GOOD GOVERNANCE FOR DEVELOPMENT IN ARAB COUNTRIES INITIATIVE

High Level Seminar on Measuring and Evaluating E-Government and 3rd Meeting of Working Group 2 on E-Government and Administrative Simplification

(Dubai, 12-13 March 2007)

Measuring and Evaluating E-Government in Arab Countries

OECD

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INTRODUCTION

Measuring and evaluating e-government progress has become a priority for decision makers in OECD and non-OECD countries, as governments are increasingly asked to demonstrate the benefit of using information and communication technologies in government administration to enable internal efficiencies and increase the effectiveness of government actions. To respond to this demand, a range of measurement and evaluation tools have been developed and used by countries to justify e-government investments, assess impacts, and better meet citizen and business expectations.

Most Arab countries in the MENA region envision an efficient, accountable and results-oriented public administration; information and communication technologies and e-government play a strong role in achieving this goal. Measuring e-government progress is therefore at the heart of Arab countries' e-government strategies to ensure that expected benefits of e-government are realised and shared.

Measuring ICT-enabled government reform is a challenging endeavour which requires Arab governments to pool and mobilise considerable technical know-how, and financial and human resources. In this regard, co-operation with other countries at both the policy and technical levels is fundamental to ensure knowledge sharing and facilitate mutual learning.

The High Level Seminar on Measurement and Evaluation of E-Government – held in Dubai on 12 March 2007 – provided a forum where Arab e-government policy makers could come together to share knowledge, methodologies and good practice in measurement and evaluation of e-government. This event was jointly organised by the Dubai School of Government and the OECD. Dubai, with the support of Italy and Korea, is actively chairing the Working Group on E-Government and Administrative Simplification within the framework of the OECD Governance for Development (GfD) in Arab Countries Initiative.

This volume sums up the results of the High Level Seminar and includes: preliminary results of the analysis of country papers; detailed summary of discussions and presentations; background materials; and conclusions elaborated by the delegations of participating countries, with the support of experts and representatives from the OECD, the European Commission, the United Nations, and the World Bank.We hope that readers of this publication will find useful information on the status and challenges of measuring e-government progress in Arab countries, and that its diffusion will lay the groundwork for increased collaboration and sharing of best practices between OECD and Arab countries in the area of measuring and monitoring e-government.

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FOREWORD

This publication presents: 1) the proceedings of the regional High Level Seminar on Measuring and Evaluating E-Government (12 March 2007, Dubai), and of the 3rd Meeting of Working Group 2 on E-Government and Administrative Simplification (13 March 2007, Dubai); and 2) the initial results of the analysis of country papers submitted by Arab countries as background to the seminar. Both events were organised within the framework of the OECD Good Governance for Development (GfD) in Arab Countries Initiative.

This initiative, launched in February 2005 at the request of 18 Arab countries, focuses on helping participating countries to design and implement policy reforms and modernise governance structures and operations in view of enhancing the investment climate and promoting sustainable economic growth throughout the MENA region.

The seminar and working group meeting were held at the invitation of the Government of Dubai to support the activities carried out by the regional Working Group on E-Government and Administrative Simplification, chaired by Dubai, United Arab Emirates, and co-chaired by Italy and Korea. The seminar was jointly organised by the OECD and the Dubai School of Government, which hosted the event on its premises. This publication would not be possible without the strong support of Nabil Ali Alyousuf, Director General of the Executive Office and Chair of Working Group 2, and the encouragement of the Governments of Italy and Korea, who co-chair this group. Special thanks go to Mr. Moosa Al Hashemi, Head of the Delivery Unit of the Executive Office, Dubai, and Mr. Chang Kil Lee, e-government Policy Advisor at the Ministry of Government Administration and Home Affairs (MOGAHA), Korea, who respectively chaired and co-chaired the seminar and ensured a lively and constructive discussion among participants.

This seminar brought together 27 delegates from 17 Arab countries (including all the Gulf countries), experts from international organisations (World Bank, United Nations Economic and Social Commission for Western Asia, European Commission), academia (Dr. Richard Heeks, University of Manchester), and from OECD countries (Canada, France, Korea and Norway) to discuss realities and challenges of measurement and evaluation of e-government in Arab countries. The seminar discussion focused on three areas: (i) discussing the challenges for e-government measurement and evaluation in Arab countries; ii) presenting and discussing some of the main evaluation practices, tools and techniques at both the national and project levels; and (iii) identifying lessons learned and assessing progress to date in developing indicators for e-government.

As a result of the discussion, Arab countries deepened their knowledge of specific tools adopted by OECD countries to measure and evaluate e-government; identified key experiences and practices in building e-government indicators at both the national and international levels; and planned follow-up initiatives to be led by individual Arab countries and/or to be taken forward collectively by the group with the support of OECD and the Dubai School of Government.

This publication has been finalised with the support of Working Group 2 delegates and is put forward as Working Group 2 contribution to the GfD Steering Group Meeting at Ministerial Level (29 November 2007). The topic of measurement and evaluation of the progress of e-government will continue to be at the heart of the current phase of the activities of WG 2 as well as the GfD initiative.

HIGH LEVEL SEMINAR ON MEASURING AND EVALUATING E-GOVERNMENT AND BACK-TO-BACK 3RD MEETING OF THE WORKING GROUP 2 ON E-GOVERNMENT AND ADMINISTRATIVE SIMPLIFICATION

Dubai, 12-13 March 2006

Meeting summary

Overview

A two-day event including: 1) a High Level Seminar on Measuring and Evaluating E-Government, hgeld back-to-back with; 2) the 3rd meeting of the Working Group 2 on E-Government and Administrative Simplification took place in Dubai on 12 -13 March at the invitation of the Dubai Government and in collaboration with the OECD within the framework of the Good Governance for Development (GfD) in Arab Countries Initiative. The seminar achieved the following objectives: 1) **exchange of experiences** on the frameworks and tools in place in Arab and OECD countries to measure and evaluate e-government; 2) **discuss progress made and next steps** in building indicators for e-government. The working group meeting provided the platform to brainstorm about future WG2 activities and discuss the preparation of the GfD Steering Group meeting at Ministerial level in late November 2007.

The event registered a high participation rate, which confirmed Arab countries' high interest in e-government and in particular in the area of measuring e-government performance. **27 delegates from 17 Arab countries (including all the Gulf countries)** participated in the event. Regional co-ordinators and experts from international organisations also actively participated in the discussion (World Bank, United Nations Economic and Social Commission for Western Asia, European Commission). 6 Experts from OECD countries (Canada, France, Korea and Norway) and academia (Dr. Richard Heeks, University of Manchester) engaged in policy discussion with their Arab counterparts. The meetings were chaired by Mr. Moosa Al Hashemi, Head of the Delivery Unit of the Executive Office, Dubai, and co-chaired by Mr. Chang Kil Lee, E-Government Policy Advisor at the Ministry of Government Administration and Home Affairs (MOGAHA), Korea.

The **high level seminar** was welcomed as timely, as most Arab countries are still in the early stages of measuring and evaluating e-government initiatives and are eager to learn from successes and failures of OECD countries in developing and using methods and tools to evaluate e-government progress at both the project and national levels. The seminar discussion focused on: 1) identifying the case for e-government measurement and evaluation in Arab countries and the main challenges liked to its implementation; 2) presenting and discussing some of the main evaluation tools and techniques at both the national and project levels; 3) sharing lessons learned and progress to date in developing indicators for e-government.

At the 3rd working group meeting, Arab delegates discussed the programme of activities for the upcoming months and the WG2 contribution to the GfD ministerial meeting in late November 2007. Delegates also had the opportunity to discuss the format and types of future regional capacity building activities, including high level seminars, peer-to-peer visits and training activities. This led to an agreement on the benefit of exchange between OECD and Arab delegates at regional level, and to a series of offers by

Arab countries to host regional activities in the coming months. Delegates also discussed the possibility to carry out e-government peer reviews in Arab countries, building on the OECD tested methodology and practice.

Outcomes

This event achieved its stated objectives both in terms of improving knowledge and strengthening specific sets of skills and capacities of delegates, and in planning a series of follow up initiatives proposed and led by individual Arab countries, or to be taken forward collectively by the group with the support of OECD and DSG.

The following key outcomes of the **seminar** were achieved:

Identification and discussion of the main challenges of measuring and evaluating e-government (*e.g.* poor data quality, lack of evaluation culture, lack of evaluation methodologies and tools, high cost associated with data collection, fragmented measurement efforts).

Increased capacity in using some of the toolkits/models available to measure progress (eEurope benchmarking, MAREVA, Common Measurement Tool).

Stock-taking of progress to date in Arab countries in building e-government indicators at both national and project levels.

Identification of good practices that need to be taken into account while undertaking any e-government evaluation effort.

Agreement to focus on mapping out existing data on e-government in Arab countries as a first step to define a programme of work in this area.

Discussion of a proposal to organise a follow-up workshop on capacity building for indicators with other international actions in the area (*e.g.* ESCWA).

Key outcomes of the **3rd working group meeting** were the following:

Identification and scheduling of the next round of capacity-building seminars:

Announcement by Egypt of the 5th High Level Seminar on Strategies, tools and capacities for administrative simplification, which took place on 20-21 June 2007 in Cairo.

Expression of interest by Morocco to host a High Level Seminar on an e-government topic in Morocco.

Tunisia stated its intention to host a high level seminar on frameworks and partnerships for e-government collaboration in Tunis (autumn/winter 2007).

Expression of interest by Saudi Arabia to host a High Level Seminar on a topic to be determined back-to-back with the 2nd eTransaction Conference in Saudi Arabia.

Identification by Arab countries of technical assistance co-operation initiatives in the form of peer-to-peer exchange and training activities where OECD country support is demanded:

Request by Lebanon of assistance in terms of peer-to-peer exchange of experience with OECD countries on strategies to integrate e-government and administrative reform efforts.

Announcement by Arab countries of their intention to have their e-government programme reviewed by the OECD using its tested peer review methodology:

Egypt reaffirmed its decision to have the OECD review its e-government initiative, as mentioned in the National Action Plan of Egypt, and announced that initial steps have been taken.

Morocco announced its intention to have its e-government strategy reviewed by the OECD.

The participants agreed on a set of outputs to be produced and adopted by the group in preparation for the GfD Steering Group Meeting at Ministerial level. These would include the finalisation of seminar booklets, and the launching of a preliminary e-government core data collection exercise.

Seminar presentations can be downloaded from www.oecd.org/mena/governance

Summary of meeting discussions

1) High Level Seminar on Measuring and Evaluating E-government (12 March 2007, Dubai, UAE)

The seminar was focused on the exchange of experiences between Arab and OECD countries in the area of e-government measurement and evaluation. In particular the seminar was structured around four sessions following a short opening: 1) opportunities and challenges of evaluation; 2) toolkits and methods for project evaluation; 3) national and international indicators; and 4) lessons learned and next steps.

Session 1: Why do we measure and evaluate e-government: Opportunities and challenges

The **first session** served to introduce the topic of the seminar by discussing: 1) why governments need to measure and evaluate e-government; and 2) what are the challenges that governments have to face in measuring and evaluating e-government progress. Discussions were opened by presentations by Edwin Lau from the OECD Secretariat and Dr Ehab Moustafa, Principal Advisor, Intercom Development Co. Mr Lau discussed aspects related to measuring and evaluating ICT-enabled public sector transformation. while Dr Moustafa discussed issues related to measuring e-government performance from the point of view of Arab countries.

Mr Lau stressed the importance of defining upfront a clear framework and objective of e-government measurement and evaluation before starting any such exercise (why measure and evaluate? for whom? what are the benefits?) and making measurement and evaluation part of the overall e-government policy cycle. Evaluation should focus on the costs of e-government, and also on identifying the kind of benefits realised (*e.g.* financial, non financial – *e.g.* improve customer satisfaction) and their intended beneficiaries (being government, users of services or other groups). Not all indicators are good indicators. There is a need to carefully define the purpose and objective of data collection to avoid the risk of overestimating the importance of collected information (*e.g.* number of e-services).

Mr Moustafa argued the relevance of measuring and evaluating e-government for Arab countries to justify investments, assess impacts and monitor e-government progress. He also stressed the need in Arab countries to have a clear understanding and definition of what is meant by "e-government success" before starting any measurement and evaluation exercise. One dimension that is difficult to evaluate is the impact of e-government on society – that is where common indicators would need to be developed. He suggested that a working group be established to develop commonly agreed indicators and measures, and mechanisms for their deployment and reporting of results.

Delegates intervening in this session recognised the importance of implementing systems to measure ICT-enabled reform in government to build political support and to justify investment decisions (Tunisia), assess progress being made (Lebanon), shaping the direction of e-government projects in support of a better government agenda (Morocco), and to develop a set of indicators which can guide business investments in the region. In addition, evaluation would help foster a return-on-investment mentality and culture of performance among government organisations (Jordan, Syria).

Exchange of experiences in this area is of particular importance for those countries that are still in early stages of e-government development so that they can avoid mistakes and learn from other Arab and OECD countries. Some pilot measurement and evaluation projects are currently ongoing in Arab countries but few cases of a more systematic approach to measurement and evaluation of e-government seem to be in place. Most countries are still in the measurement phase (Algeria) and few fragmented evaluation efforts have taken place. Lack of a structured framework and methodologies for e-government evaluation is also a key challenge. The poor data quality (lack of data standards, data dispersion) increases the already high cost of data collection for Arab countries and represent a barrier to e-government measurement. Lack of

collaborative frameworks and common vision for e-government across ministries and agencies may also make it difficult for evaluation initiatives to emerge.

In his presentation, **Dr Richard Heeks** (University of Manchester) also highlighted the challenges of measuring and evaluating e-government including: 1) assessing the demand and motivation for evaluation; 2) defining a clear object of evaluation (readiness, availability, uptake, impact); 3) understanding the cost associated with evaluation exercises. He also pointed out the challenges in moving from a more static evaluation focused on benchmarking progress and assessing the status quo, to a more dynamic evaluation aiming at encouraging mutual learning and exchange of knowledge from implementation experiences (benchlearning). There is also a need to make sure that any measurement and evaluation activity becomes part of the e-government policy cycle so that data collected and analysed form the basis for decisions and actions.

Session 2: Evaluating e-government: Toolkits and methods for project evaluation

The **second session** focused on illustrating and discussing tools and practices in e-government measurement and evaluation at the project level, starting from the concrete experience of OECD and Arab countries, and international organisations. The session was opened by the presentation of **Mr. Faycal Mecheri (France)** illustrating the MAREVA tool used to measure and evaluate the value of e-government services. MAREVA is a method of analysis developed by the French Electronic Administration Department Agency, which allows the assessment of value of e-government projects. MAREVA focuses on a series of dimensions including: 1) the strategic alignment; 2) the economic justification; 3) the risk adjustment; and 4) the follow-up of expected results. This method allows the government to take into account qualitative both external (for individual users, associations or business) and internal (for public sector employees) benefits. Measurement was initially carried out for 30 projects and is meant to be systematically applied to new projects *ex ante*. MAREVA also provides a common evaluation framework for comparing different projects.

