2008, page 14).

These assumptions are crucial, because – in turn – it assumes the UN will a) build on the current approach; b) preserve comparability over time; and, c) recognize the continuous and often fast-developing nature of the field. Combined, these three assumptions need to guide any methodological discussion about the UN e-government survey.

Differences of opinion most frequently abound with regard to the ministries surveyed, the addition of demand-side measurement (see section 4.4.4) or tweaking the stages of e-government (3.4.2).

The addition or removal of any specific ministries would appear to have marginal impact. A more radical proposal is to remove all ministries and instead measure information and services through a central gateway, assessing, for example, whether one can pay taxes (typically a finance ministry function) by visiting the national portal. The primary argument for such approach is that citizens should not need to know where services come from but just be able to find them. The counterargument is that this would represent a major shift in methodology and compromise backwards comparability.

While the online measure must progress, it needs to be reflective of its past. Otherwise it would be a new undertaking. As such, a multi-step recommendation is made for 2012 to take into account both arguments:

a) the questions in the ministry survey questionnaire need to map to the national site questionnaire, as used to be the case (there are now minor differences);
b) the ministry portion of the questionnaire should be scaled back;
c) researchers will assess the national portal and attempt to find all services from there;
d) researchers will assess the ministry sites as usual, using the scaled back questionnaire;
e) comparison will be made whether countries offer the service through the national portal or at the ministry sites, or both; and,
f) a country should score a point regardless of how the service was found but should not receive two points if it was found in both instances.

This approach retains the original methodology and allows for comparability. But it also emphasizes the importance of back-end operations. An added benefit of this suggestion is that the UN will be able to track, over time, how many services are found through the national portal vis-à-vis the ministries while allowing Member States to develop their own approach.

3.4.2 Stages of e-government

Many scholars have argued that e-government development proceeds through stages, ranging from basic information to increasingly interactive, interconnected and deliberative phases (Bellamy and Taylor 1998; Layne and Lee 2001; Dunleavy and Margetts 2002; Reece and Andreasson 2009). The exact number of stages and their precise meaning varies. For example, the EC recently revised its four stage approach into a five stage maturity model describing information, one-way interaction, two-way interaction, transaction, and targetisation/automation (CapGemini, et al. 2009).

Along those lines, the current UN framework is based on four stages:[6]

- Stage I: Emerging information services
- Stage II: Enhanced information services
- Stage III: Transactional services
- Stage IV: Connected services

The UN stages are not necessarily cumulative, which means that a country can offer information and services (and score points in the survey questionnaire) in higher stages without having a substantial presence in lower stages.

3.4.3 Additional recommendation(s)

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[6] For the complete definition of each stage, see UN 2010, page 95.

It is recommended that the UN maintain the current stages. Progress is not made by introducing a new framework. Whether there are 5, 4, or even 3 or 6 stages does not really matter as long as clearly outdated indicators are removed and new obvious ones introduced. The temptation to revamp the number of stages, or add new ones to reflect the "hot" indicators of the day, will only minimize long-term comparability, require constant re-evaluation, and add considerable time to the survey process, especially as new or revised stages are likely to provide diminishing returns.

3.5 E-participation index

E-participation covers a host of participatory mechanisms online, ranging from information on how to participate to actual participation in the public policy discourse.

While the term is common, few organizations actually measure it. As a result, both the EIU and the World Economic Forum are using the UN's e-participation index in their models (EIU 2009; World Economic Forum 2010).

The UN is primarily interested in how various Member States are using online tools for interaction rather than prescribing a specific form of participation. Specifically, the index "assesses the quality and usefulness of information and services provided by a country for the purpose of engaging its citizens in public policy making through the use of e-government programs," according to the most recent report (UN 2010).

The e-participation index is integrated into the online service index survey instrument (described in section 3.4). Specifically, any questions in the survey that relate to participatory activities at both the national portal and ministerial levels are pulled out to form the separate e-participation index.

The e-participation index is itself composed of three stages: information on how to participate ("e-information"), interaction ("e-consultation") and engagement in decision-making ("e-decision-making").

3.5.1 Recommendation(s)

While the online service index warrants a conservative approach, the e-participation index – which was originally based on a mostly qualitative assessment – remains in need of attention. It is my understanding, from reading the latest questionnaire, that the index is now primarily quantitative but still contains qualitative scoring. It is recommended that any remaining qualitative indicators are converted into quantitative ones in order to solidify the non-subjective approach of the overall UN framework.

A revised e-participation index that is purely quantitative should be of high priority. Even if those involved know there is no bias on the part of researchers, perceptions are equally

important and the argument will be easily questioned by an outside observer when the index is published.

4. Survey implementation process

Partly because the entire process has not been transparent, there seem to have been misconceptions about survey implementation in the past. As a result, this section will first provide an overview of the current approach as I currently understand it, and from what I recall when I was part of the survey team.[7] This is followed by specific comments with regard to the various items listed in the methodology, as well as alternative suggestions for consideration before providing a set of summary recommendations.

4.1 Current approach

The compilations of the human capital and telecommunication indices are provided by UNESCO and the ITU respectively and do not require further elaboration. The online service index has been provided by Civic Resource Group (CRG), an e-government consultancy based in Los Angeles, in the United States. The company takes the most recent survey questionnaire as provided by the UN and recruits a research team consisting primarily of graduate students to assess the national portal as well as the websites of the ministries of education, labour, social services, health and finance of each UN Member State. Associated portals and subsidiary websites are considered part of the process and taken into consideration. With at least six potential websites per country and 192 Member States, more than a thousand sites are evaluated. CRG provides the UN with the raw data in the form of an Excel spreadsheet once the web assessment is completed.

4.1.1 Preparation

Member States are invited to provide their relevant URLs, and where no response is received, a list of URLs are identified for all websites to be surveyed, primarily based on the previous survey, but also through an extensive additional search to uncover new online presence. Survey piloting, i.e. the assessment of new indicators, is also conducted at this stage.

Meanwhile, survey management will recruit the core research team, which is comprised of senior researchers, researchers, and translators, most of whom are recruited specifically for this effort.

All researchers are provided with research guidelines in the form of specific instructions on how to score each individual indicator, as well as actual website examples. General training sessions are provided at the outset of the project and all researchers have continuous access to senior researchers at all times.

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[7] This section draws on personal experience but is also an interpretation of the web measure methodology as described on pages 110-112 of the most recent report (UN 2010).

To manage the process from start to end, an online system is set up. Beginning with a new application in 2004, specific features include quality control measures, such as digital sign-off procedures and screenshots of all main websites. So, if at a later point, someone would ask if the latest version of the website had been reviewed, it would be easy to verify that. In addition to the survey questions, the tool also included, among other things, blank fields for comments, access to a survey glossary, and the ability to change or add URLs.

4.1.2 Execution

Since it is currently not feasible to capture real time changes for 192 Member States, a fair way of assessment is to establish firm start and end dates. As such, survey execution is conducted over a specific period of time (the "survey window"), currently 75 days, in order to capture development at a particular moment in time.

The research team follows a citizen-centric approach in their evaluation of the survey questionnaire, essentially trying to mimic average citizen user behavior. This is currently fundamental to the survey because it means that answers are generally based on whether the relevant feature(s) can be found as opposed to whether they exist. As the numbers of national websites grow and their sophistication improves, this becomes increasingly important. While it is possible, although implausible, to spend hours browsing a government website meticulously for all available content and features, this approach misses the point that for information and services to be usable, they must be readily accessible by the intended beneficiaries. No citizen would, for example, spend a full day looking for a service that could be accomplished quicker over the phone, or in person. The current approach of the survey methodology, therefore, is in essence a measurement of e-government effectiveness, as opposed to strict supply. In theory, a feature may exist, but unless it is easily accessible, it won't be scored.

It seems researchers tend to spend more time on a given website to look for features than the average citizen would. The actual time spent by someone will vary widely depending on, *inter alia*, the, level of development and design (or "user-friendliness"). As a rule of thumb, however, a researcher will typically review one or two countries per day.