Ms Rehab Lootah (Dubai) presented Dubai's experience with measuring performance of e-government at three levels – initiative, organisational and project. Two main dimensions are taken into account for evaluation: customer focus and operations efficiency. More than 30 evaluation criteria have been developed for evaluating the quality of online services (*e.g.* awareness, usage of services, satisfaction) and the quality of Web sites (*e.g.* content, usability, common look-and-feel). The operation efficiency is measured by looking at cost savings for the services for both government and non-governmental organisations. While the focus of current measurement and evaluation is the front office of e-government, the next steps will be strengthening back-office evaluation. Ms Lootah also highlighted some lessons learned from Dubai's evaluation practice (*e.g.* the benefits of building indicators in house and use of common indicators to benchmark progress across organisations).

Mr Carlo Rossotto (WB) presented the monitoring and evaluation toolkit for e-strategies results (METER) developed by the World Bank. The primary objective of this toolkit is to help countries evaluate the e-strategies' impact and achievements and provide them with a systematic set of indicators to monitor and evaluate their implementation. The METER toolkit provides an evaluation framework linking ICT policy, strategies, initiatives and actions, and proposes identifiable measurable indicators for each of these levels. Mr Rossotto stressed the importance of considering evaluation as an integral part of any e-strategy design and implementation, and not as an end in itself. This framework can be applied to different components of e-strategies, including e-government initiatives (*e.g.* setting up e-government technical infrastructures, policies and legal frameworks). Mr Rossotto also stressed the importance of interacting with government to identify the objectives of measurement in order to link them to broader policy objectives.

Mr Kjell Ove Kalhagen (Norway) discussed the Norwegian approach to evaluating performance at the programmelevel through the Hoykom programme supporting broadband development in the public

sector. This programme supports projects at central, regional and local levels in the areas including strengthening collaboration among municipalities on IT services, and making service available through portals. Following internal (General Audit) and external (OECD) reviews highlighting the lack of evaluation frameworks for e-government projects, since 2005 projects are evaluated and must report on a set of established qualitative and quantitative indicators. These indicators attempt to capture both general internal benefits (*e.g.* labour saved) and service-specific benefits (*e.g.* shortened processing time). Mr Kalhagen mentioned that, while in the short term benefits have not translated yet into organisational changes, higher benefits are expected in the long run from the introduction of new ways of working and increased inter-agency collaboration (*e.g.* introducing online application for building permission in seven municipalities will bring savings estimated at NOK 9 million per year).

Ms Su-Mi Lee (Korea) made a presentation on Korea's e-government evaluation methodology and practice and on the use of indicators to assess progress. E-Government evaluation practice in Korea dates back to 1997, when all project-leading agencies were asked to self-evaluate ongoing national digitalisation projects. The last phase started in 2004 with a focus on pre-evaluation of project feasibility and post-evaluation of project performance. Korea's model for performance management of e-government includes the use of a series of indicators for project and organisation evaluation focusing on: appropriateness to the national plan, efficiency in execution, performance results, application of results, infrastructure for e-government, e-government application level, effects of e-government. Ms Lee highlighted the lack of evaluation of policy results and achievement of planned policy effects, the need to improve the methodology to make it more robust, and the need to build evaluation indicators that take into account interoperability, standardisation and security issues as key challenges.

Ms Vicki Morrison (Canada) discussed the experience of Canada with implementing common tools (Common Measurement Tool – CMT – and benchmarking practices) to measure and evaluate service quality for better service delivery. The CMT is a multi-channel instrument for designing client satisfaction surveys that enables organisations to benchmark results. It is designed by public servants for public servants. CMT questions are aligned with identified user drivers/indicators of satisfaction (*e.g.* extra mile/courtesy, knowledge, fairness, timeliness, outcomes) which may vary by channel and use. CMT can be adapted for administration in-person, over the telephone, or electronically, and organisations can add customised and organisation-specific questions. A central database for storing CMT data has been built, allowing organisations to anonymously compare results against peers. CMT benchmarking analysis is undertaken to identify service gaps, define service standards, assessing satisfaction scores relative to importance scores, and better understand drivers of satisfaction of different service areas.

Eng. Ahmed Kamal (Egypt) closed the series of presentation by sharing the Egyptian experience and progress to date in measuring and evaluating e-government. With one of the earliest e-government projects in the region, Egypt has started collecting data and producing statistical indicators on ICT penetration at the national level (number of landilines, mobiles phone, etc.). Measurement is done at the national and sectoral levels (*e.g.* education, health, social services). Data is collected through a number of tools including questionnaires/surveys (*e.g.* on ICT infrastructure). Measurement at the project level has not yet been undertaken.

Session 3: National and international indicators for e-government: Progress to date

In the **third session** participants discussed current experiences (and related challenges) in building indicators to measure and evaluate e-government progress in Arab and OECD countries. While countries recognised the importance of strengthening work in this area at the regional level, they acknowledged that progress in this area is mixed: while e-government readiness and access indicators (*e.g.* ICT penetration) are diffused, process, outcome and usage indicators are more difficult to develop.

The creation of indicators requires investments of resources and capacities at the national level. This leads to the question of the opportunity to build indicators at regional level vs adopting already existing

internationally agreed indicators. In addition, in the context of scarce resources and given that indicators may take a long time to emerge, there is a need for Arab countries to carefully weigh the benefits and costs of measuring and evaluating progress vs the pressure to move on with the next phase of e-government implementations (UN).

It was also recognised that indicators need not be perceived as the only tool for e-government assessment; their meaningfulness may largely be influenced by the degree of subjectivity attached to their construction. They are useful when it comes to measuring performance from a technical point of view but it is more complicated to measure more intangible variables such as "success" or" leadership support" (Jordan). Indicators can be useful to monitor achievements against stated e-government goals; however, it is less clear to what extent they can drive e-government development in the absence of an e-government vision (Lebanon).

The World Bank representative stressed that common outcome indicators are increasingly needed in the development context to move away from an output-oriented approach (*e.g.* number of children trained in using software) to measuring the impact of government policies to targeted groups (*e.g.* children's IT skills improvement). Most Arab countries recognised the importance of joining efforts at the regional level and called on the support of international partners (OECD, UNDP, WB and ESCWA) to develop common frameworks allowing for aggregating, comparing data and benchmarking over time. However, results cannot be achieved without efforts to increase awareness of indicators among decision makers at the national level.

Mr. Abdulilah Dewachi (UN) opened the series of presentations by illustrating the results of the meeting on e-government readiness indicators of the UN Expert Group on Information and Communications Technology Indicators Adoption and Data Collection in Arab countries, which took place in Cairo on 13-15 February 2007. Mr Dewaichi provided an overview of the Partnership for Measuring ICT for Development and on the results of its work (*e.g.* the production of a core list of ICT indicators on infrastructure and access, use of ICT by household and individuals, etc). He also discussed past and current UN efforts towards assessing e-government progress globally (UN global e-government assessment 2005, with the use of composite indexes) and regionally (UN regional e-government assessment). The regional assessment is currently in the planning stage and would use a methodology to reflect more qualitative analysis rather than quantitative evaluations. One of the final outputs of the meeting was an agreement to conduct further work in the region to collect comparable data to monitor e-government assessment.

Mr. Juan Arregui Mc Guillon (EU) discussed the EU experience with monitoring the overall performance of e-government at the European level with a particular focus on the e-Europe benchmarking initiative. This EU programmeattempts to produce supply-side indicators measuring the availability and sophistication of basic public online services (12 for citizens and 8 for businesses). The methodology was reviewed during 2006 to align with policy and technology developments. A user-centric indicator has also been built combining a series of dimensions: use of eID, convenience, multiplatform delivery, accessibility. Indicators have also been produced to assess national portals by looking at personalisation, targetisation, and usability. Following this presentation, **Helene de Chanterac (France)** shared the experience of France in participating in this evaluation exercise and the benefits derived (*e.g.*high diffusion and internalisation of the results by all departments evaluated). Mme de Chanterac also highlighted some lessons learned from developing and using the eEurope methodology including the importance of determining the unit/service to be measured and the sample, and the need to ensure flexibility of the measurement instrument to allow for changes to be introduced during the process.

Closing session: Lessons learned and next steps in measuring and evaluating e-government in Arab countries

In the **last session**, Mr Edwin Lau (OECD) wrapped up the main points of the seminar discussion and identified some lessons emerging from OECD and Arab countries' experiences in measuring and

evaluating e-government. Arab delegates were invited during a final roundtable discussion to discuss the status of the availability of e-government-related data in their country as a first step to define a programme of work in this area. The results of the roundtable discussion showed that e-government data collection is still fragmented in Arab countries and mainly focused on collecting basic data measuring readiness for e-government (*e.g.* infrastructure). As a next step, Arab countries agreed to work towards collecting pilot datasets on e-government which will constitute the first building block for further work in this area. This first stage could focus on collecting comparable measures of e-government arrangements (*e.g.* policy, institutional, legislative and regulatory) in Arab countries with the objective of providing a common language for policy dialogue (through the use of common unit of analysis), facilitating self-assessment of e-government progress, and enhancing bench-learning among Arab countries.

2) 3rd Meeting of Working Group 3 (13 March 2007, Dubai, UAE)

The **working group meeting** focused on assessing progress made since the last meeting in March 2006 and identifying the next round of regional activities for WG 2 for the next months with a particular attention on the preparation of the GfD Steering Group meeting at Ministerial level planned in late November 2007.

Session 1: Overview and update on recent e-government developments

The **first session** opened with a short report of recent e-government events which took place in the region or in the framework of the GfD WG 2 activities. The OECD reported on the High Level Seminar on personalised e-government portals, which took place in Paris on 11-12 December 2006 at the invitation of the French Directorate General of State Modernisation. One of the conclusions of this seminar was that personalised portal development must be seen as a component of the overall e-government strategy to use ICT to transform public administration and not simply as e-service enablers.

The Dubai School of Government reported on the main highlights of the e-government panel of the Arab Strategy Forum, which took place in December 2006. The panel discussed external as well as internal barriers to e-government. While there is a large number of failed e-government projects, speakers acknowledged that it is important to take into account the positive experiences of those countries that have initiated projects that turned out to be a success in simplifying relations between government and citizens, reducing administrative burden, and creating a proper environment for businesses.

Panelists also agreed on the difficulty of talking about "e-government failure" without a clear understanding of how to measure it. Sometimes countries set too high expectations as e-government objectives and fail to clearly define how to measure failure and success. This leads to an unbalanced measurement of success and failure.

All speakers intervening on the panel recognised that there are many factors that can lead to failures of e-government projects, namely: lack of citizen trust in using ICT to interact with government, cultural barriers, lack of ICT readiness, etc. What is important is that government learn to listen to people's needs and find the best way to organise itself to meet these needs.

A number of Arab countries (including Morocco, Tunisia, Jordan, Lebanon, Egypt, Dubai and Bahrain) reported on progress in the implementation of their national action plans for e-government while others (Saudi Arabia, Yemen and Sudan) presented recent developments on e-government.

Morocco highlighted the progress made since the presentation of the GfD Action Plan on e-government. Efforts have been made to reduce the digital divide and to apply e-government across different sectors. Another focus was enhancing capacity to benefit from e-government services and applications: vocational training and skills development courses have been increased. Progress has also been made in drafting legislation aimed at protecting the exchange of personal information online. An increased number of services have been put online and more than 600 administrative forms are accessible electronically. Projects are now focusing on deepening the use of e-government by the administration (one-gov project) and increasing access to e-government in rural areas.

Tunisia started developing e-administration in the 1990s with the definition of an institutional and legislative framework supporting e-government implementation (e-signature and protection of personal data). The objective of e-government, since the beginning, was to modernise the administration. Recent efforts have been directed towards the generalisation of e-services and creating the framework conditions for agencies involved in e-government to realise their stated objectives.

The GfD Action Plan on e-government inspired and was translated into a national action plan for e-government covering 2007 and 2008. The objective of the plan is to create a platform for electronic communication between government institutions and to reinforce the capacities of public servants to meet skills requirements.

Large projects involving the whole government have been elaborated, including the creation of a system for sharing information electronically among agencies. Other efforts are directed to diffusing common standards (systems and data) across the administration and introducing a common terminology on e-government. Pilot projects have been launched, *e.g.* central electronic or databank for all the administrations and e-civil status documentation. Fore example, birth certificates will be obtainable from all municipalities in Tunisia regardless of the residence of the person requesting them. Another step will be allowing public administrations to exchange and reuse civil status data in their databases. Other projects – notablly e-procurement, e-health, e-ID card – will be developed.

Lebanon illustrated progress made on e-government in the last nine months despite the difficult political situation. With regards to the legal framework for e-government, a law on electronic transactions has been drafted and is currently under consideration by the Parliament. A Telecom Regulatory Authority has been created to push forward the reform of the ICT sector. In the area of e-services, a number of services have been completely automated or upgraded (*e.g.* work permit). An e-procurement pilot project is ongoing with the objective of connecting six ministries to the tender board. The government information portal, which contains around 4 500 forms, has been upgraded and moved to a new technical platform. The focus is now updating government Web sites.

With regards to the technical framework, efforts towards increasing the use of standards across government are underway. Discussion with major software providers have been taken to standardise all software applications in government. At the central level, initiatives have been taken to raise funds for smart applications (*e.g.* national ID-card or health card). Delays have arisen in moving towards DSL.

Lebanon also started a number of capacity building initiatives, including ICT training for civil servants (outsourced to the private sector). Community centres have been established with the support of the private sector. Lebanon is also trying to map out all ICT projects undertaken in the last 10 years with OMSAR's support. To increase policy co-ordination capacity at central level, an IT strategy unit in the Prime Minister's office has been created.

Bahrain announced that a new e-government strategy was issued in December 2006 focusing on the next three years. The goal will be to make Bahrain the leading e-government actor within the GCC (as measured by the UN readiness report). This would be achieved by providing an increased number of services online through different channels (portal, mobile, call centres, and post offices), among other measures. In parallel to the implementation of the long-term objectives of this strategy, Bahrain has also focus on developing quick wins (*e.g.* the e-government portal) and ensuring co-ordination of initiatives between ministries.

Jordan also reported having recently approved an e-government strategy for the next three years through 2009. The strategy focuses on three main axes: 1) legislative framework; 2) infrastructures framework; and 3) service framework. Extending the e-communication network to all institutions by 2009 and developing and implementing common shared services are two of the main priority areas. A project extending broadband coverage across the country has been initiated with a particular focus on increasing the number of school connected to the network.

Egypt has also focused on upgrading existing online services and increasing the number of service delivery channels. A number of projects have been initiated, in particular in the area of creating databases (*e.g.* to manage civil certificates). Following its decision to have its e-government initiative peer reviewed by the OECD, Egypt has started some work in preparation to this project (*e.g.* initial data collection).

The session was closed by presentations from Saudi Arabia, Oman and Sudan on their approaches and progress in developing e-government. **Saudi Arabia**'s national e-government programme(Yasser) was launched in 2005 following the establishment of an ICT ministry and the drafting of a national ICT plan. The Saudi approach to e-government is based on three main building blocks: a unified vision and action plan, a shared infrastructure, and common standards and practices. Legislation concerning e-government has been enacted (*e.g.* e-transaction law, cyber crime law) and common frameworks supporting e-government have been established (*e.g.* e-government strategy) or are currently under development (*e.g.* PKI centre). Sufficient funds have been allocated to the e-government programmeto support major infrastructure and national projects (*e.g.* e-procurement, databases). Saudi is monitoring progress against stated goals at both the ministry/agency and national levels (balance score card project).

Oman's strategy for the use of ICT (eOman) was approved by the Cabinet in 2003 with the aim of "transforming the Sultanate of Oman into a sustainable knowledge-based society by leveraging ICT to enhance e-government services, enrich businesses and empower individuals". The eOman approach focused on the integration of different layers/elements: e-government strategies, common technical standards, shared central architecture components, regulatory and legislative frameworks governing electronic transactions, and capacity building. Oman has adopted a "life-event" strategy for organising and delivering electronic services and is currently developing a national portal as a first gateway for service delivery to citizens and businesses. A number of infrastructure projects have been launched and are currently being implemented (*e.g.* government network, security architecture).

Sudan elaborated a strategy for e-government in 1997 with specific attention to developing a telecom infrastructure. In the last 10 years e-government development has moved from provincial to central level with the creation of a council for information co-ordination responsible for co-ordinating the e-government strategy. Most recently, Sudan has started elaborating an action plan to guide the implementation of the actions in the strategy. Despite support from the private sector, the biggest challenge remains lack of funding for e-government development.

Session 2: Preparation of the programme of work for WG2: Capacity building activities

In **the second session**, delegates had the opportunity to **discuss and plan the next round of capacity building activities** to be conducted in support of the implementation of National Action plans.

Regional high level seminars: capacity building seminars focusing on the exchange of technical know-how and experiences on a specific topic (*e.g.* e-government portals, e-procurement) and targeting e-government experts and decision makers in Arab countries.

Country-specific joint learning activities: focused on identified themes of Arab country interest and based on the OECD methodology. They could take the form of, for example, thematic studies. The results of these exercises could be shared with other OECD countries.

A number of countries made concrete proposals for follow-up initiatives in the area of e-government.

Session 3: Preparation of the programme of work forWG2: E-Government Peer Reviews

In the **third session** delegates had the opportunity to **discuss the proposal to undertake e-government peer reviews in Arab countries**. During their interventions in this session, Egypt and Morocco confirmed their intention to undertake an e-government peer review in their respective countries. Norway commented on the OECD peer review methodology, building on its experience in participating in this exercise, and pointed out the benefit of a framework allowing comparability between countries and independency of results. The DSG also stressed the benefits of the peer review process and mentioned the in-depth analytical framework covering a large number of areas of e-government implementation (*e.g.* policy formulation and co-ordination, barriers to e-government, common frameworks for collaboration,

skills and capacities). DSG also pointed delegates' attention to the timeliness of this exercise for most Arab countries, which have made important progress on e-government and may need an external independent assessment to assist them in identifying key steps to move forward.

The discussion was constructive in that it went beyond the simple acknowledgment of the weaknesses and benefits of e-government reviews for Arab countries *vis a vis* similar products from the private sector to focus on debating the extent to which the "peer-to-peer" dimension of such reviews (*i.e.* the insight and participation of government experts from other countries in the exercise) is well received in Arab countries.

The question of the readiness of Arab countries to accept and implement proposals for action emerging from the review was also discussed, and different views were shared among Arab participants. Tunisia underlined that the decision to undertake such review should be of strategic importance for a country, as the review provides policy proposals for action which countries need to be ready to accept.

Countries also discussed the extent to which these reviews could help Arab countries move forward with their e-government agendas and eventually help them leapfrog stages of e-government development. Syria underlined that one of the benefits of these reviews should be to allow Arab countries to position themselves on the path towards implementing e-government. The review framework would benefit from a more customised analytical framework which takes into account countries' different stages of development. Lebanon also mentioned the possibility to undertake "twinning" reviews of countries with similar experiences.

Closing session

The **closing session** focused on discussing the WG2 contribution to the next meeting of the GfD Steering Group at Ministerial level, which will take place in November 2007. The participants agreed on a set of outputs to be produced and adopted by the group in preparation for the GfD Steering Group Meeting at Ministerial level. These would include the finalisation of seminar booklets, and the launching of a preliminary e-government core data collection exercise.

OVERVIEW OF MEASURING AND EVALUATION PRACTICES IN ARAB COUNTRIES

This section presents analysis of the country papers prepared by Arab countries participating in the seminar, with elaboration from the OECD Secretariat. The following countries submitted papers: Algeria, Bahrain, Dubai, Egypt, Jordan, Lebanon, Morocco, Oman, Saudi Arabia, Sudan, Syria and Tunisia (see Table 1).

The purpose of this short section is to provide an overview of the status of current practices, and examine key challenges Arab countries are facing in measuring and evaluating e-government initiatives. This overview draws from and complements the detailed summary of the discussion among participating Arab countries during the High Level Seminar on Measuring and Evaluating E-Government, which took place in Dubai on 12 March 2007. This document, which was submitted for data verification to data providers in Arab countries, should be considered as a first attempt to collect and analyse data on a specific aspect of e-government in Arab countries, and could be augmented by further input and research in the region.

Table 1. Countries participating in the High Level Seminar and submitting country papers

Country	Algeria	Bahrain	Dubai	Egypt	Jordan	Kuwait	Lebanon	Libya	Mauritania	Morocco	Oman	PNA	Qatar	Saudi Arabia	Sudan	Syria	Tunisia	Yemen	UAE
Participation in High Level Seminar	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√		√
Responses to country questionnaire[1]	√	√	√	√	√		√			√	√			√	√	√	√		

Key highlights

Some e-government measurement and evaluation activity is carried out in the Arab region. However, most countries are still in the early stages of conducting e-government evaluation, and these efforts are mainly focused at measuring progress at the project level.

Arab and OECD countries have common objectives for e-government measurement and evaluation – measurement of performance and alignment of results with stated targets. The general trend in most Arab countries is setting identifiable targets linked to national e-government strategies.

[1] See Annex 3.

However, a general lack of evaluation culture in government, and disinclination to measure government action seem to pose a serious challenge to the diffusion of e-government evaluation practice and represents the single most important obstacle to e-government evaluation in Arab countries.

A range of evaluation methods and tools for e-government are available to Arab countries; however, most countries have not developed significant strategies to use these methods, especially more sophisticated user-engaging tools.

Overall, the status of e-government data collection and availability in the Arab region is mixed: readiness and access data seem to be collected by and available in most Arab countries, while data on outcomes is not yet systematically collected and uniformly available across the region.

Overview

Some e-government measurement and evaluation activity is carried out in the Arab region. However, most countries are still in the early stages of conducting e-government evaluation, and these efforts are mainly focused at measuring progress at the project level.

All Arab countries responding to the questionnaire have carried out or are carrying out some e-government measurement, assessment or evaluation activities at the national, sectoral, ministry/agency, programme or project level. However, data collected from country questionnaires shows that few countries have set up common frameworks and mechanisms for measurement of e-government across levels of the administration (see Box 1 below) and most (10 of 12) have focused on measuring results at the **programme or individual project** level.

Box 1. Example of approaches to setting up a national framework for measuring e-government implementation

Bahrain has defined a common approach to track progress of all components of its kingdom's e-government strategy. This monitoring and evaluation framework is operated at the national, ministry/agency and project levels, and includes the use of specific indicators to measure progress.

Dubai has also implemented a centralised e-service strategic progress monitoring system to monitor progress at the government department (agency) level. Agencies can also adopt their own measurement systems. The centralised system is implemented by Dubai eGovernment, and measurement is conducted periodically depending on the indicator (*e.g.* monthly, quarterly or annually). The project-level measurement is decentralised across the various government departments. Dubai eGovernment tracks the projects for which it is responsible (weekly or bi-weekly).

Saudi Arabia has set up measurement and evaluation mechanisms combining different levels of the administration. The sectoral and ministerial/agency levels are merged into one single level or focus area. Each ministry has a detailed action plan to be implemented for its particular sector with identified measurable objectives in alignment with the e-government plan.

The majority of Arab countries answering the questionnaire have undertaken some measurement initiatives at the **national** level. In Morocco, the National ICT Observatory is in charge of monitoring and updating indicators on e-administration at the national level, as well as measuring ICT in households and business, the ICT industry, and ICT capacity.

For some countries measurement and evaluation at the central (or sectoral) level has taken the form of e-readiness assessments which aim to build a case for e-government or assess institutional preparedness to use ICT. In Egypt, for example, measurement at the national level has so far been focused essentially on technology readiness assessments of public institutions. Such e-readiness evaluation exercises were also conducted in Lebanon, Jordan and Sudan.

Lack of measurement at the ministry/agency level could be explained in many Arab countries by the still-limited institutionalisation of e-government across the government administration. In other words, in transitioning from a programme-based approach to a unified whole-of-government system of e-

government, most Arab countries are facing the challenges of setting up organisational structures supporting e-government across the administration. This includes setting up and staffing e-government units in ministries and agencies and creating internal capacities for co-ordinating, implementing and monitoring e-government in specific policy areas.

Table 2. E-Government measurement and evaluation activities in Arab countries

	National level	Sectoral level	Ministry/ Agency level	E-Government programme/ Unit level	Project Level
Algeria					√
Bahrain	√		√		√
Dubai	√		√	√	√
Egypt	√R	√R	√	√	
Jordan	√R			√	√
Kuwait*					
Lebanon	√R				√
Lybia**					
Mauritania*					
Morocco	√			√	√
Oman	√	√			√
PNA*					
Qatar*					
Saudi Arabia	√	√	√	√	√
Sudan	√R				
Syria					√
Tunisia	√	√		√	√
Yemen**					
UAE*					

Note: * did not answer the questionnaire; ** did not participate in the seminar.

Note: R=readiness assessment.

Source: OECD (2007), Country questionnaires.

Arab and OECD countries have common objectives for e-government measurement and evaluation – measure performance and alignment of results with stated targets. The general trend in most Arab countries is setting identifiable targets linked to national e-government strategies.

The questionnaire results show that Arab countries and OECD countries share common objectives for measuring and evaluating e-government at the national, sectoral, ministry/agency and project levels. These objectives are:

National level

Evaluate the contribution of e-government to achieving public sector reform objectives.

Monitor overall compliance of initiatives with national strategy and allow for realignment of initiatives with overarching plan if necessary.

Ensure a whole-of-government approach to e-government by strengthening the co-ordination of initiatives at the national level.

Project level

Assess and monitor the costs, benefits, and risks of project implementation.

Measure the efficiency and effectiveness of implemented projects.

Identify good practices and promote knowledge sharing among institutions.

Provide data/information to decision makers.

Justify investments and determine resource allocation for new projects.

The detailed table below summarised major objectives for e-government identified in country responses to the questionnaire.

Table 3. Major e-government objectives in Arab countries

	Objectives of evaluation at the national or sectoral level	Objectives of evaluation at the ministry/agency or project level
Algeria	-to strengthen the administration -to reform the public sector and simplify administrative procedures -to adopt a unified, common plan for all ministerial departments	
Bahrain	-to measure e-government progress against established targets and goals	-to track changes from baseline conditions to desired project-level outcomes -to validate the results achieved for each project
Dubai	-to ensure compliance with the national e-government strategy -to monitor overall progress against targets -to ensure transparency, accountability and awareness -to take corrective actions	-to ensure strategic target compliance -to create productive and healthy competition among government departments -to align government departments around standards and better practices -to ensure transparency and accountability -to recognise best achievers -to measure effectiveness and efficiency
Egypt	-to enhance Egypt's ranking for the global economic competitiveness indicator -to measure and support ICT use in the government administration -to enhance civil servants' performance and IT capacity -to measure the impact of the technological readiness indicators on Egypt's economic and investment environment	-to monitor progress and assess the capacity of each public institution to undertake reforms -to create new opportunities for e-government projects -to support government institutions in planning projects and directing investments by highlighting development and improvement of work cycles through better use of technology -to provide accurate information to decision makers for elaboration of accurate and efficient plans
Jordan	-to measure the progress of e-government programmes/projects -to evaluate the level of alignment of these national programmes/projects with the overall national e-government strategic objective -to oversee national programmes/projects as a whole and identify proper co-ordination and integration points -to identify the uptake of e-government programmes/projects and assist in overcoming current challenges	-to measure progress and achievements -to ensure alignment with the strategic goals/objectives from which these project were derived -to compare progress among different entities -to promote knowledge sharing and usage of re-usable components -to identify potential development and enhancement projects -to measure e-readiness/maturity of various entities -to measure efficiency and effectiveness of implemented services and projects
Kuwait*		
Lebanon	-to identify priority policy areas for action	-to support decision making

	-to assess and revise ICT strategies -to allocate resources -to evaluate impacts and benchmark national and/or sectoral e-government development	-to identify *ex ante* project risks -to assess *ex post* project impact and benefits
Libya**		
Mauritania*		
Morocco	-to measure the impact of adopted projects on the level of efficiency and productivity of the administration -to follow up and evaluate e-government project implementation	
Oman	-to help decision makers in designing appropriate programmes based on actual needs, with the objective of achieving sustainable development in the sultanate -to measure current practices and evaluate their strengths and weaknesses -to improve the level of transparency and trust in the administration	
PNA*		
Qatar*		
Saudi Arabia	- provide better quality services by year 2010 - increase internal efficiency and effectiveness - contribute to the country's prosperity	-measure the contribution of sectors and agency to the achievement of the national objectives (e.g. in terms of assessing service quality, four dimensions are identified: speed, accuracy, responsiveness and degree of fulfillment to be available online)
Sudan	-evaluating achievements and comparing them with the objectives set in the national strategy	
Syria		-simplify procedures -solve technical problems -increase customer satisfaction
Tunisia	-measure the extent to which e-government contribute to the achievement of development objectives	-assess the achievement of programmes / project objectives
Yemen**		
UAE*		

Note: * did not answer the questionnaire; ** did not participate in the seminar.

Source: OECD (2007), Country questionnaires.

A large majority of countries responding to the questionnaire reported that e-government goals and targets have been included in their national or sectoral e-government strategies (9 of 12), and that some type of indicators have been developed to measure these objectives (8 of12). In Bahrain, the e-government strategy vision is translated into a series of customer-centric outcomes; specific indicators, along with associated measurement mechanisms, have been identified to measure progress against these targets. In Morocco, the current national e-government programme includes a number of measurable objectives including number of e-government services implemented per year and number of departments that have created a Web site. This data could reflect the high priority placed on monitoring and evaluation activities in these countries.

However, the frameworks allowing actual implementation of measurement and evaluation activities in government, present a somewhat less clear picture. Only 4out of 12 countries responding to the questionnaire require ministries and agencies to conduct monitoring and evaluation of e-government

projects. This may indicate relatively less emphasis attributed to monitoring and evaluation initiatives at the organisational level.