Consistency is paramount. Once a researcher has completed the survey questionnaire for the national portal and the five ministries, their assessment is validated by a senior researcher and a number of countries are also selected at random for a full reassessment. As a result, each website is reviewed by at least two people. Additional quality control is undertaken by comparing indicators and trends with prior years. For example, did an indicator really "disappear" from the website – another check would be made to verify this. Once all Member States have been assessed, a fourth review would be made based on outliers. For example, did the Ministry of Finance for country XYZ really improve 25 points this year – the result would be validated again.

4.2 Comments on existing survey methodology

The web measure methodology described in the most recent report contains important details about the survey process (UN 2010). As they combine to reflect the overall approach, each sub header from the report is commented on in turn.

4.2.1 Identification of the national website

When more than one appropriate site is found, a primary site is scored for all basic elements while services on associated sites and portals are taken into account as long as a clear link is provided. For example, there may be an official national portal containing information but also a portal containing services or the national portal may inform users that getting a driver license is a state topic and provide a link to that site.

The system works well and should continue. It also reflects the UN approach of putting users first. It doesn't matter who is offering the service on the back-end as long as one can easily find the service through the national portal or gateway.

4.2.2 Identification of ministerial websites

Similarly to the national site approach, as long as associated sites (e.g. portals) are clearly linked to, or integrated with the main ministry site, the features are included in the assessment.

4.2.3 Extension of the survey window

In 2003, 2004 and 2005, the survey window was 60 days. In 2008 it was 30 days and in 2010 it was 75 days.

While a shorter timeframe is preferable, of course, as this is a "snapshot" in time, quality should supersede speed. As such, an independent assessment should take place to determine the optimal survey window based on experience.

Also, the specific date(s) of the survey window needs to be made publicly available retroactively, i.e. published in the report, in order to improve transparency, avoid questions, and counteract any perception of bias.

4.2.4 Enhanced citizen-centric approach

As discussed in section 4.1.2, researchers take a citizen perspective. If they cannot easily locate an indicator, then it is not scored. Enforcement of this notion was apparently increased in 2010, according to the report.

The current approach works well because it mimics citizen behaviour without promising to readers that every feature has been confirmed as available or missing. Country X may claim to have indicator Y buried deep down in the web, but if the researcher could not find it, a citizen user probably would not either.

The primary limitation of this approach, however, is to properly explain it to an outside audience. While the method in itself is clear, the amount of time spent looking for something or the extent to which a researcher will go, is not. Since the approach is fundamental to the entire web measure, it is recommended that the methodology section in this regard is strengthened and more details provided. For example, future assessments may make a note of the exact time a person spent reviewing each site, the overall average, and whether they are a native of the country or not.

4.2.5 Identification of sites for review

Section 6.2.2 contains ideas on how to improve the URL submission process of the Member States, an important endeavor in ensuring all appropriate sites are captured.

4.2.6 Greater scrutiny of sites

Greater scrutiny is welcome, though it would appear to contradict, at least in theory, with the enhanced citizen-centric approach described in 4.2.5, above. The point remains the same: greater transparency is needed in this regard.

4.2.7 Emphasis on interactive, transactional and integrated services

In an effort to promote inclusion and narrow the digital divide, the most recent survey gives additional points for participatory features and integrated services to countries with a higher Internet penetration rate.

This introduces a measure of subjectivity to an otherwise objective online scoring system. While there is no denial of the importance of participatory features and integrated services, it doesn't mean that they should receive preference over important usability features, such as help functions or search tools.

For this reason, it is suggested that the web measure reverts back to an objective available/unavailable (1 or 0) scoring system. Promoting inclusion and narrowing the digital divide can instead be done by increasing the importance of the Internet penetration rate in the telecommunications index (see section 3.2.1).

4.2.8 International research team

The survey team utilizes an online management tool, which has been the case since 2003, and this practice should continue while attempting to extend the amount of information captured. For example, only the binary (0 or 1) scores were captured in 2003; in 2004, screenshots were added; in 2005 a dashboard was created.

The team has always been international; the assessment used to take place in Los Angeles, United States. However, it now appears that researchers are located across the world. This would change the recruitment, training, and verification processes.

4.2.9 Improved quality assurance

Good quality control is achieved, it was discovered during past surveys, by having a researcher evaluate a website and having a senior researcher review the entire site again (independently of the first researcher). If an indicator could not be verified during the second review, the original researcher was asked to provide evidence, or the indicator scoring was changed accordingly. As described in section 4.1.2, additional quality control is also made by comparisons with prior years and trends. Quality control is obviously paramount; suggestions for enhancements are always welcome in this area.

4.3 Limitations

In order to keep the EGM discussion realistic, it is important to note that the UN endeavor faces certain constraints in terms of resources. Progress is not made by proposing massive undertakings or introducing a radical new framework. The recommendations provided here take these factors into account.

4.4 Alternatives

The present survey implementation process may not be optimal but it works well. While refinements continue to be made and enhancements are always sought, the general structure has not changed since inception, nor does it need to. Any suggested alternatives should supplement the current process rather than replace it. This subsection provides an overview of viable alternatives for further discussion.

4.4.1 Automation

Automating part(s) of the survey may be preferable. On the one hand, technology assessments can jeopardize quality consistency, though careful testing should be able to overcome this. On the other hand, it can save time and increase objectivity. The present survey questionnaire contains only one automated test, namely that of the W3C's Web Content Accessibility Guidelines Priority 1. An additional suggestion is made in section 5.1.1 to use Netcraft to measure server uptime, an important part of accessibility. It is further suggested that the questionnaire is evaluated to assess what other questions can be automated.

4.4.2 Desk research

Desk research is currently only conducted to find the appropriate website URLs and to see where they rank using common search tools. But the practice might be considered for wider use, e.g. assessing who provides links to government websites, whether the government uses many communication channels and the visibility of its efforts, such as offline promotions. Some suggestions are made in section 5.1.1 but more should be considered.

4.4.3 Mobile assessment

As noted in several initiatives in section 2, mobile phones are increasingly important to e-government development around the world. In developed countries, they may enhance service or offer excluded groups with another channel for communication; in developing countries, they may provide first time access.

The survey already captures m-government features; additional suggestions are provided here to extend the scope of measurement. For example, section 5.2.1 asks if the government portal displays correctly on a mobile device. Such suggestion is purposely included because it necessitates that part(s) of the survey be conducted via a mobile phone.

It seems people are in agreement that m-government is a good thing. The biggest promotion for mobile access would be to actually use it for assessing certain indicators.

4.4.4 Supply (availability) and demand (usage)

The strength of the UN measurement lays in its supply-side analysis, which entails quantitatively assessing websites through content analysis, a common assessment when

examining trends and patterns. Such approach looks at how governments are developing the availability of e-government.

With steady growth in availability of services, focus is increasingly shifting to the demand-side of the equation (see sections 1.4 and 2.1). Such approach looks at whether, and how, constituents and businesses use e-government.

Suggestions that the UN should venture beyond supply-side assessment to include a demand-side approach occur with increasing frequency. For example, the 2008 overview paper considered the possibility of gathering usage statistics, though the actual process of collection was acknowledged to be unfeasible. Clearly, the gathering of actual take-up across all Member States would be the optimal solution and something the UN should work towards; however, it is assumed here that it is still not viable.

Usage is a complex area to measure (section 2.1 provides examples of why). While it may not be possible to quantify at present, it can be encouraged. It is recommended that overall access figures in the telecommunications index are weighed more heavily than other indicators in that index (see section 3.2.1). Further, if an assessment of take-up is desired, the survey implementation methodology must also extend beyond the online component. The ideal option in this regard would be for Member States to provide access to usage statistics, as suggested by the 2008 overview paper. Should that still not be feasible, however, additional ssuggestions for discussion in this regard include:

a) Use of proxy indicators, such as taking the total online population for a country and assume e-government usage based on available figures in nearby, or similar, countries, to encourage actual reporting;
b) Get analysts in each Member State to qualitatively assess adoption propensity and usage;
c) Assess online and offline promotions of e-government to gain an understanding of government efforts in stimulating usage; and,
d) Work with the UN missions to develop a plan for gathering this information moving forward.