Disseminating the results of monitoring and evaluation can be of great value to government decision makers, helping them plan, manage and improve e-government performance by individual organisations. Here again, only a limited number of countries responding to the questionnaire (5 of 12) indicated that the results of their internal monitoring and evaluation are made available to interested parties. In Dubai, monitoring results for government departments are made available to eGovernment Dubai, government department Directors General and e-governmentrelated staff, and the Executive Office. In Egypt, results of e-government readiness evaluation are made available to concerned entities (*e.g.* the head of an institution) and decision makers in government. In Jordan, results from the ministerial, project levels or national/sectoral level are analysed and presented to the Minister of ICT and communicated to the national E-Government Steering Committee, which reports directly to the Jordan Cabinet. In Morocco, results are first submitted to the national committee on e-government and then to all officials in the field (prime ministry and international partner organisations).

A general lack of evaluation culture in government and disinclination to measure government action seem to pose a serious challenge to the diffusion of e-government evaluation practice and represents the single most important obstacles to e-government evaluation in Arab countries.

Country questionnaires indicate that the main challenge to e-government evaluation activities is not the lack of understanding of the reasons for and benefits of measuring e-government, but a lack of widespread evaluation culture and experience in countries' administrations (see Figure 1). Six of 9 countries providing a valid answer to the question concerning barriers to e-government evaluation rated "lack of evaluation culture" as the first or second most important challenge to e-government evaluation, while the relatively least importance is assigned to "non-clarity of who should perform evaluation" and "non-clarity on the clients of evaluation".

While this document does not aim to provide an explanation of the absence or limitation of policy evaluation culture in the region – usually related to socio-economic-political factors rooted in individual country history and linked to the establishment of a modern state administration –some general explanatory factors could have limited the take-up of e-government evaluation policies in the region.

The lack of e-government evaluation culture could be partly explained by the relatively recent establishment (or in certain cases, the absence) of organisations to administer, manage, supervise and evaluate e-government planning and implementation across the administration. In a large number of countries, e-government initiatives are designed and implemented by individual e-government programme units with very loose institutional links with other ministries and agencies. This could prevent development of a common culture and experience of implementation and evaluation across government.

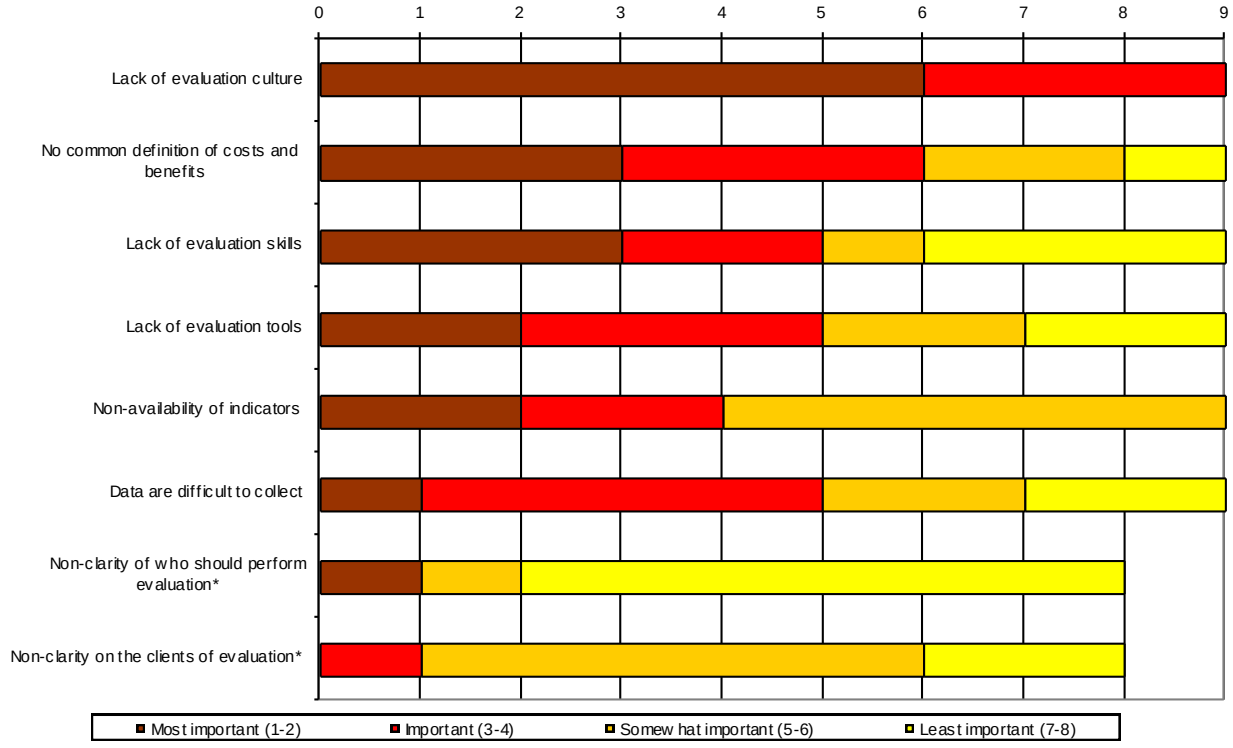
This conclusion is also reinforced by other data emerging from the questionnaire; respondents perceive the lack of specific evaluation skills as one of the most important challenges to e-government evaluation. International research and literature have stressed the role of education and skill development in e-government development in Arab countries. Specific training courses for managers and staff must focus on building evaluation skills, which should be diffused across administrative boundaries to establish and reinforce a proper evaluation and performance culture.

Countries now redesigning or implementing institutional and organisational frameworks supporting e-government are increasingly realising the importance of setting up and activating mechanisms to monitor and evaluate e-government progress. In Jordan, following the publication of a new e-government strategy, the main elements of a national framework for e-government planning, measurement and evaluation have been designed and are now being implemented.

Another hurdle could be the lack of funds specifically earmarked for evaluation activities. Most Arab countries are still focusing primarily on implementing e-government infrastructure and services, devoting relatively less attention to measurement of outcomes. As highlighted during the seminar, there might be a significant trade-off between implementation and evaluation, with countries trying to balance the need to make tangible progress with the necessity of evaluating whether achievements are in line with budgets and objectives.

The lack of a clear definition of e-government costs and benefits is the second most important barrier to evaluation for Arab countries, as well as for most OECD countries. OECD work in this area has shown that identification and measurement of the costs and benefits of e-government is fundamental to developing business cases and justifying large investments. The lack of common understanding of costs and benefits of e-government also impedes common measurement of progress and ability to benchmark and compare results across countries. OECD countries have produced a checklist of costs and benefits of e-government that can be used to evaluate the economic case for e-government projects. This checklist was made available as a background document for the seminar, for the benefit of Arab countries.

Figure 1. Obstacles to e-government measurement and evaluation



Note: 11 countries answered question n. 5 on obstacles (Algeria, Bahrain, Dubai, Egypt, Jordan, Lebanon, Morocco, Oman, Saudi Arabia, Sudan, and Tunisia); answers from Saudi Arabia and Morocco could not be aggregated, as some responses are invalid.

Note: *Not applicable to Tunisia.

Source: OECD (2007), Country questionnaires.

A range of evaluation methods and tools for e-government are available to Arab countries; however, most countries have not developed significant strategies to use these methods especially more sophisticated user-engaging tools.

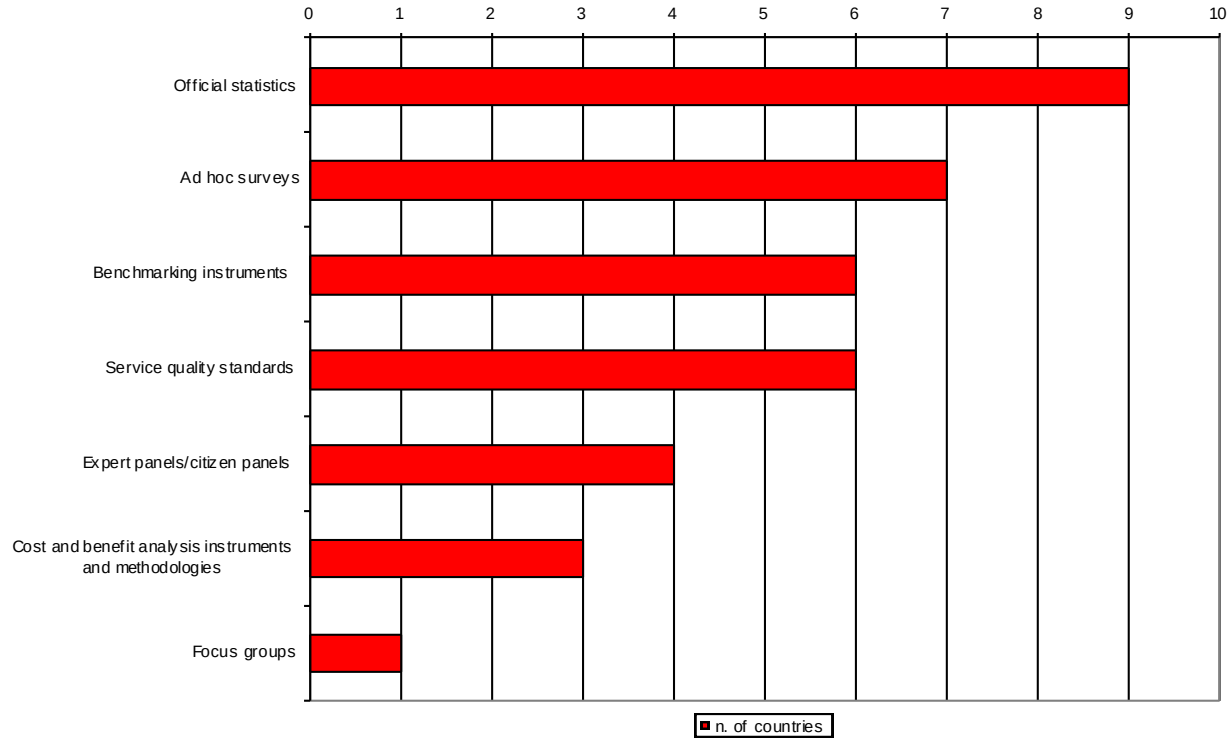
The survey results show that the lack of evaluation tools is considered an important challenge by the majority of Arab countries responding to the questionnaire. However, when looking at the current use of frameworks, methods and tools to measure and evaluate e-government in Arab countries the overall picture is somewhat more positive. Almost all countries responding to this question state that they use at least one type of evaluation tool/method for project evaluation at sectoral/ministry/agency or project level. This may lead to an argument that the key issue is the lack of experience and familiarity in using evaluation methods and tools, rather than their limited availability.

The Dubai seminar on measuring and evaluating e-government was intended to close this perceived knowledge gap and offered participants the opportunity to discuss tools, methods and practices in e-government measurement and evaluation at the project level; the concrete experience of OECD and Arab countries and international organisations served as the basis for discussion. One conclusion of the discussion is that Arab countries can benefit from a vast range of practical tools, methodologies and knowledge that could be potentially adapted to fit project-specific evaluation requirements of Arab countries.

The questionnaire results show that Arab countries have adopted *ad hoc* surveys and official statistics as the most common tools for e-government evaluation. These are particularly used for evaluating countries' infrastructure capacities and the use of the Internet by target populations. A majority of Arab countries responding to this question also mentioned that they have used or are using benchmarking instruments; for example, to compare project results among governments based on established indicators. Bahrain has developed and introduced a specific benchmarking methodology to evaluate e-government initiatives with respect to the UN government e-readiness index. Periodic global benchmarking exercises are also carried out as part of the e-government strategy.

Half of this group of Arab countries use service quality standards. Dubai eGovernment has identified two separate sets of quality standards applying to department Web sites (standards are set in terms of usability, common look and feel, and content) and on individual e-services accessed through these Web sites. In Oman, service level agreements (SLAs) are in place to ensure high quality standards for services to citizens and businesses.

Figure 2. Frameworks/methods and tools used to measure and evaluate e-government



Note: 11 countries answered question n. 4 on tools (Algeria, Bahrain, Dubai, Egypt, Jordan, Lebanon, Morocco, Oman, Saudi Arabia, Sudan, and Tunisia).

Source: OECD (2007), Country questionnaires.

On the other hand, relatively few countries use focus groups or expert panels, to undertake tasks such as validating data collected through large or *ad hoc* surveys. Focus groups usually involve a group of stakeholders, or a group of people with the same characteristics, providing qualitative information during a targeted discussion. They can be used to compare user experiences and perceptions on topics such as service delivery or the effectiveness of a specific programme[2]. The survey results indicate that, while the use of traditional evaluation tools (statistics, surveys) is more widespread, more user-focused methods (*e.g.* involving targeted user groups in direct consultation processes) are still far form reaching widespread adoption in the region. Table 4 shows the use of e-government tools by country.

Table 4. Frameworks/methods/tools used to measure and evaluate e-government

	Official statistics	*Ad hoc* surveys	Expert panels/ citizen panels	Focus groups	Cost and benefit analysis instruments and methodologies	Benchmarking instruments	Service quality standards	Others, please specify
Algeria	√*							
Bahrain	√	√	√	√		√	√	

[2] Diane Van Gils (2002), "Examples of Evaluation Practices used by OECD member countries to assess e-government", paper prepared for the Expert Seminar on Measuring and Evaluation of E-government (Paris, 22-23 September 2002).

Dubai	√	√	√		√	√	√	
Egypt	√		√			√	√	
Jordan		√**			***	√**	√**	
Kuwait								
Lebanon[1]								
Lybia								
Mauritania								
Morocco	√[2]	√[3]						ad hoc studies
Oman	√˜	√			√	√	√	
PNA								
Qatar								
Saudi Arabia	√	√			√	√	√	
Sudan	√							
Syria								
Tunisia	√	√	√				under elaboration	
Yemen								
UAE								

Note: 11 countries answered question n. 4 on tools (Algeria, Bahrain, Dubai, Egypt, Jordan, Lebanon, Morocco, Oman, Saudi Arabia, Sudan, and Tunisia).

* Experts from the national committee on e-government submit reports on their assigned areas on a quarterly, semi-annual and annual basis. The committee then elaborates a national report containing official statistics on the use of ICT for administrative simplification.

** These tools are currently used at the project level. A high-level mechanism and frameworks for planning, measurement and evaluation of e-government at the national level have been outlined in the e-government strategy for 2007-2209. This will lead to the establishment of full performance measurement and management system, and the definition of accompanying tools (panel, surveys, etc.).

*** Plans are underway to upgrade and update the business case framework and methodology.

[1]Minimal or incomplete initiatives

[2] This includes annual pools to monitor development of Internet subscriber categories according to services, and evaluation of mobile phone services.

[3] An online survey of administrative procedures was undertaken in 2006 to assess the clarity of online administrative forms, as well as evaluate the rate of use of these forms.