Take-up is also a function of e-inclusiveness, including training initiatives. It is therefore important to assess government efforts and programs for training in addition to actual usage figures. This, again, requires the active cooperation of Member States, though similar alternatives as those presented above (items a through d) should apply in this instance as well.

4.4.5 Size of economy, and other country classifications

The UN has indicated a desire to assign different benchmarks for different groups of countries according to country classifications. Specifically, in 2012, a distinction may be made between big and small countries.

Analogous to the suggestion at hand, it has been shown that large cities, on average, have better e-government than small ones because systems implementation tends to have a roughly fixed cost, decreasing the cost per constituent (Reece and Andreasson 2009). Yet, no other comparable international survey provides different benchmarks according to country classifications; however, that in itself does not mean the UN should not do it.

Classifications can be helpful: the current survey provides data based on regions and a broad overview according to World Bank income classifications, both of which are useful to countries when comparing their implementation to peers. Such classification efforts should increase. For example, it might be helpful to a small country to compare its e-government development to other small countries as opposed to larger regional neighbors. Canada's e-government budget, for example, may be more similar to that of Australia than to the United States.

While additional classifications are recommended on their own for comparison purposes, it does not mean that benchmarks should be different for various countries or that it should affect scoring. Such manipulation may raise perceptions of bias and distort the measurement of e-government development.

4.5 Guidelines for researchers

It is understood that the UN would like to publish the guidelines for researchers as an annex to the 2012 e-government survey. It is not possible to comment on them here as they will be revised according to the outcome of the EGM; however, it is worth briefly reflecting on the greater transparency.

The 2001 benchmarking study included the entire survey questionnaire as an annex. The 2003 survey did not; instead an explanation of the methodology was included (UN 2003, pages 232-235). Subsequent reports followed this practice because it was perceived that enough transparency about the process was provided while eliminating the possibility that some countries might try to "game" the survey, i.e. to focus implementation on the specific indicators captured.

The survey should serve as an assessment of trends in e-government, not as a guide on what features to implement. The purpose remains to "inform and improve the understanding of policy makers' choices to shape their e-government programs" (UN 2004 report, page 14). Disclosing the guidelines for researchers (or the survey questionnaire) and providing more detail around the process will help improve credibility and transparency; it will hopefully result in useful feedback as well. Yet, caution is warranted with regard to providing specifics on scoring.

4.6 Summary recommendation(s)

Given the UN's desire to move away from surveying the ministries and the reasoning provided in section 3.4.1, it is necessary to – once again – consolidate the national site and ministry survey questionnaires. This is an almost theoretical recommendation as the two questionnaires correspond to each other anyway, but it is an important step in practice because it allows us to focus on a single document. As such, specific comments on the 2010 survey appear at the end of this section in a consolidated fashion.

In addition, in order to enhance data quality and improve the overall survey process for future surveys, the following specific steps are recommended based on the review above:

a) Strengthen the notion of a core team where researchers are increasingly dedicated and better trained (section 4.1.1);
b) Continue to improve the online tool (section 4.1.1) with the goal of opening it up to the Member States and the public;
c) Retain the overarching approach (sections 4.2.1 and 4.2.2);
d) Review all sites in the official langue(s) of the country (section 4.2.3);
e) Make the specific date(s) of the survey window publicly available (section 4.2.4);
f) Formalize processes and improve the methodology section in the reports in order to avoid misconceptions (section 4.2.5);
g) Return to an objective scoring system (section 4.2.8);
h) Consider viable alternative approaches to enhance the survey (section 4.4); and,
i) Create more specific guidelines for researchers and make them publicly available to improve transparency and provide an opportunity for feedback (section 4.5).

This list is not meant to be exhaustive; it is intended as a starting point for discussion and attempts to highlight preferable enhancements. Section 6.2.1 also suggests the establishment of an external advisory board to monitor progress and provide ongoing advice.

5. Indicator development for 2012

Quality is more important than quantity. Ninety indicators will probably capture broad trends almost as well, if not as well, as 100 indicators. Adding a single indicator to each website also means that a researcher may have to look for that indicator six times per country. If one indicator takes one minute to locate, that is six minutes of time. Multiply by 192 Member States, and the addition of a single indicator adds 1,152 minutes to the survey process, or about 19 hours. This does not take into account, of course, a second review, or the fact that translators are needed for a lot of countries.

But the survey questionnaire must evolve to reflect constant development. In 2010, for example, 25 questions were added to the survey instrument, 29 questions were modified and 16 questions were removed (UN 2010).

This section presents suggested indicator additions by initiative while at the end of this section there are suggested modifications and another section contains all new proposed questions for possible inclusion into the 2012 survey questionnaire in one place (to be finalized based on the EGM discussion); another section provides the proposed e-environment index. In this undertaking, assumptions include:

- Website supply side analysis (the online service index) remains the primary method of assessment.

- Both dimensions and stages of e-government development, as currently used by the UN, are sufficiently developed. As such, only minor refinements are suggested (by stage); in total. A section at the end of this section proposes the deletion of 13 questions at the national site level and 10 at the ministry level; a total of 22 modifications are proposed.

- Questions deleted from the ministry level were made in accordance with a proposition that the national portal is increasingly important while ministries will continue to provide information and serve as a guide to services. In order to track trends, however, most services will still be assessed, as proposed in section 3.4.1.

- It is acknowledged that the existing survey contains questions relevant to the initiatives; however, they were not classified as such because the emphasis here is on developing new indicators.

- New indicators draw on the six initiatives described in sections 2.1 through 2.6. They are presented in turn according to the definitions presented earlier. While they are categorized here, it is important to note that one indicator can be reflective of more than one initiative.

- Additional or revised indicators need to be measurable in that they can be objectively quantified in a survey question as either present on a website (1) or non-existent (0).

- Modifications to existing, or the addition of new, indicators are made for EGM discussion purposes only. As this is meant to be a conversation starter, there are intentionally too many questions suggested here for inclusion in the survey. Similarly, once agreement is reached on which indicators to propose for 2012, actual verbiage will be refined. Further, any overlap with existing questions is accidental and will be addressed during finalization.

- During the EGM we will review each initiative in turn, in part using some suggested indicators as starting points. In the end, there will be a review of the existing questionnaire together with any comments as a group. The result of these activities will be the proposed 2012 survey questionnaire.

- Each initiative described below first provides a brief overview and a selection of items found useful by browsing actual websites. Such approach not only confirms the feasibility of proposed indicators for assessment but also identifies new practices, prior to suggesting questions. But not all suggested indicators were found in this way, or pre-confirmed, as this would unnecessarily limit the discussion.

5.1 Initiative A: User take-up and training

As noted by the background review in section 2.1, most measures of the initiative will be served by proxy indicators, i.e. they will be indicative of government's interest in usage and training rather than necessarily providing a measure of take-up per se.

It starts with the user experience: if a site is unavailable, it might put off users and lower the rate of return. Combined with the suggestion in 4.4.1 that automation should be increased, a suggestion is made for measuring the national server uptime using a tool such as Netcraft.[8]

Training can be measured in two ways. One can either look for government notices on actual workshops, which are provided by a broad range of countries as varied as Austria and Kenya.[9] Or one can look for website FAQs or help desks that provide assistance specific to a service, such as the one provided on the American forms.gov portal mentioned in section 2.1.[10]

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[8] http://www.netcraft.com
[9] Austria: http://oesterreich.gv.at/site/6567/default.aspx
Kenya: http://www.e-government.go.ke/index.php?option=com_content&view=article&id=129:e-government-steps-up-training-in-2010&catid=1:latest-news
[10] http://forms.gov/bgfPortal/nav.do;jsessionid=12136DC0B7BDE2275F11A08DF2FA3E93?oa=faq

Usage can be stimulated by government promotional efforts online, especially using Web 2.0 tools such as Facebook and Youtube to increase awareness. Desk research initiatives mentioned in 4.4.2 can provide the basis for an online search for whether the government is undertaking offline activities to promote usage. One example is the TV advertisements run by direct.gov.uk, which incidentally have also made their way onto Youtube.[11]

5.2 Initiative B: Accessibility of Internet or mobile connectivity to all

While accessibility is a broad topic that overlaps with initiatives C (inclusion) and D (multi-channel service provision), the primary focus here is on enhancing Internet penetration to all specifically. There appear to be three potential avenues for doing this.

First, one can assess whether the government, or one of its agencies, has showed an interest in the topic of Internet penetration by either publishing statistics or providing a statement regarding policy in this regard.

Second, mobile phones have created a large number of potential users. It is important, therefore, to assess whether government sites display correctly on them and whether separate m-government sites are developed, such as the mobile portal in the U.S.[12]

The third suggestion essentially combines the previous two as it seeks to assess whether the government is promoting free Internet access, either at government buildings or through various hotspots. A good example in this area is the Singaporean Wireless@SG initiative.[13]

5.3 Initiative C: Accessibility of services to vulnerable groups

To improve accessibility to vulnerable groups means taking a proactive and user centric approach to design and development. In practice, a website should have specifically targeted information to groups such as people with disabilities, young, seniors, migrants and women.

The people's section on Australia's national portal offers a good example of personalization.[14] One can select from 20 specific audience groups, including the vulnerable ones of interest here. While the site provides each group with specific needs, every link is also accessible through alternative methods, such as using a topic approach.

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[11] Simply Google "Youtube direct.gov.uk" for examples.
[12] http://m.usa.gov/
[13] http://www.infocomm123.sg/wireless_at_sg
[14] http://australia.gov.au/people

Targeted information or services to vulnerable groups is important but not always enough. Important design features to look for on a website include the ability to change font size, font color, background color, and type of font. The Swedish government has a designated page where users can change settings.[15] But the country's effort in e-inclusion and accessibility of services to vulnerable groups goes one step beyond such features. The site also offers a sign language video as well as a simplified language version, both limited in scope but potentially useful to disadvantaged groups.[16]

5.4 Initiative D: Multi-channel service provision

Online multi-channel delivery should inform citizens of offline ways of conducting a task. Australia's portal offers several examples, including the filing of a complaint where the website explains that it can be received via email, fax, post or hand delivery, and goes on to provide all the necessary details.[17]

To some extent, multi-channel delivery in an online environment should go beyond a website and provide several avenues to a service. In this instance, Web 2.0 tools can be an important channel for certain users. The bottom of America's USA.gov portal provides a list of how to engage with government across a variety of such tools.[18]

In an effort to further address this initiative as well as the one following (whole of government), it is suggested that the survey is broadened and the depth of information extended. For example, users would find it helpful if the website contained an interactive map from which they could locate the nearest government office providing the service they need.[19]

5.5 Initiative E: Whole of government (WOG) and one-stop service provision

Assessing whole of government and one-stop service using a web measure approach largely necessitates the use of proxy indicators, i.e. they will be indicative of trends in implementation rather than necessarily providing a measure of back-end operational efficiency per se

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[15] http://regeringen.se/sb/d/6910
[16] Sign language video: http://regeringen.se/sb/d/8962
Simplified language version: http://regeringen.se/sb/d/2506
[17] http://australia.gov.au/service/privacy-complaint-to-the-office-of-the-australian-information-commissioner
[18] http://www.usa.gov
[19] An example of this is provided by Australia: http://australia.gov.au/services/government-shopfront-locator

While it may only offer insight into one-half of the equation, understanding the user perspective is fundamental, especially as local services are improving and increasingly integrated into national portals. The homepage of the Republic of Korea's national portal, for example, provides clear links to both central and local government, as well as non-ministerial agencies.[20] As many of the proposed indicators illustrate, the trend is deep. The Canadian portal allows users to find services "close to your home" through postal code, city or province/territory.[21] The Australian portal, meanwhile, provides an advanced search feature that can filter results by, *inter alia*, portal results, government website results and local government website results.[22]

5.6 Initiative F: Assessing the environment

This initiative is different from the others because no existing indicators specifically address e-environment while the proposed creation of a separate index necessitates a certain number of questions (see section 2.6). In this endeavour, it seems reasonable that the e-environment index should have roughly the same number of questions as the ministries, about 20 in the proposed 2012 version. The composition, meanwhile, is suggested as follows:

a) *Website basics*: Ability to locate government information on the environment and the tools provided to assist in this effort.
b) *E-environment information*: Static, or one-way, information on a range of environmental issues.
c) *E-environment services*: Interactive, or two-way, information or services related to the environment and connectedness.

It is, of course, possible to arrange questions according to any number of other approaches or stages (see section 3.4.2 for a discussion), including the method employed by the online service and e-participation indices. However, as a stand-alone index it doesn't need to map to any of the others and a simple, easily comprehensible, approach seems most appropriate as the target audience is going to be people familiar with sustainability, not e-government.

The primary challenge in the creation of the e-environment index is not what is available but rather what to prioritize. Below is a selection of items found useful by browsing actual websites, followed by the proposed questions composing the index.

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[20] http://www.korea.go.kr/new_eng/main/index.do
[21] http://www.servicecanada.gc.ca/cgi-bin/hr-search.cgi?app=hme&ln=eng
[22] Select "search" and then "advanced search" on the portal to try: http://australia.gov.au

6. Towards the future

From a tactical perspective, the UN web measure should remain comprehensive and allow for backwards comparability while also evolving with time. Partly due to constant technological innovation, e-government will continue to progress, as should the survey instrument.. What follows are strategic recommendations for the consideration of the United Nations.

6.1 Goals of the Expert Group Meeting (EGM)

It is suggested that one or more people assume responsibility for tracking progress: from the goals set at the meeting and the recommendations to come out of it to the finalization of documents at the UN and the final report. This will help to determine the value of the biennial EGMs and provide accountability to experts, consultants, and staff alike.

6.2 Strategic recommendations

The EGM serves as an important checkpoint for the UN survey. Previous practices are objectively reviewed and new trends are debated. But the EGM is a tactical effort to a strategic program. Therefore, it is also worth considering key issues beyond the EGM.

6.2.1 Establishing an ongoing advisory board

Meetings, such as the one that these comments are prepared for, often lack continuity in terms of people's time and commitment. It is assumed they are quite costly too. Lack of oversight beyond the meeting can also mean that recommendations are not appropriately acted on and changes do not materialize. To resolve this over the long term (as opposed to the quick fix proposed in 6.1, above), it is suggested that a formal advisory board is established to provide ongoing advice and oversight.

The advisory board would lend additional credibility to the survey process and establish accountability. For example, the board could be broken into subgroups where one would be tasked specifically with tracking recommendations, another with preparing best practices for future meetings while a third would develop the survey instrument, and so on. To save money and to optimize efficiency – especially given the topic at hand – such advisory board can be managed online, at a website or over email. A system should be set up where members are selected for a fixed period of time in order to provide consistency to the process, but also to allow for new members.

6.2.2 Engaging the Member States

Leading up to the 2010 survey, the UN asked all Member States to supply the URLs of their national and ministerial sites. Only approximately 30% of Member States responded, according to the report. The 192 UN Member States are the survey's most important stakeholders. That only about one-third would respond to the most basic e-government inquiry is indicative that more needs to be done in engaging them.

It is recognized that the Missions of Member States are likely to be deluged with information; however, it should be a strategic goal to raise the current participation level. The UN certainly would not be alone in such endeavor. In its most recent benchmarking study, the EC report states that the active participation of their Member States is "[f]undamental to the measurement process" (CapGemini 2009). One idea to borrow from the EC in this regard is to ask Member States not only for the mundane URLs but also encourage them to put forth their own best practices for possible inclusion in the report.