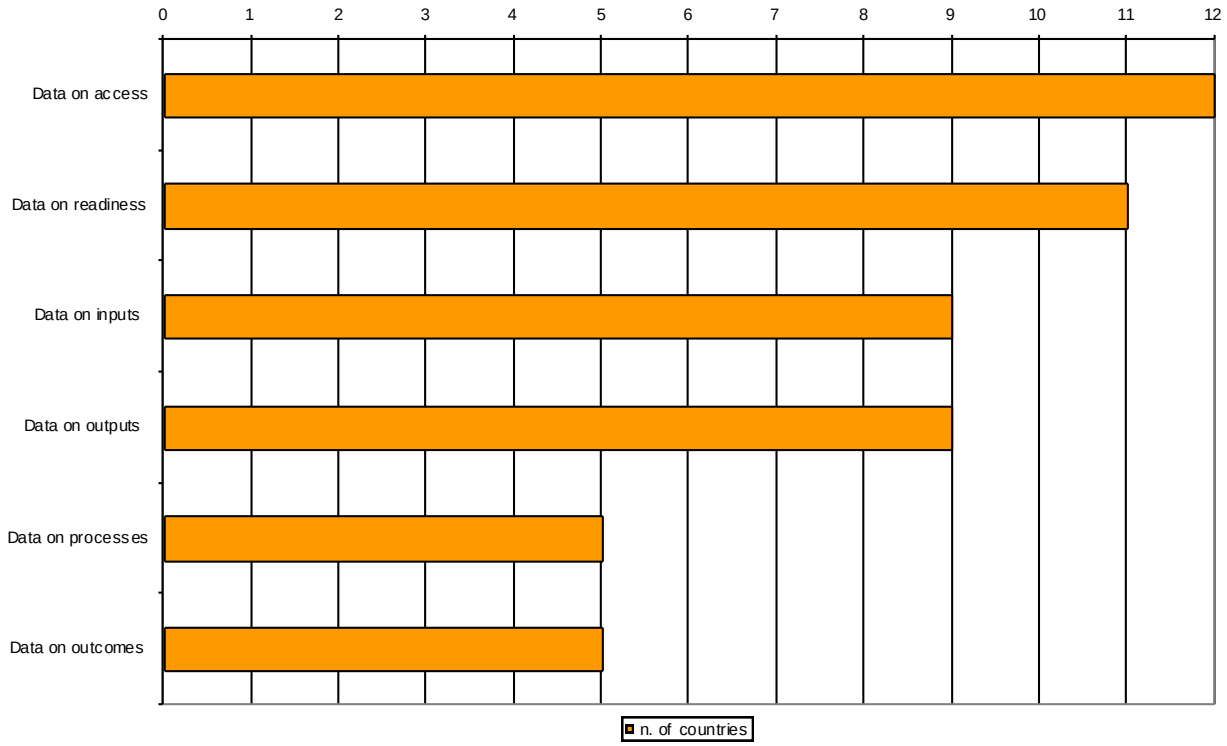
˜ Provided via Ministry of National Economy Statistical Reports.

Source: OECD (2007), Country questionnaires.

Overall, the status of e-government data collection and availability in the Arab region is mixed: readiness and access data seem to be collected by and available in most Arab countries, while data on outcomes is not yet systematically collected and uniformly available across the region.

All Arab countries responding to the questionnaire on data availability (12) mention that data on e-readiness (*e.g.* statistics on the digital divide, legal framework) and access to ICT (*e.g.* number of computers per households, infrastructure, and network penetration) has been collected and is currently available. Nine countries of 12 have also reported collecting some data on e-government inputs (*e.g.* cost of IT hardware) and outputs (*e.g.* number of service online). Not surprisingly, a relatively limited number of countries are collecting data on processes (*e.g.* time saved by process automation) and outcomes (*e.g.* level of satisfaction of e-government users). (See Figure 3). More details on data availability for each country are provided in Table 5.

Figure 3. Type of e-government data available in Arab countries



Note: 12 countries answered question n. 6 on data availability (Algeria, Bahrain, Dubai, Egypt, Jordan, Lebanon, Morocco, Oman, Saudi Arabia, Sudan, Syria and Tunisia).

Source: OECD (2007), Country questionnaires.

Table 5. E-Government data in Arab countries: Overview and sources

Bahrain	Data on e-readiness is available for all government agencies through e-readiness assessments and surveys of citizens and businesses. Data on access is available through surveys of citizens and business. Data on inputs is available through vendor discussions, past project implementation and industry surveys. Data on process is available through a detailed as-is assessment of all government agencies. Data on outputs is available as part of the detailed government strategy roadmap.
Dubai	Data on access and readiness include PC, Internet and mobile penetration rates. Data on inputs includes internal IT consumption figures. Data on outputs includes total number of services (divided into categories), number of services online, government Web site quality ranking, synergetic service usage and cost savings through synergetic services, e-government customer awareness, and e-service quality rankings (planned for 2007). Data on outcome, including customer e-service adoption and customer e-service satisfaction, will be collected starting in 2007. At the project level, available data includes number of projects delivered on time, number of projects that comply with project management guidelines, number of deliverables delivered on time. Data is available through Dubai government annual reports, quarterly reports, e4all magazine, etc.
Egypt	Main available indicators are the following: 1) indicator on digital availability; 2) e-indicator for measuring the information community; 3) indicator of technological readiness of public institutions. Data on readiness is available through regular international reports. Data on access is available through the Ministry of Information and Communication Technology. Data on outputs is made available to the public at large on the Egyptian government portal.
Jordan	The e-Readiness Assessment Report (published in 2002 and 2006) provides a high-level whole-of-ICT-sector view with some reference to the use of ICT in government. Data on government readiness is available only for government entities that have worked with the E-government Programmeto deliver certain services. Data collection is undertaken at the project level, but no national efforts to collect readiness data for the whole of government have been undertaken in Jordan so far. The assessment data are available to government, but are not issued to the public. Responsibility for collecting data on access rests within the ICT policy unit in the Ministry of Information and Communication Technologies. Data on processes is collected for the e-services delivered by the E-government Programmeonly. Data on outcome is available at the project level (*e.g.* a satisfaction survey launched after each service is put online).
Lebanon	Readiness data for Lebanon was collected on the national level in 2003 by OMSAR and UNDP. A number of first-hand data sources have been used including ISPs, the professional computer Association, ITU, and others.
Morocco	The National Agency for the Regulation of Communication is in charge of collecting data on e-readiness and on access. Data on inputs is available through the Ministry of Finance and Privatization. The Ministry for the Development of Public Sectors is responsible for collecting data on outputs and outcomes.
Oman	Data on access is available through the Ministry of National Economy and the Telecommunication Regulatory Authority. Data on inputs is collected by the Information Technology Authority (ITA) (not public). Data on processes is gathered by ITA for e-service prioritisation and integration into the government gateway portal (under implementation).
Sudan	At present the main data collected is on e-readiness (collected through a national survey). Measurement of ministry readiness is undertaken at the national level. A national working group has been established to work towards producing e-government indicators. Data on access refers to DSL broadband connections. Data on outputs (*e.g.* number of services online) is also collected.
Syria	Data on access and readiness include PC, Internet and mobile penetration rates.

Concluding note

The data presented in this document has been collected from the responses to a country questionnaire; it provides an example of a dataset on a specific e-government topic (*i.e.* measurement and evaluation). This is the third of a series of thematic data collection exercises to support capacity-building seminars organised within the framework of GfD Working Group 2 activities (in addition to e-procurement and personalised portals). This thematic data will be further enriched with general data on e-government frameworks in Arab countries. This combined e-government dataset will serve as a basis for the production of an e-government report on Arab countries that is planned to be prepared in 2008.

ANNEX 1: FINAL AGENDAS

WELCOME COCKTAIL: 11 March 2007

19.00	Dubai School of Government, Convention Tower, 13th Floor

HIGH LEVEL SEMINAR: 12 MARCH 2007

9.00-9.30	**OPENING AND INTRODUCTION**
	Opening remarks by the Arab chairperson **Mr Moosa Al Hashemi**, Head, Delivery Unit, The Executive Office, Dubai, the OECD country co-chair, the DSG and the OECD (max 1 min each). ▪ Dr. Chang-Kil Lee, *E-Government Policy Advisor to the Ministry of Government Administration and Home Affairs (MOGAHA), Korea* ▪ Mr Christian Vergez, *Head of Division, Innovation and Integrity, Public Governance and Territorial Development Directorate, OECD* ▪ Prof. Tarik Yousef, Dean, Dubai School of Government, Dubai Brief overview of the purpose, objectives and structure of the meeting by DSG (max 2-3 minutes)
9.30-10.20	**SESSION 1: Why do we measure and evaluate e-government: opportunities and challenges**
	This session will introduce the topic of the seminar by discussing 1) why governments need to measure and evaluate e-government (e.g. prioritise actions, justify investments, assess impacts) and 2) what are the challenges that governments have to face in measuring and evaluating e-government progress (e.g. lack of evaluation culture, poor evaluation skills, measurement problems). Discussions will be opened by presentations from invited experts from OECD and Arab countries. ▪ Measuring and evaluating ICT enabled public sector transformation: opportunities and challenges, Edwin Lau, *Project Leader, OECD E-government Project, OECD* (max 10 minutes) ▪ Opportunities and challenges of measuring and evaluating e-government performance in the Arab world, Dr. Ehab Moustafa, *Ministry Advisor, Advisory Council, Ministry of Labour, UAE* (max 10 minutes)

	Followed by discussion Questions for discussion: 1. Why do Arab countries need to evaluate e-government progress? What are the key objectives of e-government evaluation? (e.g. understand demand, assess the benefits to users, justifying expenditures on e-government) 2. What are the main challenges (institutional, capacity-related, technical) Arab countries have to face when undertaking evaluation activities and what has been done to overcome them? Background documents: Collection of country papers; Doc n3: Monitoring and Evaluating E-government in OECD countries; Doc n4: The business case for e-government
10.20-10.50	**COFFEE BREAK**
10.50-13.10	**SESSION 2: Evaluating e-government: toolkits and methods for project evaluation**
	This section focuses on illustrating and discussing tools and practices in e-government measurement and evaluation at programme/project level starting from the concrete experience of OECD and Arab countries. Examples of toolkits developed by international organisations will also be presented. Each set of presentations will be followed by discussion. ▪ The experience of France with building up a methodology to measure and evaluate the value of e-government projects (the case of MAREVA), *Mr Fayçal Mecheri, Project Leader, E-government Unit, Ministry of Economy, Finance and Industry, France* (max 8 min) ▪ Experiences on e-government measurement and evaluation in UAE, from Ms Rehab Lootah, E-Services Provisioning Manager, Dubai eGovernment (max 8 min) ▪ Monitoring and evaluating toolkits for e-government developed by the World Bank, Carlo Maria Rossotto, *Senior Regulatory Economist, Regional Coordinator for Middle East and North Africa, Policy Division, Global Information and Communications Technologies, World Bank* (max 8 min) ▪ Measuring and evaluating performance at programmelevel: the experience of Norway with the Hoykom initiative on supporting broadband communication in the public sector, Mr. Kjell Ove Kalhagen, *Senior Advisor, Department of IT Policy, Ministry of Government Administration and Reform* (max 8 min) ▪ Korea's e-government evaluation methodology and practice: the use of indicators to assess progress, Ms. Su-Mi Lee, *Deputy Director, E-Government Headquarters, Ministry of Government Administration and*

	Home Affairs (MOGAHA). (max 8 min) ▪ Evaluating service quality at operational level: the experience of Canada with implementing common tools to measure and evaluate service quality for better service delivery (Common Measurement Tool and benchmarking practices), Ms Vicki Morrison, *Program Manager, Institute for Citizen-Centred Service, Canada* (max 8 min) ▪ Measuring and evaluating e-government: practice and tools – the case of Egypt, Eng. Ahmed Kamal, *Projects Manager, e-Government Program, Ministry of State for Administrative Development, Egypt* (max 8 min) Presentations will be followed by two session of discussions (max 30 min each) Questions for discussion: 1. How can measurement and evaluation activities be integrated in the e-government policy-making cycle and become key components of any e-government implementation strategy? 2. What are the available tools and methodologies to measure and evaluate e-government cost and benefits? How to ensure that these tools are used across government? 3. What methods and tools are available for agencies to measure the level of satisfaction of users with online service? How to ensure that results of evaluation are comparable across government? Background documents: Collection of country papers; OECD country presentations; Doc n3: Monitoring and Evaluating E-government in OECD countries; Doc n4: The business case for e-government; Doc n5: Draft Summary of the OECD report on Benefit Realisation Management
13.10-14.30	**LUNCH**
14.30-16.00	**SESSION 3: National and international indicators for e-government : progress to date**
	The purpose of this section is to provide an overview and discuss current selected experiences (and related challenges) in building up indicators to measure and evaluate e-government progress in Arab and OECD countries. ▪ E-government readiness indicators in the Arab world: overview of the work of the UN Expert Group on Information and Communications Technology Indicators Adoption and Data Collection in Arab countries (Cairo, 13-15 February 2007), Mr. Abdulilah Dewachi, *Regional Advisor on ICT, United Nations Economic and Social Commission for Western Asia, ESCWA.* (max 8 min) ▪ Monitoring the overall performance of e-government at European level: the e-Europe benchmarking initiative, Mr. Juan Arregui Mc Guillon, *Policy Developer, Directorate General Information Society and Media, European*

	Commission and Helene de Chanterac, *Government expert, Embassy of France in Bahrein.* (max 8 min) ▪ E-government measurement, evaluation and use of indicators – objectives and challenges: Dr. Richard Heeks, *Senior Lecturer, Institute for Development Policy and Management, Manchester University, UK* (max 8 min) Each presentation will be followed by discussion (max 20 min) Questions for discussion: 1. What kind of approach to developing e-government indicators is the most appropriate for Arab countries? How to move from developing readiness and access indicators towards more hard indicators measuring e-government outcomes? 2. What are the challenges in building common indicators in e-government for the region? How can existing regional initiatives provide a platform for Arab countries to make progress in this area? 3. What does it mean to measure public sector transformation through ICT? How can Arab countries benefit from OECD efforts to develop indicators in this area? Background documents: OECD, WB, EU presentations; Paper from Dr Heeks "Benchmarking eGovernment: Improving the National and International Measurement, Evaluation and Comparison of eGovernment"
16.00 – 16.30	**COFFEE BREAK**
16.30-18.00	**Closing session: lessons learned and next step in measuring and evaluating e-government in the Arab world**
	In this section Arab participants will have the opportunity to 1) identify the lessons learned from presentations and meeting discussions and 2) discuss the next steps and lines of action towards a definition of a programme of work in the area of e-government measurement and evaluation. ▪ Wrap up of discussions and main conclusions: Edwin Lau, OECD, followed by discussion (max 30 min) ▪ Defining the next steps: round table on "**Data collection on e-government in the Arab world: what is available today and how to move forward?**" The result of this discussion will feed into a checklist of e-government data which 1) will outline the kind of dataset already available in Arab countries and 2) will identify areas where further data need to be collected. ▪ Closing remarks by the Arab chairperson, the OECD country co-chairs Background documents: Collection of country papers