The UN can also provide the URLs to be surveyed and ask the Member States to verify them as opposed to having to write them in. While hopefully such effort would increase the response rate, a non-response would also imply tacit endorsement.

Another idea would be for the UN to send an email to country representatives where a response would garner a point in the survey – it is, after all, e-government.

6.2.3 Leveraging the United Nations E-Government Development Knowledge Base (UNKB)

The UN E-Government Development Knowledge Base (hereinafter referred to as the "UNKB") serves as the virtual home of the program.

At the last EGM, there were several issues with the site, including the fact that it was rarely updated; however, this seems to have been addressed. Still, the UNKB holds much more potential. As of this writing, only about 18 separate websites link to the UNKB.[23]

In order to address this, as has been noted in the past, the website should be refreshed, expanded, and marketed as the de facto home of the UN program in this regard generally, and as the source for the most comprehensive international website supply side analysis specifically. Such branding would enhance the visibility of the overall program and take it to the next level. To do so, it would be important to update the site frequently and – since e-participation is an important aspect of the survey government and/or user participation could also introduced on the site itself.

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[23] Evaluated using the crude method offered by Google: "link:http://www.unpan.org/egovkb"

Specifically, a registration platform would enable the creation of open and/or authorized networks to be created. They could all contribute to international e-government development efforts, assist the UN, and learn from each other. For example, each Member State could be invited to participate. The UNKB could also serve as the home for the ongoing advisory board, described in section 6.2.1 above. It could also establish a network of e-government experts around the world who could contribute to the knowledgebase. Members of the public could be invited too. At a minimum, registration would allow for information to be pushed out to users. The possibilities seem endless for enhancing the UNKB but one thing is certain: it is vital to the future of the brand.

6.2.4 Creating additional accountability through checks and balances

A system needs to be established where the survey implementation team is held accountable by a third-party, such as the board suggested above, which in turn will report to the UN, offering ongoing advice. Those who serve on the advisory board should not be part of the survey implementation process. But they should monitor the endeavor to ensure consistency and quality.

6.3 Concluding remarks

Given this expert's overall preference to continue the mission of providing a broad overview that allows for comparability, a cautious approach was taken to radical suggestions; however, refinements are needed. The suggestions of other experts and a summary conclusion follow.

IV. Selection of expert comments

1. Introduction

EGM participants read the overview paper and provided their own comments prior to the meeting. This section contains a lightly edited consolidated selection of expert comments.

2. Select comments on methodology

- Need definition of broadband

- Add measure of public server response time

- Mobile substitution is causing fixed line penetration to fall in all countries; mobile broadband 3G, 3.5G, 4G are fast growing in all countries

- Different countries report Internet penetration differently. For example, broadband penetration is traditionally measured by household like fixed lines; however, with the popularity of mobile broadband, household broadband penetration can often be greater than 100%

- Suggest bands instead of absolute percentage for telecoms infrastructure index

- The EGDI Rank, as shown in the Survey 2010, can be defined as "analogical", in the sense that the Member States have a continuous score between 0 and 1. A different approach could be to "group" Member States with "very similar" score and assign them to a "class rating". It sounds as a lifelike description of the real situation, because the difference among scores are probably well beyond the measurement precision.

- Cluster techniques could be useful to figure out if an underlying structure exists in the EGDI ranking.

- A new methodology could be experimented: studying the indexes distribution in order to find the statistical weights that guarantee equal importance to the three indexes in the best way.

- The three indexes should preferably be equally involved in the EGDI: that is the reason why the same statistical weights have been used.

- A check has to be performed "a priori", otherwise more nations could be outliers in future rankings; this check has to be performed again after the TI index has been correctly normalized.

- How do we measure the willingness and capacity of countries to use online and mobile technology in the execution of government functions when the function is performed by wholly or partially private bodies?

- Monitor and measure social media traffic generated by and/or encouraged by governments

- Can we measure citizen initiated efforts that are encouraged by governments?

- There is a strong emphasis on the structure and tools adopted by a website and less emphasis on the outcomes (performance)

- Right to e-governance service (REGS), like the right to information or freedom of speech, is an important aspect

- Weigh the online services index more than the others

- Thoroughly endorse the move to just looking at the national portal but focusing on services wherever they are found, as long as they are easily found from the national portal

3. Select comments on survey implementation

- What about open data and open API's into government websites?

- How about an online training and alignment session for researchers?

- Publish the methodology and its implementation notes to enable others to conduct the survey. Also explore ways to open the development process.

- Publication of questionnaire and survey dates may give a stimulating deadline for improvements.

- Define how to distinguish between findability and existence

- Explore how to find services in a country regardless of level of government.

- Prioritize the use of open source tools that are operated by the UN research team.

- Divide countries in groups and show the winner in each group (economy, size class, etc)

- It would be important to be cognizant of the possibility that further classifications may contribute to a widening of the digital divide.

- While publication of methodology will absolutely improve transparency, it will inevitably be used by governments to determine how to improve their scores, precisely because the survey has gained such prominence as a tool to assist in determining where to invest and do business.

- There is a general problem with the more advanced services that researchers will typically require to log in using a pin or password to determine whether or not a specific question has a yes or no response. Unless dummy facilities are made available, there should probably be instructions to the research team that some evidence on the website should be available that the service or feature exists if it cannot be accessed directly.

- Given the strong move to open government and open data in many more developed countries, there should probably be questions on whether public sector data is made available on the portal (or through a link from the portal) and whether or not the government invites and makes available tools and forums for others to develop services independently or in collaboration with government.

- Similarly, other evidence of collaboration on specific services or features with non-government actors, including civil society organizations and enterprises should be assessed.

- Review in local languages is of utmost importance!

- The survey should and is used to assist countries improve through comparison, not by revealing individual indicators and their scores, but by providing a synoptic report to each country on the main indices of their performance – say by breaking down the online services score into 10-15 main sub-scores which are meaningful for a country to consider how to improve. Such fact sheets might go on the web for all to see, or be provided confidentially to the country. This could be a powerful learning tool and encourage more dialogue and interaction between countries. The valuable data is otherwise being somewhat wasted!

- What about a crowd sourcing component?! An additional quality control input which also encourages dialogue and engagement. Invite, say, a couple of volunteers from each country (e.g. through universities) to do the survey remotely using a sample of indicators which are however representative of the main components. (This would be real local language testing using real users.) This would also help test and pilot indicators as well as some aspects of the

methodology. The reward for the volunteers would be a mention in the acknowledgements. Little cost to the UN, apart from organization and management, but a huge boost to awareness, publicity, goodwill, etc.

4. Select comments on new indicators

This section was meant to supplement the suggestions provided in the overview paper. While some are general comments with regard to the initiative, most statements could be made into a binary (0 or 1) question. Each initiative was discussed in turn, along with the comments provided for how to measure them through the e-government survey.

4.1 Initiative A: User take-up and training

- How about machine processable interaction, such as the ability to import data from an accounting system?

- Could also check for incitements, such as extended deadline for electronic version like the company tax declaration in Norway

- Measure server uptime using an open source tool

- With regard to help/usability features, does the site provide a proper http header, a language change option, and an on the fly Google translation?

- Seems problematic to award use of specific commercial services.

- Some countries have passed the stage of providing training for the general public. They may have done it 10 years ago and the population is deemed to be savvy enough for them to stop these initiatives. Will they be penalized under the proposed measurement?

- Similarly, user adoption in some countries is high enough so promotional activities are no longer high priority. Will they be penalized for this?

- Identify killer services and availability of reports of user take.

- Availability of usage reports across all service delivery channels namely portal, kiosks, mobile, contact centers etc

- How easy is it to find services, for example look for personalization with mash ups, life cycle segregations, most frequently used services, search based on services etc

- Feature for citizen feedback, content rating, rating of services provided etc
- Prominence of grievance mechanism and multiple channels for citizens to register grievance and follow up.

- Regular updates and availability of archived reports of usage

- Forthcoming capacity building initiatives made available on event calendar

- Promotional measures for new upcoming services etc

- Newsletters to be sent to the registered users on future events / trainings

- Most e-government services are administrative services as these have been prioritized by governments. However, by definition, these are only relevant at most once a year or even more infrequently, and this keeps usage low.

4.2 Initiative B: Accessibility of internet or mobile connectivity to all

- Is there a mobile accessibility statement?

- E-government services can be delivered through old 2G networks without Internet. For example, agriculture prices through SMS

- Measuring actual outcome through case scenarios is more objective than looking for policies. Many government policies are not executed.

- Prominence of government initiatives (reports etc) with regard to Internet / mobile connectivity to all – Citizens, Business, Government etc

- Availability of wide range of services catering to all – Citizens, Business, Visitors etc

- Availability of customer satisfaction survey reports covering all service delivery channels – web portal, mobile, kiosks etc

- Availability of web analytics report

- WAP enabled web portals

- Prominence of mobile apps / mobile services section on portal

- Reports on mobile uptake of the services provided

- Service provisioning through integrated service delivery platform; multiple service delivery channels complementing each other
- Segregation of mobile applications, such as life cycle, user categorization, UN focus areas etc

- Distinguish between universal 'access' as such and making the Internet universally 'available'.

4.3 Initiative C: Accessibility of services to vulnerable groups

- How about assessing "fix my street" or similar tools to report encountered issues?

- Proper use of CSS, and possibly also options on the site to alter the appearance

- Appropriate HTML encoding helpful for people who have tools installed to read aloud, such as most blind, and possibly an option to have the site read aloud from the web page. Useful for immigrants, dyslectics, and illiterates.

- Countries may not choose electronic means to service vulnerable groups and they may be better served through personalized services with e-government as a backend platform.

- Presence of government reports to reach out to women, physically challenged citizens, poor, illiterate, immigrants etc

- Prominence on the web portal of alternative channels like kiosks and customer service centers

- Prominence of assistance provided for using eServices like online help, or leaving offline messages and government responding to them

- Compliance to accessibility standards such as W3C etc

- Features such as font resizing, background color change

- Feature of long texts to be audio enabled. The audio to have feature to pause and play from where stopped.

- Keyboard enablement for major sections on portal

- Audio and video guides for service usage

- Integration with Web 2.0 technologies for eParticipation / eConsultation

- Decisions based on eConsultation highlighted on the site

- Videos in sign language

- Service provisioning through social networking mediums

- In this area specifically, as well as in most other areas, collaboration between government and non-government actors (especially civil society, social entrepreneurs and enterprises), is critical.

- Vulnerable groups can often be better served through other more traditional channels (as stated), but this should and can still be thought of as e-government as ICT will be used to make the back-office more effective. For example, to improve service targeting, response, personalization, etc. This approach to e-government, like the deployment of intermediaries, implies that the end-user her- or himself does not need to use ICT.

4.4 Initiative D: Multi-channel service provision

- Availability of multi-channels should be considered in conjunction with the next section on one-stop service. You can have many e-services operating in silos and each having multiple channels of service provision. This is confusing for businesses and citizens rather than making it more accessible.

- Suggest using case scenarios that entails end-to-end services rather than picking individual services in isolation.

- Suggest the discussion on the proposed indicators be broadened to cover government schools attended by children, as these may not necessarily be the nearest schools.

- Prominence of multi service provisioning through customer service centers, kiosks, mobile and contact center on the web portal

- Availability of live chat feature

- Grievance logging and tracking through all service delivery channels

- Service provisioning on social networking sites

- Prominence of initiatives like "Follow the Minister or Head of Organization" on the web portal or a link to "Follow Health Minister" on Twitter etc

- Suggest measure of both types of services (online and mobile); which services are available on both platforms

- Better to focus on how many channels available for a specific service – not just 'e' but the others as well, whether channels are integrated, etc. – i.e. the focus should be on services rather than government organization

4.5 Initiative E: Whole of government (WOG) and one-stop service provision

- Assessment should be done from the user's point of view, similar to World Bank's Doing Business report. This is done using a realistic case scenario e.g. the number of steps involved in starting a business in different countries, rather than looking for specific functionalities or e-services.

- Assess all prominent linkages from the national portal, including all ministries, national daily newspaper, national stock exchange etc

- Feature to search respective ministry services on national portal

- Is the organizational hierarchy with contact details provided?

- Is there an exhaustive search facility (content + parameters), which could bring data from across all ministries

- Place emphasis on search capability.

- Front-end services which can 'measure' WOG include thematic, persona and life event services, each of which implies integrating service components across more than one ministry or agency.

- Focus on service integration across ministries and agencies, as well as with non-government entities. This would include service packages as themes, personas and life events which demonstrate service and back-office integration

- Open government and open data become increasingly important within and across government but also with non-government actors like civil organizations and enterprises. This should probably be stressed more.

4.6 Initiative F: Assessing the environment

- Possibly some of the existing questions can be related to the environment. An example is providing interactive forms online. This reduces the need for paper, mail, etc. This was already part of the 2008 survey (Test II-15), but not specifically addressed as environmental. This suggests that option B in the overview paper is the most viable.

- Available online data / maps of pollution? (Could also be made available on services like http://www.pachube.com/)

- How about environment accounting – checking goals against real development.

- Check for a national progress page in relation to the MDGs?

- Focus should be on environmental impact of e-government such as adoption of green IT policies rather than assessing the general environmental policies of individual countries.

- This section looks like we are assessing the environmental policies of countries rather than their e-government policies. If we want to include a section on the environment, then a focus on adoption of "Green IT" principles are more appropriate.

- Is there a "being green" website

- Highlight certifications on being green

- Endeavors on "Recycle IT" should be made available

- It may be worthwhile not only talking about 'assessing' the environment but also providing information and tools for citizens and companies to actively reduce their environmental impact. Thus rename this initiative as "assessing and improving the environment", or even simply "sustainable development"

V. Summary EGM outcome

The primary goal of the EGM was to make specific suggestions for new indicators with regard to the six initiatives considered for the 2012 survey and which this expert highlighted in the overview paper as well as in his presentation. In addition to the development of new indicators around the six initiatives, the group also reviewed the existing survey for potential modification to existing indicators. While this expert will prepare the actual proposed 2012 e-government survey questionnaire separately for DPADM to take into consideration in the development for the next report, the quantitative success of the EGM can be summarized as follows:

In addition to the development of new indicators, and the potential modification of existing indicators, the EGM also addressed three key topics: 1) approach to finding information and services; 2) assessing the environment; and, 3) statistical assessment of the methodology. The discussion with regard to each of these topics is reported on, in turn, below.

1. Approach to finding information and services

In the current methodology, researchers evaluate the national portal, or other official homepage, as well as five pre-determined ministries reflective of the MDGs: health, education, social welfare, labour and finance. Recently, however, the UN indicated a desire to move away from surveying the ministries and instead only assess the national portal, or gateway to government services, whether it is the national site or not. It would be a shift from a website-specific approach to a service-specific approach, indicative of the trend that users should not need to know where a service is coming from as long as they can easily access it.

The expert who wrote the overview paper had proposed a compromise approach moving forward: to emphasize a move to the national portal while keeping a minimal assessment of the ministries.

When asked to vote in favour of either the existing approach of national portal plus ministries or the proposed national portal only approach, most experts countered with a third option: the "search approach". The reasoning, according to one expert, is that "citizens use Google to find services". Another participant noted, therefore, that it is the quality of the search feature that matters, not where things are collected per se. A majority of participants supported the "search approach" .

2. Assessing the environment

In light of the UN Conference on Sustainable Development 2012, also known as Rio+20, the UN is considering the addition of an e-environment component to the online service index. Mr. Nikhil Chandavarkar, Chief of Communications and Outreach Branch of the Division for Sustainable Development (DSD), whose division is responsible for organizing the RIO+20, attended the EGM and co-chaired the session on the environment on day two. He pointed out that the topic could be the environment specifically but also sustainable development more broadly.