WORKING GROUP MEETING: 13 MARCH 2007

9.00-9.30	**OPENING AND INTRODUCTION**
	Opening remarks by the Arab chairperson **Mr Moosa Al Hashemi**, Head, Delivery Unit, The Executive Office, Dubai, the OECD country co-chair, the DSG and the OECD (max 1 min each). Brief overview of the purpose, objectives and structure of the meeting by OECD Secretariat (max 2-3 min)
9.30-11.00	**SESSION 1: Overview and update on recent e-government developments**
	The aim of this session is to 1) bring participants up to date on the results of the activities carried in the framework of WG 2, 2) give participants the opportunity to report on the progress made in implementing their Action Plan on e-government. ▪ Summary and approval of the conclusions of the High Level Seminar on Evaluating and Benchmarking E-government by DSG (Dubai, 12 March 2007) (5 min) ▪ Report on the High Level Seminar on Personalised Service Portals (Ministry of Economy, Finance and Industry, Paris - 11 December 2006), Mr Fayçal Mecheri*, Project Leader, E-government Unit, Ministry of Economy, Finance and Industry, France (*5 min) ▪ Report on the special session on exchange of experiences on the basis of OECD work on e-government (12 December, Annex Monaco, OECD Headquarter, Paris), including finalisation of the OECD transformation report, by Christian Vergez and Edwin Lau, OECD (5 min) ▪ Report on the results of the panel on "The E-government revolution: what went wrong" organised by DSG in the context of the Arab Strategy Forum (Dubai, 4-6 December 2006), by Fadi Salem, *Research Associate, DSG*, followed by comments from Christian Vergez, *OECD* (5 min) ▪ Report on the status of implementation of Country Action Plans in the field of e-government and administrative simplification and challenges encountered – interventions from Morocco, Tunisia, Lebanon, UAE (Dubai), Bahrain, Jordan, Egypt. ▪ Short overview of the progress made in e-government development in other Arab countries – presentation from Saudi Arabia, Oman and Sudan. Expected output: follow up on the implementation of Action Plans and the monitoring of e-government initiatives in the region Background document: doc n6) Draft proceedings of the High Level Seminar on Personalised Service Portals (10-11 December 2007, Paris)
11.00-11.30	**COFFEE BREAK**

11.30-13.00	**SESSION 2: Preparation of the Programme of Work for the Working Group 2**
	This section will focus on planning the next round of capacity building activities to be conducted in support of the implementation of National Action plans. Discussion will focus in particular on how the design, format, and timing of the high level seminars could be improved and better aligned in support of the implementation of national action plans. WG 2 delegates will also have the opportunity to discuss the proposals made by Arab countries to expand the set of activities to include peer-to-peer visits and support to Arab country training activities. Interventions from ▪ **Morocco**: Ms Fatna EL-Farsi, *Department Head, Information System Directory, Ministry of Public Sector Modernisation, Morocco* (max 5 min) ▪ **Egypt**: Eng. Ahmed Kamal, *Projects Manager, e-Government Program, Ministry of State for Administrative Development, Egypt* (max 5 min) ▪ **Tunisia:** Ms Khedija Zammouri, *Director General, E-government Unit, Prime Minister's Office, Tunisia* (max 5 min) Discussion Expected output: draft work plan highlighting the next round of activities for 2007-2008
13.00-14.30	**LUNCH**
14.30-16.00	**SESSION 3: Preparation of the Programme of Work for the Working Group 2 (continue)**
	This session will focus on discussing and approving a proposed framework for Country Peer Reviews in Arab countries. The OECD secretariat will present a draft proposal for e-government peer reviews, including main purpose, methodologies and analytical framework. Arab delegates will have the opportunity to comment on the proposal and provide input for its improvement. "Draft project proposal of Peer reviews of e-government in Arab countries"; Presentation by Marco Daglio, *Administrator, GfD Initiative, OECD* (5-10 min) followed by comments: Interventions from ▪ **Egypt**: Eng. Ahmed Kamal, *Projects Manager, e-Government Program, Ministry of State for Administrative Development, Egypt* (max 5 min) ▪ **Norway:** Mr. Kjell Ove Kalhagen, *Senior Advisor, Department of IT Policy, Ministry of Government Administration and Reform* (max 5 min) ▪ **DSG:** Dr. Yasar Jarrar, *Executive Dean, DSG* (max 5 min) *Tour de table*: how can the framework be improved to 1) take into account the specific social, economic and development context of Arab countries and 2) allow for regional comparison.

	Expected outputs*:* discussion and approval of a framework for country peer reviews Background documents: Draft Project charter for E-government Peer Review in Arab countries
16.00 – 16.30	**COFFEE BREAK**
16.30-17.30	**CLOSING SESSION**
	In this session WG 2 delegates will discuss WG 2 contribution to the next meeting of the GfD Steering Group at ministerial level which will take place in fall 2007. Countries are invited to discuss a proposal to produce a draft regional synthesis report on e-government implementation to be adopted by the group and presented in a preliminary version at the next Steering Group Meeting at Ministerial Level in Fall 2007. ▪ Short briefing on the next GfD Steering Group meeting at ministerial level, Christian Vergez, *Head of Division, Innovation and Integrity OECD* ▪ Presentation of a proposal to produce a draft synthesis report – Marco Daglio, *Administrator, GfD Initiative, OECD* ▪ Comments from Arab countries ▪ Closing remarks by the Arab chairperson, the OECD country co-chairs, the DSG and the OECD

ANNEX 2: LIST OF PARTICIPANTS

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ANNEX 3: COLLECTION OF BACKGROUND COUNTRY PAPERS SUBMITTED BY ARAB COUNTRIES

Request for country information

In preparation to the High Level Seminar on Measuring and Evaluating E-government, the OECD Secretariat requested that countries submit short country fact sheets which will provide relevant background information for the meeting. The country fact sheets have been compiled by 12 countries (Algeria, Bahrain, Dubai, Egypt, Jordan, Lebanon, Morocco, Oman, Saudi Arabia, Sudan , Syria, Tunisia) following the guidelines and structure illustrated below.

Topic

The country papers focus on Arab country experience in measuring and evaluating e-government and in particular look at: 1) whether Arab country are measuring and evaluating e-government progress and at which level (national and/or project level), 2) what are the purpose and objectives of measurement and evaluation initiatives, 2) what tools and methodologies are used to evaluate e-government, 3) what are the obstacles and challenges to evaluation, 4) what kind of data on the use of ICT in government is available.

Structure of the country papers

In order to ensure comparability among papers, it was requested that countries structure the paper along the following lines:

Question 1: Have you undertaken or are you undertaking any activity focused on measuring and evaluating e-government in your country? If yes, please explain and state whether they were/are conducted at 1) national level, 2) sectoral level (e.g. health, education), 3) ministry/agency level or 4) project level.

Question 2: What are the main purpose and objective of e-government measurement and evaluation at national or sectoral level? Are measurable e-government targets and goals included in your national or sectoral e-government strategy? If yes, have indicators been developed to measure them?

Question 3: What is the purpose and objective of e-government measurement and evaluation at ministry/agency/project level (e.g. ex ante: to argue the case for new projects, or ex post: to assess efficiency and effectiveness)? Is e-government measurement and evaluation mandatory for ministries and agencies? To whom the results of e-government evaluation is made available (e.g. within the organization, to political decision makers, outside government)

Question 4: Have frameworks/methods/tools been developed and use to measure and evaluate e-government at sectoral / ministry/agency and/or project level? If yes, please indicate which ones and provide a short description below:

a) officials statistics (e.g. number of PCs at home)	
b) ad-hoc surveys (e.g. on customer satisfaction)	
c) expert panels / citizen panels	
d) focus groups	

e) cost and benefit analysis instruments and methodologies	
f) benchmarking instruments	
g) service quality standards	
h) other, please specify	

Please provide a short description of the ticked frameworks/methods/tools below:

Question 5: What are the main obstacles for e-government evaluating in your country? Please indicate them in ascending order (1: most important, 8: least important)

a) lack of evaluation tools	
b) lack of evaluation culture	
c) lack of evaluation skills	
d) no common definition of cost and benefits	
e) data are difficult to collect	
f) no indicators available	
g) not clear who are the clients of evaluation	
h) not clear who should perform evaluation	
i) other, please specify	

Question 6: What kind of e-government data that you are already collecting is available today in your country?

a) data on readiness (e.g. statistics on digital divide, IT education of the population)	
b) data on access (e.g. number of computer per households, broadband penetration)	
c) data on inputs (e.g. cost of IT hardware)	
d) data on processes (e.g. time saved by process automation)	
e) data on outputs (e.g. number of services online)	
f) data on outcome (e.g. level of satisfaction of e-government users)	
g) other, please specify	

Please list below the data available for each category of data. Please also state whether this data is publicly available and where to find them.

Question 7: What would you see as the main challenges in building common indicators in e-government for the region? What next steps would need to be taken to at regional level to make progress in this area?

ALGERIA

Question 1: Have you undertaken or are you undertaking any activity focused on measuring and evaluating e-government in your country? If yes, please explain and state whether they were/are conducted at 1) national level, 2) sectoral level (e.g. health, education), 3) ministry/agency level or 4) project level.

Algeria's experience in e-government is too brief to discuss measuring and evaluating e-government at this point in time. However, recent surveys analysing citizens' satisfaction with public service performance have provided positive results.

Question 2: What are the main purpose and objective of e-government measurement and evaluation at national or sectoral level? Are measurable e-government targets and goals included in your national or sectoral e-government strategy? If yes, have indicators been developed to measure them?

There are three main objectives for measuring e-government on the national level:
- Establishing a real political administration.
- Adopting a unified strategic plan common to all ministerial departments.
- Establishing organisational structures headed by the prime minister with the co-operation of all ministerial departments which have political influence.

Question 3: What is the purpose and objective of e-government measurement and evaluation at ministry/agency/project level (e.g. ex ante: to argue the case for new projects, or ex post: to assess efficiency and effectiveness)? Is e-government measurement and evaluation mandatory for ministries and agencies? To whom the results of e-government evaluation is made available (e.g. within the organization, to political decision makers, outside government)

The main aim of measuring e-government is to reform the public sector and to simplify administrative procedures in Algeria. Algeria strives to realise this objective by creating a strategic national committee involving various ministerial departments.

The Judicial sector, for instance, has focused on projects aiming at serving citizens in general. The project for facilitating and following up on cases allows citizens to submit and follow up their files in a short time. Another project was established to help the disabled (blind, handicapped…) address courts to handle their problems.

It is the mandatory responsibility of the Ministry of Finance to measure and evaluate e-government. This is undertaken during the discussion of the budget with each department and in justifying all individual e-government projects.

Question 4: Have frameworks/methods/tools been developed and use to measure and evaluate e-government at sectoral / ministry/agency and/or project level? If yes, please indicate which ones and provide a short description below:

Regarding tools and means of evaluation, the national committee on e-government has a number of experts who submit reports and summaries of their completed work on a quarterly, semi-annual and annual basis. The committee then elaborates the national report containing official statistics on the use of ICT for administrative simplification.

- Algeria has elaborated a project allowing each family to acquire its own personal computer and Internet access. Algeria has also worked on reducing prices, facilitating loans and instalments without imposing interest rates.

- Furthermore, various projects have been established allowing citizens to relate better to the judicial system and providing them with legal documents (legal record, sentences, nationality …) in rapid manner. These projects were welcomed by citizens.

Question 5: What are the main obstacles for e-government evaluating in your country? Please indicate them in ascending order (1: most important, 8: least important)

Naturally, each project is facing a number of obstacles impeding its implementation, some of which are:

1. the absence of a culture of evaluation.
2. the absence of evaluation skills.
3. the lack of evaluation tools.
4. difficulty in collecting data.
5. the absence of indicators.
6. the absence of a common definition of costs and benefits.

Question 6: What kind of e-government data that you are already collecting is available today in your country?

The following data on e-government is collected:

- Data on readiness, for instance phone connections (landlines and mobiles).
- Increasing numbers of ADSL users and public Internet access points.
- Data on access, for instance multi-purpose computers were made available in the post office allowing citizens to access the Internet and to familiarise themselves with it.
- Some processes were accomplished and resulted in saving time such as retrieving legal records and nationality certificates from the Ministry of Justice, retrieving administrative accounts immediately, facilitating gray cards and construction contracts, etc.

Question 7: What would you see as the main challenges in building common indicators in e-government for the region? What next steps would need to be taken to at regional level to make progress in this area?

The main challenges facing any attempt to establish common indicators in the Arab region are:

- Developing content for information systems and information and communication technologies by giving top priority to partnerships between Arab countries.
- Establishing an Arab fund allowing Arab countries to finance projects aiming at serving citizens and promoting the best use of ICT within families.

BAHRAIN

Question 1: Have you undertaken or are you undertaking any activity focused on measuring and evaluating e-government in your country? If yes, please explain and state whether they were/are conducted at 1) national level, 2) sectoral level (e.g. health, education), 3) ministry/agency level or 4) project level.

Country focus on measuring and evaluating e-government

The Government of Bahrain has defined a common approach to track progress of all components in the Kingdom's e-government strategy. This monitoring and evaluation framework, applicable at all stages of strategy implementation, is envisaged to create an institutional mechanism for organisation, formulation, activation, monitoring, reporting, controlling and disseminating results from monitoring and evaluation for all projects.

The monitoring and evaluation mechanism is operated at the national level as well as at the project level. This level of abstraction is addressed by designing and incorporating project-specific indicators in the monitoring and evaluation framework.

Question 2: What are the main purpose and objective of e-government measurement and evaluation at national or sectoral level? Are measurable e-government targets and goals included in your national or sectoral e-government strategy? If yes, have indicators been developed to measure them?

Objective of e-government measurement and evaluation at the national level

The evaluation of e-government is done with respect to expected outcomes. In Bahrain's e-government strategy, the outcomes have been derived from translating the national e-government vision into measurable targets. Hence, there is a need to measure the progress of e-government at the national level also.

The e-government strategy begins with a vision statement with its elements translating into different customer-centric outcomes. For achieving these outcomes, there are specific measurable targets/goals identified for each of the outcomes. To measure progress against these targets/goals, key indicators have been identified along with their measurement mechanisms.

Question 3: What is the purpose and objective of e-government measurement and evaluation at ministry/agency/project level (e.g. ex ante: to argue the case for new projects, or ex post: to assess efficiency and effectiveness)? Is e-government measurement and evaluation mandatory for ministries and agencies? To whom the results of e-government evaluation is made available (e.g. within the organization, to political decision makers, outside government)

Objective of e-government measurement and evaluation at the project level

For a successful realisation of benefits in terms of customer satisfaction, it is important to track changes from baseline conditions to desired project-level outcomes (achievement of the defined services level for each of the projects) and to validate results achieved, and how and why they were or were not achieved. In this scenario, national-level indicators will not give a detailed snapshot of the progress and therefore, it warrants conducting monitoring and evaluation at the project level as well.