In terms of the e-government survey, the two primary options facing the experts were whether to integrate questions into the main survey, similar to the e-participation index, or to create an entirely separate module of questions. Based on a review of availability, the expert who prepared the overview paper had proposed the latter. He noted that the primary challenge in the creation of an e-environment index is not what is available but rather what to prioritize.

While everyone agreed on the importance of the topic generally, experts were torn between the two options. Notably, the expert who prepared the overview paer had proposed 20 specific questions to address the e-environment and not a single participant raised any objections to them; rather they added to the list. While a success in terms of quantity, therefore, the discussion illustrates that the issue lies not in the ability to measure but rather to agree on the approach and to which extent to incorporate the topic into the 2012 report.

3. Statistical assessment of the methodology

In conjunction with the EGM, one expert, Mr. Roberto Bellotti, gave a presentation on his statistical assessment of the methodology. His three main points were: a) current issues; b) review of the calculus model; c) from ranking to rating. Each item is elaborated on below.

3.1 Current issues

Mr. Bellotti noted that in the calculation of the 2010 e-government index one of the three indices (the telecommunication infrastructure index) was not normalized as its range was 0 to 0.77 as opposed to a normalized range of 0 to 1. Mr. Bellotti suggested that this issue might have affected the overall ranking and should be addressed in the next survey.

A second issue, according to Mr. Bellotti, is that the numerical values are expressed with four decimals. For example, the human capital index for Finland is 0.9933. Such values are given with a precision that is not reasonable. The reason is that the values seem to have been obtained from a calculus model and are reported independently from the precision of the actual measures or observations. It is far more reasonable to assume that the accuracy is 1%, still a very good precision. This means, for Finland for example, that

the value of the human capital index should be 0.99. Mr. Bellotti suggested that this is a more realistic assessment given the complexity of measurement.

3.2 Review of the calculus model

Mr. Bellotti noted that the e-government index (EGDI) is based on the weighted sum of three different indices, namely the online service index (ONI), the telecommunications infrastructure index (TI) and the human capital index (HCI), according to the following equation:

$$EDGI = 0.34 \ ONI + 0.33 \ TI + 0.33 \ HCI$$

Since each index (ONI, TI and HCI) range from 0 to 1, the EGDI index also ranges in the same interval. The formula is equivalent to the following:

$$EDGI = (ONI + TI + HCI)/3$$

(the difference between 0.33 and 0.34 has been disregarded here, though it needs to be justified in the original model as presented in the first equation above).

But Mr. Bellotti pointed out that the three indices have remarkably different statistical properties. The current weighted average (if the weight is equal to 1/3 is simply the arithmetic mean) does not guarantee that the three indices are equally represented in the model. Specifically, the different statistical behaviour of the constituent indices indicates that "equal weight" does not mean "equal importance" in the current overall index.

In order to make the three indices comparable to each other they have to be standardized by means of a linear transformation. After such transformation, they all have the same mean and the same standard deviation. This would not change the ranking of each index, only the numerical values assigned to the indices. The arithmetic mean would become the "main indicator" whereas the geometrical mean could be an "additional indicator" to classify Member States with the same (or similar) overall scores.

3.3 From ranking to rating

Finally, Mr. Bellotti suggested that it would also be appropriate to group Member States with a similar ranking by using cluster techniques to assign a rating. Such procedure would not change the value of the overall index but can give an additional view of the time evolution of the ranking. It would also allow for direct comparisons among Member States according to a wide variety of features, such as population, gross domestic product, geographical area, etc. For example, Mr. Bellotti explained, each geographical region can be isolated to create five separate rankings using ratings, though the original values are maintained.

3.4 Summary of statistical assessment of the methodology

While the entire EGM group was not present at Mr. Bellotti's presentation, the participants who were endorsed an assessment of his main points, above.

VI. Concluding remarks

Concluding remarks **Mr. Vincenzo Aquaro, Chief of e-Government Branch**

Dear Colleagues,

After two days' discussion, I think this expert group meeting has achieved its expected outcome and we have reached great consensus on the proposed six initiatives, though some issues are pending for further deliberation.

On the first day, we discussed about the issues on user take-up and training, accessibility of internet or mobile connectivity to all, and accessibility of services to vulnerable groups.

Regarding user take-up and training, many governments have adopted initiatives to increase user take-up to address the 'disconnect' issue. The issue here is the measurement of user take-up and how to verify such usage statistics if provided from government sources. Nevertheless, one expert mentioned that due to lack of comparability of user take-up statistics, we cannot rely on government statistics. As to the training, it was suggested that such training should be need-based and the training module could be either online or off-line with more emphasis being placed on online promotion.

With regard to accessibility issues, there exists some overlapping between accessibility to all and accessibility of services to vulnerable groups. There has been some clarification about the internet/mobile penetration and accessibility. Some discussion was centered on the mobile-enabled accessibility of the government website. Some discussion was conducted on the concept of the vulnerable groups and on it is proposed that we had better follow the UN resolution on the standard definition. And, one expert has proposed the scheme for automated measurement/evaluation of accessibility.

On the second day, we discussed about the multi-channel service provision, Whole-of-Government and one-stop service provision, and assessing the environment.

Regarding the multi-channel service provision, it was agreed that the needs of different groups should be recognized and the service delivery channel should be tailored to these varied needs. One expert mentioned that Open Government Data is one powerful channel, though not applicable for all countries, to provide valuable service to citizens, especially opening government budgets. It was discussed that government services could be also delivered through the third party/intermediaries. We need to map out what is the current status and capture the future directions of multi-channel service provision.

As to the Whole-of-Government and one-stop service provision, there has been some heated discussion on whether we should move from the traditional module --- 1 national portal plus 5 ministerial websites --- to one single portal, and the seemingly agreed transitional approach is to scale back the scoring weights of ministerial websites with a more extensive category of service being assessed. It was agreed that the back office coordination --- integration of services at the back-end, interoperability, the API, and the personalization are critical for WOG and one-stop service provision.

With regard to assessing the environment, the Whole-of-Government approach is also useful in addressing environment issues and we need to identify from which perspectives e-government could contribute to the improvement of government --- namely, information services, and any transaction tools available on government website that promote the sustainability.

Subsequent to the discussion on the six initiatives, we also conducted a comprehensive revision of the current survey questionnaire and proposed some new indicators.

I thank you all for your active participation in all sessions and I am sure your contribution will greatly contribute to the improvement of UN E-Government Survey. Due to the very limited time, we could not address many issues in more depth, so please send us your further suggestions and advice via email to us.

In the meantime, I would like to indicate that this EGM, unfortunately, only focused on the prescribed tasks and your talents are far from being fully tapped. So, I really hope that this group of experts could continue to perform the similar functions of a Think Tank and I encourage all of you to submit more suggestions and proposals as your contributions could really help us shape up the direction going beyond the 2012 UN E-Government Survey. As the e-government is progressing at a very rapid pace, your consistent incoming suggestions and advice, or even some radical mind-setting would shed light on the restructuring and improvement of the e-government survey.

I would also like to take this occasion to thank Mr. Nikhil Chandavarkar for his kind support and as he mentioned this morning, I hope that, this exercise could become the exemplary inter-divisional cooperation. I am sure that the findings from UN E-Government Survey on assessing the environment could also contribute significantly to the Rio+20 Conference.

Finally, on behalf of Ms. Haiyan Qian, I thank you all for participating in this important meeting.

Keep in touch and I wish you all a safe trip back.
Thank you!

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Annex 3: EGM Agenda

**UNITED NATIONS EXPERT GROUP MEETING
2012 UN E-Government Survey: Towards a More Citizen-Centric
Approach**

New York, USA, 6 - 7 December 2010

AGENDA

MONDAY, 6 DECEMBER 2010

09:30 – 09:45 **WELCOME AND INTRODUCTION**
Mr. Vincenzo Aquaro
Chief, e-Government Branch, DPADM/UNDESA

09:45 – 10:00 **OPENING REMARKS**
Ms. Haiyan Qian
Director, DPADM/UNDESA
(Statement addressed by Mr. Vincenzo Aquaro)

10:00 – 10:30 **PRESENTATION OF THE OVERVIEW PAPER**
Presenter: Mr. Kim Andreasson, DAKA Advisory &
Research
DPADM Consultant

10:30 – 11:00 **INTERACTIVE DISCUSSION ON THE OVERVIEW PAPER
AND EXPERT PROPOSALS**
Facilitators: Mr. Koon Tian Ooh, Koon and
Associates
Mr. Vincenzo Aquaro, DPADM

11:00 – 11:20 **Coffee Break**

11:20 – 13:00 **CONTINUATION OF INTERACTIVE DISCUSSION ON
THE OVERVIEW PAPER AND EXPERT PROPOSALS**

13:00 – 14:30 **Lunch Break**

14:30 – 15:30	**SESSION I: USER TAKE-UP AND TRAINING** Facilitators: *Mr. Koon Tian Ooh, Koon and Associates* *Mr. Richard Kerby, DPADM* *Discussion will focus on how to use the Survey to assess whether governments provide citizen-centric services. More specifically, how to assess/measure user take-up of e-Government services (supported by usage statistics).*

15:30 – 15:50	**Coffee Break**

15:50 – 16:50	**SESSION II: ACCESSIBILITY OF INTERNET OR MOBILE CONNECTIVITY TO ALL** Facilitators: *Mr. Abir Qasem, Bridgewater College* *Mr. Vincenzo Aquaro, DPADM* *Discussion will focus on how the Survey can score the status of governments in dealing with bridging such technical digital divide issues to ensure that their services online can be accessed by all the citizens that they serve.*

16:50 – 17:50	**SESSION III: ACCESSIBILITY OF SERVICES TO VULNERABLE GROUPS** Facilitators: *Mr. Mikael Snaprud, European Internet Accessibility Observatory Project* *Mr. Michael Mimicopoulos, DPADM* *Discussion will focus on how the methodology of the Survey can address the inclusiveness/equity issues, especially of vulnerable groups. Are customized services provided for the poor, illiterate, the aged, the young, the blind, women and immigrants? What features can be assessed on government portals and whether e-services are customized to their needs.*

TUESDAY, 7 DECEMBER 2010

09:30 – 10:30   **SESSION IV: MULTI-CHANNEL SERVICE PROVISION**
             Facilitators: Ms. Tanya Gupta, World Bank
                         Mr. Patrick Spearing, DPADM

Discussion will focus on how citizens want multiple channels into public services—online, telephone, over the counter, mobile, kiosks, and even podcasts. Mobile government is rapidly gaining in popularity. The issue here is whether governments provide services through different channels, e.g. whether a citizen can pay taxes or a parking ticket via his/her mobile as well as via the internet. Broadband issues are important in such provision of service. It is hoped that the Survey will shed light on how to assess such service provision.

10: 30 –11:30   **SESSION V: Whole-of-Government (WOG) and ONE-STOP SERVICE PROVISION**

             Facilitators: Mr. David Eaves, Eaves.ca
                         Mr. Vincenzo Aquaro, DPADM

Discussion will focus on whether governments are creating one-stop service organizations where citizens can access a wide range of services and transactions.
Ideally governments would provide integrated services which would entail back-end coordination and interoperability issues. How do we practically assess back-end integration by reviewing the upfront services? How do we check whether governments are integrated horizontally and vertically or in other words interconnected?

11:30 – 11:50   **Coffee Break**

11:50 – 12:50   **SESSION VI: ASSESSING THE ENVIRONMENT**
             Facilitators: Mr. Jeremy Millard,
                         Danish Technology Institute
                         Mr. Michael Mimicopoulos, DPADM

Discussion will focus on assessing whether governments provide environment friendly/related information and services through internet and mobile devices. The proposed question is: how to incorporate five to seven indicators on environmental issues into the questionnaire --- whether we should integrate the environment-related questions into the questionnaire or conduct a separate evaluation on environment-related information or service provision by governments.

12:50 – 14:30	**Lunch Break**

14:30 – 15:30   **REVIEW AND FINALIZATION OF THE CURRENT SURVEY QUESTIONNAIRE AND OF PROPOSED INDICATORS**
Facilitators: Mr. Kim Andreasson
                Managing Director, DAKA Advisory & Research
                Mr. Vincenzo Aquaro, DPADM

15:30 – 15:50   **Coffee Break**

15:50 – 17:30   **CONTINUATION OF REVIEW AND FINALIZATION OF THE CURRENT SURVEY QUESTIONNAIRE AND OF PROPOSED INDICATORS**

17:30 – 17:45   **CLOSING REMARKS**
Ms. Haiyan Qian
Director, DPADM/UNDESA
Mr. Vincenzo Aquaro
Chief, e-Government Branch, DPADM/UNDESA

Annex 4: Opening remarks by the DPADM Director

United Nations Expert Group
UN E-government Survey 2012: Towards a more citizen-centric approach
6-7 December 2010
New York

U N I T E D N A T I O N S

DIVISION FOR PUBLIC ADMINISTRATION AND DEVELOPMENT MANAGEMENT
(DPADM)

DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS (DESA)

Opening remarks

Ms. Haiyan Qian, Director, DPADM/UNDESA

Distinguished experts and dear colleagues,

I am very pleased to welcome you to the United Nations Department of Economic and Social Affairs (UNDESA) Expert Group Meeting, "UN E-government Survey 2012: Towards a more citizen-centric approach".

Please allow me to take this occasion to report to you that UN E-Government Survey 2010 has received great acknowledgment from Member States, academia, non-government organizations, such as Economist and World Economic Forum, and the media has cast increasing attention on our e-government rankings thanks to the relevance of the covered issues and the improvement of survey data quality. Investors have even started to refer to our e-

government survey rankings as benchmark for evaluating investment conditions in host countries. Many experts including some of you present today, who attended our EGM in 2008 as well, have consistently contributed to this progress. I expect to count on your great assistance in the future to help us improve UN e-Government Survey.

In this context, this meeting constitutes our continuous effort to further improve UN E-Government Survey, and the main purpose of this EGM is to review and examine the guideline and methodology of the E-Government Survey, including the revamping of the questionnaire, in response to current trends in e-government programmes.

This meeting will also serve as a forum to address challenges and emerging issues such as user take-up, enterprise architecture, interoperability, back-office reform, and government open data initiatives, and provide guidance on how to integrate these issues into the UN E-Government Survey 2012. All these issues have been fully reviewed in the Overview Paper by Mr. Kim Andreasson and I am happy to see that nearly all experts have submitted their comments for this Overview Paper. These comments will help us further deliberate on each specific topic and Mr. Andreasson will integrate all your comments in the revised edition of the Overview Paper.

As suggested by the Agenda, this meeting is expected to discuss about six important initiatives, namely, i) user take-up and training; ii) accessibility of internet or mobile connectivity; iii) accessibility of services to vulnerable groups; iv) multi-channel service provision; v) whole-of-government (W-O-G) and one-stop service provision; and vi) assessing the environment.

Some of these initiatives are rather new, especially the W-O-G structure and one-stop service provision, open government data and assessing the

environment. So, your practical experience and contributions would be extremely helpful in integrating these issues in the Survey.

In addition to the discussion on these six initiatives, we are also seeking your concrete inputs on methodology, survey implementation, and revision of indicators. Based on the EGM, Mr. Andreasson will prepare a proposed 2012 e-government survey questionnaire.

Turning to the meeting procedure, I would like to note that given the short duration of the meeting, we should try to make this meeting as much structured as possible. For each session, there are two facilitators assigned for moderating the discussion and these two facilitators are expected to have advance discussion on the specific points so that the meeting deliberations can proceed in a focused and efficient manner.

I am sure that your expertise in each specific area will help us attain concrete deliverables, especially the improvement of indicators and the questionnaire. The meeting proceedings will be published at a later stage.

I look forward to fruitful and constructive deliberations.

Thank you.