The e-government strategy mandates every government ministry and organisation to develop indicators for each of their e-government projects and regularly measure them. The results of the monitoring and evaluation exercise are available with the various government organisations and are envisaged to be shared with other stakeholders outside the government domain in the near future.

Question 4: Have frameworks/methods/tools been developed and use to measure and evaluate e-government at sectoral / ministry/agency and/or project level? If yes, please indicate which ones and provide a short description below:

Use of frameworks / methods / tools for measurement and evaluation of e-Government

a) Official statistics (e.g. number of PCs at home)	✔	The National Demographics Census carried out on a 10-year basis provides these statistics.
b) Ad-hoc surveys (e.g. on customer satisfaction)	✔	National Customer (citizen and business) Surveys; Measurement of Customer Satisfaction Index.
c) Expert panels	✔	The Technical Committee for Information and Communication Technology (TCICT) appointed by the Government of Bahrain as advisory for e-government.
d) Focus groups	✔	Special groups have been formed within the e-government programme management structure for various modules of implementation.
e) Cost and benefit analysis instruments and methodologies	✘	-
f) Benchmarking instruments	✔	Benchmarking methodology prepared for evaluating various e-government initiatives with respect to the UN Government e-readiness Index; Periodic global benchmarking exercise envisaged as part of the e-government strategy.
g) Service quality standards	✔	E-Government Strategy ensures service quality standards through the citizen charters for each government agency (incorporating the SLAs).
h) Other, please specify	✘	-

Please provide a short description of the ticked frameworks/methods/tools below:

Question 5: What are the main obstacles for e-government evaluating in your country? Please indicate them in ascending order (1: most important, 9: least important)

Level of importance of possible roadblocks in measurement and evaluation of eGovernment

a) Lack of evaluation culture	1
b) Lack of evaluation skills	2
c) Non-availability of indicators	3
d) Lack of evaluation tools	4
e) Data are difficult to collect	5
f) No common definition of cost and benefits	6
g) Non-clarity on the clients of evaluation	7
h) Non-clarity on who should perform evaluation	8
i) Other, please specify	-

Question 6: What kind of e-government data that you are already collecting is available today in your country?

E-Government Data available

a) Data on readiness (e.g. statistics on digital divide, IT education of the population)	Available through readiness assessment of all government agencies and surveys of citizens & businesses.
b) Data on access (e.g. number of computer per households, broadband penetration)	Available through national surveys of citizens & businesses.
c) Data on inputs (e.g. cost of IT hardware)	Available through vendor discussions, past project implementations and industry surveys (used in strategy implementation budgeting).
d) Data on processes (e.g. time saved by process automation)	Available through a detailed as-is assessment of all government agencies.
e) Data on outputs (e.g. number of services online)	Available as part of the detailed e-government strategy roadmap.
f) Data on outcome (e.g. level of satisfaction of e-government users)	Framework is available for measuring outcomes and data being collected as part of the strategy implementation.
g) Other, please specify	-

Question 7: What would you see as the main challenges in building common indicators in e-government for the region? What next steps would need to be taken to at regional level to make progress in this area?

Challenges in building common indicators for e-government in the region

The two key challenges in building common indicators for e-government in the region are:

1. Every country demonstrates different dynamics in terms of the focus areas, national priorities, current level of readiness/progress in e-government and initiatives being undertaken. Accordingly, each country's e-government strategy details a different vision from which the outcomes derived are also different.
2. Even in the case of common indicators, the way of measurement for each of the indicators is different depending on the demographics of the population.

These challenges can be overcome by allowing every country to have its own e-government performance indicators and simultaneously developing certain generic/overarching performance indicators that can be measured for all regional countries at a regional level.

The next steps for the following will be:

- All regional countries to share their e-government measurement and evaluation system including the indicators and their measurement mechanisms.
- A special group to be formed with representation from every participant country to study these systems in detail and arrive at a common list of indicators taking into account all dynamics.
- After finalisation of the indicators, the same special group to meet and develop measurement mechanisms.
- The top management stakeholders to decide on a institutional structure and associated processes to conduct this exercise on a regular basis.

DUBAI

Question 1: Have you undertaken or are you undertaking any activity focused on measuring and evaluating e-government in your country? If yes, please explain and state whether they were/are conducted at 1) national level, 2) sectoral level (e.g. health, education), 3) ministry/agency level or 4) project level.

The centralized entity in Dubai Government, namely DEG (Dubai eGovernment), oversees and monitors the public e-services (G2C and G2B) and strategic progress at the high level. DEG formulates the strategy and monitors its implementation by defining strategic performance targets, and measures the overall strategic performance.

Dubai Government is a local government (emirate-level government) within the United Arab Emirates. Hence, measurement and evaluation is conducted:

- at the local government level.
- at the agency level (Government Departments level).
- at the project level within the centralised entity for the centralised projects undertaken by DEG.

Additionally, it is at the discretion of the Government Departments to further apply other internal measurements.

Question 2: What are the main purpose and objective of e-government measurement and evaluation at national or sectoral level? Are measurable e-government targets and goals included in your national or sectoral e-government strategy? If yes, have indicators been developed to measure them?

The main objectives of Dubai eGovernment measurement and evaluation are:

- To ensure compliance with strategy.
- To monitor overall progress against targets.
- To ensure transparency, accountability and awareness.
- To take corrective actions.

DEG has identified measurable and strategic targets for the local government level e-government initiative and has already put in place the requisite:

- Processes.
- Responsible and accountable persons.
- Technology solutions to measure targets compliance. DEG has also formulated various indicators to gauge the overall effectiveness and, to a certain extent, the efficiency of the Dubai eGovernment initiative.

Question 3: What is the purpose and objective of e-government measurement and evaluation at ministry/agency/project level (e.g. ex ante: to argue the case for new projects, or ex post: to assess efficiency and effectiveness)? Is e-government measurement and evaluation mandatory for ministries and agencies? To whom the results of e-government evaluation is made available (e.g. within the organization, to political decision makers, outside government)

Dubai eGovernment has implemented a unified and centralised agency level eServices Strategic Progress Monitoring system. The main purposes and objectives of this centralised agency level measurement system are:

- To ensure strategic target compliance.
- To create productive and healthy competition among government departments.
- To align government departments around standards and better practices.

- To ensure transparency and accountability.
- To recognise the best achievers.
- To measure effectiveness and to a certain extent efficiency.

The government departments (agencies) go beyond this centralised strategic measurement and progress monitoring system and adopt their own measurement systems internally as well. The centralised strategic measurement and progress monitoring system is implemented by DEG (centralised entity) and measurements are conducted periodically depending on the indicator (*e.g.* monthly, quarterly, annually, etc). The measurement results are made available to:

- DEG.
- Government Department Director Generals and e-government related staff.
- The Executive Office.

The project-level measurement is currently decentralised across the various government departments. DEG, as the centralised entity, has a Program Management Office (PMO) that tracks all the projects conducted by DEG. The measurement of projects includes, among others:

- Project status tracking.
- Project deliverables.
- Project timelines compliance.

The project-level results in DEG, as measured weekly or bi-weekly, are made available to all the staff in DEG including the Director.

Question 4: Have frameworks/methods/tools been developed and use to measure and evaluate e-government at sectoral / ministry/agency and/or project level? If yes, please indicate which ones and provide a short description below:

DEG currently utilises an e-services strategic progress monitoring framework for the overall eGovernment initiative. DEG also utilises the Balanced Scorecard as the general framework for its internal management practices. The e-services strategic progress monitoring is embedded within the overall Balanced Scorecard framework.

a) officials statistics (e.g. number of PCs at home)	√
b) ad-hoc surveys (e.g. on customer satisfaction)	√
c) expert panels / citizen panels	Few Govt. Depts.
d) focus groups	
e) cost and benefit analysis instruments and methodologies	√
f) benchmarking instruments	√
g) service quality standards	√
i) other, please specify	√

Please provide a short description of the ticked frameworks/methods/tools below:

a) DEG measures various e-government indicators such as number of services in the government departments, e-enablement ratio, cost savings through synergistic services, etc. DEG also collects various ICT indicators such as PC penetration, Internet penetration, mobile penetration, etc.
b) DEG provides a synergistic electronic survey service for the government departments. Government Departments utilise this eSurvey service to conduct their electronic surveys regarding their sector-related issues and/or general customer-related issues. In 2006, 43 such electronic surveys were completed by the Government Departments. DEG also conducted market awareness surveys for the eGovernment initiatives and eServices.
e) DEG currently utilises a simple business case template for its synergistic services.
f) DEG conducts periodic benchmarking with respect to global eGovernment initiatives and individual projects as well. These benchmarks also include various measures and indicators.
g) DEG has identified two separate sets of quality standards for the government departments. The first is for the quality of Web sites (usability, common look & feel and content) and the second is for individual eServices within the Web sites.
h) DEG has defined various project-level indicators to measure the effectiveness of its project delivery.

Question 5: What are the main obstacles for e-government evaluating in your country? Please indicate them in ascending order (1: most important, 8: least important)

a) lack of evaluation tools	7
b) lack of evaluation culture	1
c) lack of evaluation skills	3
d) no common definition of cost and benefits	2
e) data are difficult to collect	4
f) no indicators available	5
g) not clear who are the clients of evaluation	6
h) not clear who should perform evaluation	8
i) other, please specify	

Question 6: What kind of e-government data that you are already collecting is available today in your country?

Measurement Category	**Data Availability**
a) data on access and readiness	PC, Internet and Mobile Penetration Rates.
b) data on inputs (e.g. cost of IT hardware)	Internal IT consumption figures.
c) data on processes (e.g. time saved by process automation)	Customer cost savings for some services (government department back-office cost savings planned after 2007).
d) data on outputs (e.g. number of services online)	Total number of services and their categories, Number of services online, Completion rating of online services, Government Web Sites Quality Ranking, Synergistic Services Usage, Cost Savings through Synergistic Services, eGovernment Customer Awareness, eServices Quality Ranking (planned for 2007).
e) data on outcome (e.g. level of satisfaction of e-government users)	Customer Adoption of eServices, Customer Satisfaction with eServices (both planned for 2007).
f) other, please specify	Project Level Measurements such as number of projects

	delivered, number of projects delivered on time, number of projects that comply with project management policies, number of deliverables delivered on time.

The data indicated above is collected in DEG through various information systems (*e.g.* GeSS - Government eServices Statistics system, EPM – Enterprise Project Management system, etc). Some of the above data is regularly available in some of the DEG publishings such as Annual Reports, Quarterly Reports, e4all magazine, etc.

Question 7: What would you see as the main challenges in building common indicators in e-government for the region? What next steps would need to be taken to at regional level to make progress in this area?

Dubai eGovernment believes that there is a need for regional e-government indicators and properly aligned measurement mechanisms. The main challenges in this endeavour can be outlined as follows:

- **Definition and Measurement:** Common definitions of indicators and measurements to ensure consistency (possibly alignment with international similar indicators).
- **Awareness and Culture:** Establishing awareness across government organisations for the proper collection of data and creating the urgency and the need for it.
- **Responsibility and Authority:** Identifying the responsible entity(ies) and clear delineation of roles and responsibilities among the entities in countries.
- **Processes and Tools:** Establishing a continuous recurring process for sustainable and consistent results and possibly implementation of common tools.

Dubai eGovernment has already acquired significant experience in the measurement area. Likewise regional countries that have undertaken similar initiatives can play a leading role in formulating the regional approach through co-ordination and collaboration.

The GfD working group members can form a task force to address this issue in order to unify the indicators, their measurement and ultimately can form a unified shared repository that each member country can access to for data submission and sharing purposes. Presumably, each member country would conduct the measurement activities independently and post its results in the unified repository while complying with timelines for data collection.

EGYPT

Question 1: Have you undertaken or are you undertaking any activity focused on measuring and evaluating e-government in your country? If yes, please explain and state whether they were/are conducted at 1) national level, 2) sectoral level (e.g. health, education), 3) ministry/agency level or 4) project level.

Egypt has three ICT indicators which are:

1. indicator of digital availability.
2. main electronic indicators for measuring the information community.
3. indicator of technological readiness of public institutions.

1. Indicator of digital availability

Institution in charge: Information and Decision Support Center – Cabinet
Frequency of the indicator: quarterly
Level of measurement: national
Measurement Data: number of mobiles lines subscribers, number of landlines subscribers, cost of Internet access, international bandwidth, number of international domains subscribers, number of Internet users, number of personal computers ("A PC per household" initiative), number of ICT companies, number of Egyptian sites on theWeb, number of people working in ICT companies, percentage of literate adults, number of children registered in primary and secondary schools, GDP per capita, population.

2. Main e-indicators for measuring the information community

Institution in charge: Central Agency for Public Mobilization and Statistics (CAPMAS)
Frequency of the indicator: Annual
Level of measurement: national - sectoral
Measurement Data: communication infrastructure, households, sectors, IT companies, IT clubs, Internet cafes, colleges (public, private, Azhar institutions) universities (public, private, Azhar).

3. Indicator of technological readiness of public institutions

Institution in charge: Ministry of State for Administrative Development
Frequency of the indicator: biannual
Level of measurement: national
Measurement Data: preliminary survey of the infrastructure (equipment and hardware, Web connections, software and applications packages, Web presence, human resources, ICT utilisation plan, security systems); work cycle and employee performance [civil services and labour force, incentives in the administration and public sectors as well as relations with citizens, the status of e-services and level of automation in the institution, the strategy, funding, technical support, partnerships, customer services and relationships with users, factors related to organization and knowledge management, automation of the institution's work cycle (advantages and obstacles), automation readiness]; infrastructure and information systems (connection methods and cost of Internet use, equipment and hardware, connectivity, software and application packages, Internet and related services, security services, agreements and MoUs with ICT companies (partnerships), privacy statements, human resources and IT training).
Since the indicator of technological readiness of government institutions is the closest we have to measuring e-government, the answer to questions about e-government indicators can be concluded from data on technological readiness of government institutions.

Question 2: What are the main purpose and objective of e-government measurement and evaluation at national or sectoral level? Are measurable e-government targets and goals included in your national or sectoral e-government strategy? If yes, have indicators been developed to measure them?

Objectives of measuring and evaluating initiatives:

- Directing development efforts through providing measures and variables of change in government institutions in order to follow progress of different routes and to examine the capacities of each institution in order to help its progress.
- Directing development efforts to reach preset values per the indicators set in the general national plan.
- In light of these measurements, accurate information is provided which will help decision and policy makers elaborate accurate and efficient plans in the future.

Goals of measuring and evaluating initiatives:

- Enhancing Egypt's ranking regarding the global economic competitiveness indicator.
- measuring and then supporting ICT use in the government administration units.
- Supporting government institutions in planning stages and directing investment through highlighting development and improvement of work cycles through better utilization of technology
- Enhancing performance and capacity of civil servants in IT.
- Measuring the impact of the technological readiness indicator on the economic and investment environment in the country.
- Publishing a guide with the names of IT officers in the administration and various ministries
- Creating a technological work environment to allow government institutions to benefit from capacities provided by the government as the main infrastructure for implementing modern technologies.
- Creating new opportunities for e-government projects.

Measuring and evaluating technological readiness of the Egyptian government is mandatory for ministries and government bodies. Results of e-government evaluation are made available to concerned entities. For instance the head of any institution has the right to view the indicators related to his/her institution. This information is also made available to decision makers in the government.

Implementation mechanisms:

- Setting a framework and guide for administration departments.
- Establishing survey questionnaires to examine the current status of ICT use in administration departments in line with the goals sought by the project.
- Reaching relevant statistical indicators and making them available to decision and policy makers in government.

Submitting recommendations based on those statistics and indicators in order to establish the programmes as well as elaborate the policies and laws needed to improve the working environment and elevate the level of workers, enhance services, and develop government performance means in general through better use of available modern technological means.

Question 3: What is the purpose and objective of e-government measurement and evaluation at ministry/agency/project level (e.g. ex ante: to argue the case for new projects, or ex post: to assess efficiency and effectiveness)? Is e-government measurement and evaluation mandatory for ministries and agencies? To whom the results of e-government evaluation is made available (e.g. within the organization, to political decision makers, outside government)

Question 4: Have frameworks/methods/tools been developed and use to measure and evaluate e-government at sectoral / ministry/agency and/or project level? If yes, please indicate which ones and provide a short description below:

Frameworks/method/tools were developed and used to measure and evaluate e-government at the level of government:

a) officials statistics (e.g. number of PCs at home)	✓
b) ad-hoc surveys (e.g. on customer satisfaction)	X
c) expert panels / citizen panels	✓
d) focus groups	X
e) cost and benefit analysis instruments and methodologies	X
f) benchmarking instruments	✓
g) service quality standards	✓
i) other, please specify	

Please provide a short description of the ticked frameworks/methods/tools below:

Official statistics: The Ministry of Communication and Information is undergoing monthly surveys on ICT in Egypt and these statistics are a major source of information.

Experts Panels: a number of experts have convened in order to set standards for the measurement of technological readiness in the Egyptian government.

Benchmarking instruments: different government bodies are compared in order to recognise positive experiences.

Service quality standards: measuring the volume of use of the Egyptian government portal and inquiring about the quality of services via the e-government communication center.

Question 5: What are the main obstacles for e-government evaluating in your country? Please indicate them in ascending order (1: most important, 8: least important)

a) lack of evaluation tools	8
b) lack of evaluation culture	2
c) lack of evaluation skills	7
d) no common definition of cost and benefits	1
e) data are difficult to collect	3
f) no indicators available	6
g) not clear who are the clients of evaluation	4
h) not clear who should perform evaluation	5
i) other, please specify	

Question 6: What kind of e-government data that you are already collecting is available today in your country?

a) data on readiness (e.g. statistics on digital divide, IT education of the population)	✓
b) data on access (e.g. number of computer per households, broadband penetration)	✓
c) data on inputs (e.g. cost of IT hardware)	✓
d) data on processes (e.g. time saved by process automation)	X
e) data on outputs (e.g. number of services online)	✓

f) data on outcome (e.g. level of satisfaction of e-government users)	X
g) other, please specify	

Please list below the data available for each category of data. Please also state whether this data is publicly available and where to find them.

Data on readiness: available through regular international reports .
Data on access: available through the ICT ministry.
Data on inputs: public data made available to all.
Data on outputs: all e-services are available to the public on the Egyptian government portal.

Question 7: What would you see as the main challenges in building common indicators in e-government for the region? What next steps would need to be taken to at regional level to make progress in this area?

Main challenges in any attempt to establish common e-government indicators in the region are:

- Radical differences in measurement tools and methods from one country to another.
- Different objectives and results of measurement indicators from one country to another (not regionally only but globally as well).
- Differences in demographic composition of populations as to age groups, level of education and living conditions.
- Absence of a unified methodology for measurement adopted by governments.
- Measurement data scattered between various government entities so it is hard to access as a result of the volume of the administration.

The next steps to be taken at the regional level to realise progress in establishing common indicators for e-government in the Arab region consist of determining a standard indicator for the region agreeing on:

- Measurement.
- Measurement methods.
- Measurement objectives.
- Measurement results.

JORDAN

Question 1: Have you undertaken or are you undertaking any activity focused on measuring and evaluating e-government in your country? If yes, please explain and state whether they were/are conducted at 1) national level, 2) sectoral level (e.g. health, education), 3) ministry/agency level or 4) project level.

Through the end of 2006, e-government evaluation and measurement were among the projects implemented by the "e-Government Program". Starting 2007, and as in the new e-government strategy (2007-2009), the implementing arm and orchestrator of e-government in Jordan; the "e-Government Program" was mandated by Jordan's cabinet to monitor and assess e-government on the national level, set responsibilities for the implementation of e-government for different stakeholders, assist in planning for related strategic and operational plans, follow up on them, and accordingly evaluate and measure their progress on the ministerial and national levels. This assessment is guided by the structure identified in the strategy, which is related to the e-government major pillars (Business Pillar, Institutional Pillar, Technical Pillar, and Legal Pillar), and it is supposed to help in evaluating e-government progress in relation to each "Pillar". A high-level mechanism was identified for that purpose to include the following and set the right basis as an initial step:

- The establishment of Jordan's "e-government Steering Committee".
- Request and assist in planning for the ministerial and national operational plans for developing vertical e-services.
- Request periodic reporting from the implementing entities.
- Establish e-government units that include specific roles and responsibilities as part of institutionalisation and enablement of e-government.
- Develop kits, tools and set policies and standards for technical and business support that assist in the development of vertical services and raise entities' e-readiness.

It is worth mentioning that work on the sectoral level was initiated late 2006. The major sectors were identified and ICT strategies will be put in place during the coming year.

Question 2: What are the main purpose and objective of e-government measurement and evaluation at national or sectoral level? Are measurable e-government targets and goals included in your national or sectoral e-government strategy? If yes, have indicators been developed to measure them?

Main objectives of evaluation on national/ sectoral levels are:

- Measuring the progress of the various national e-government programmes/ projects.
- Evaluating the level of alignment of the various national programmes/projects with the main e-government strategic objectives.
- Overseeing the national programmes/projects as a whole and identifying proper co-ordination and integration points.
- Identify the uptake of the various e-government programmes/projects and assist in overcoming current challenges.

Key measurement and evaluation goals were identified on a strategic level in the e-government strategy (2007-2009), which includes the related performance indicators with a clear baseline for most of them.

It is worth mentioning as well, that the attached roadmap to the strategy identified the major projects and activities to be undertaken by the 'e-Government Program' to satisfy the new e-government strategic directions, and related KPIs (Key Performance Indicators) at the project level.

Question 3: What is the purpose and objective of e-government measurement and evaluation at ministry/agency/project level (e.g. ex ante: to argue the case for new projects, or ex post: to assess efficiency and effectiveness)? Is e-government measurement and evaluation mandatory for ministries and agencies? To whom the results of e-government evaluation is made available (e.g. within the organization, to political decision makers, outside government)

Main objectives for evaluation on ministerial/project levels are:

- Measurement of progress and achievements.
- Ensure alignment with the related strategic goal/objectives from which these projects were derived.
- Compare progress among the different entities.
- Promote knowledge sharing and usage of re-usable components.
- Identify potential development and enhancement projects.
- Measure e-readiness maturity of the various entities.
- Measure the efficiency and effectiveness of the services and projects implemented.

Such results on ministerial/project levels or national/sectoral levels are analysed and presented to the Minister of ICT as one of the major stakeholders of e-government and who has broad responsibility for the 'e-Government Program'. In addition, such results are mainly communicated to the national "e-Government Steering Committee" which reports directly to Jordan's cabinet.

Question 4: Have frameworks/methods/tools been developed and use to measure and evaluate e-government at sectoral / ministry/agency and/or project level? If yes, please indicate which ones and provide a short description below:

As mentioned in earlier answers, a high-level mechanism was identified for measurements on project or national levels. This is an initial step that is prior to the detailed requirements that are gradually identified for e-government evaluation and measurement on the different levels, and that are supposed to be translated to a full performance measurement and management system that requires the input of the various stakeholders and allows different measurement tools and methods (panels, surveys, reporting…etc). Nevertheless, some major tools/methods are used in the current stage – they include *conducting surveys* for customer satisfaction or for the uptake of any delivered service, *benchmarking* methods to compare scope and objectives achieved, and *service quality standards* that are covered in the different audits conducted during and after service delivery. These basic measurement tools are used on project/service level. The high-level mechanism identified in the first question is the initial approach used for e-government national measurement. This approach will be detailed to identify more specific tools and measurements on national/ sectoral levels that can be linked to high-level performance indicators and to various strategic directions and objectives. Typically and as mentioned above, this will be translated to a full system for performance management and measurement.

It is important to mention as well an effort that will be shortly conducted by the 'e-Government Program', which is "Revamping of the Business Case Framework and Methodology", which will help in the identification of all measures and their baselines to all e-government programmes/projects.

Question 5: What are the main obstacles for e-government evaluating in your country? Please indicate them in ascending order (1: most important, 9: least important)

a) lack of evaluation tools	5
b) lack of evaluation culture	4
c) lack of evaluation skills	8
d) no common definition of cost and benefits	2
e) data are difficult to collect	1
f) no indicators available	3

g) not clear who are the clients of evaluation	6
h) not clear who should perform evaluation	7
i) other, please specify	9

Question 6: What kind of e-government data that you are already collecting is available today in your country?

a) data on readiness (e.g. statistics on digital divide, IT education of the population)	Such data are available to limited government entities that the 'e-Government Program' has worked with to deliver certain services. No national effort was made regarding this matter for the whole government except for a high-level Readiness Assessment Report for the government that was delivered prior to the launch of e-government in Jordan in 2002 for the use of the 'e-Government Program'. The available assessment data are not issued to the public, and they aren't kept in a systematic or presentable format for communication. The latest readiness report issued in 2006 covered the ICT Sector Readiness in general on a high level. This ICT Sector Readiness report is publicly available on the Ministry of ICT Web site www.moict.gov.jo, and is used by the 'e-Government Program' as a main reference.
b) data on access (e.g. number of computer per households, broadband penetration)	Such information is covered in the ICT Sector Readiness and Assessment document. No efforts regarding this matter by the 'e-Government Program' as it includes various stakeholders and its main owners and initiators are the policy makers for the ICT sector at the Ministry of ICT.
c) data on inputs (e.g. cost of IT hardware)	Such information is "Project/Service Based" and available upon need.
d) data on processes (e.g. time saved by process automation)	This is covered prior to any e-service implementation and after studying the current situation and design to compare status with the end result. Approach is followed for the e-services delivered by the 'e-Government Program', but it is not a common practice among other entities that perform their own services and automation projects, and depend on their observations regarding this matter instead of real data.
e) data on outputs (e.g. number of services online)	25 online, 6 done by the 'e-Government Program', and are published on their respective entities' Web sites, because Jordan's e-Government Portal in its first "Informational Format" was launched recently; end of 2006; www.jordan.gov.jo . Work will be done to transfer the Portal into a transaction portal during 2007.
f) data on outcome (e.g. level of satisfaction of e-government users)	Such information is available on project/service level, whenever a service is launched a satisfaction survey is conducted to measure user uptake and satisfaction.
g) other, please specify	-

Question 7: What would you see as the main challenges in building common indicators in

e-government for the region? What next steps would need to be taken to at regional level to make progress in this area?

Challenges:

- Different levels of e-readiness in the various countries.
- The different approaches followed for e-government development and enablement.
- The different requirements and needs from e-government users and customers.
- The different constraints and key success factors in any country, which will affect the level of progress and the results of any assessment.
- No ownership of e-government evaluation on a "Regional Level" and to whom it should be reported.
- No clear purpose for why to have measurements on a regional level, unless clear regional goals are set.

Suggested steps to be taken on a regional level to make progress in this area:

- Formulate an owning body with a representative from each country.
- Agree on common regional goals and objectives.
- Identify integrating points between the various national initiatives related to e-government.
- Identify potential co-operation areas, which will facilitate the identification of common indicators.

LEBANON

Question 1: Have you undertaken or are you undertaking any activity focused on measuring and evaluating e-government in your country? If yes, please explain and state whether they were/are conducted at 1) national level, 2) sectoral level (e.g. health, education), 3) ministry/agency level or 4) project level.

In Lebanon, on a national level, an initiative was taken in 2003 by the Office of the Minister of State for Administrative Reform (OMSAR) and the UNDP to assess eReadiness. Eighteen criteria were identified and grouped into five major categories. Each of the criteria was broken down into specific questions and issues. The assessment was done based on analysing the situation using various sources of information. Most of the data collected first hand was from local sources such as ISPs, the professional Computer Association and various domain experts. Another major source of data was the International Telecommunications Union, whose 2002 data was made available to the project by ESCWA. Other data was collected from various publications and Web sites. As benchmarks, the assessment resorted to a variety of comparisons with regional as well as developed countries.

The five categories, the eighteen criteria and the corresponding detailed source of data are shown below:

Access and Infrastructure

1. **Network Infrastructure**
    a) Fixed Line Network
    b) Fixed Line Network - Planned Projects
    c) Wireless Network - Mobile
    d) Wireless Network - Microwave
    e) Telecommunications Capacity
    f) Regulating the Telecom Industry
    g) Aerial Cables
    h) Satellites
    i) Electrical Supply
2. **Access**
    a) PC Penetration Rate
    b) Places of Access to the Internet
    c) Internet Penetration
    d) ISPs
    e) Host Count
3. **Affordability**
    a) The Cost of Telephone Dial Up Access
    b) The Cost of ISDN Access
    c) The Cost of Leased Lines Access
    d) The Cost of Wireless Access
4. **Reliability and Speed**
    a) The Reliability of the Basic Infrastructure
    b) Connection Speeds Supported by the Infrastructure
5. **International Connections**
    a) The Bandwidth of the International Connection
    b) The Internet Hub

Government Leadership

6. **National ICT Strategy**
    a) Priority Level Given to ICT by the Government
    b) The Government's ICT Strategy
    c) A Government Entity for Planning and Executing ICT Strategies
    d) Policies and Regulations: ICT Standards
7. **ICT Policies and Regulations**
    a) Telecommunications
    b) eCommerce
    c) eSignature
    d) Electronic Fund Transfers
    e) Privacy
    f) Security
    g) Intellectual Property Rights
    h) ICT Education and Skills Training
    i) ICT Awareness
    j) Web Content
    k) Domain Registration in Lebanon
    l) Transparency and Predictability of ICT Regulations
    m) Membership in International Bodies and Organizations
    n) Assessment
8. **Central Bank Initiatives**

9. **Partnerships and Funding for ICT**
    a) Funding for ICT Projects
    b) Public Private Partnerships
    c) Government Incentives for ICT
    d) Regional Technological Cooperation/Partnerships
10. **eGovernment and Organizational Efficiency**
    a) The Level of Government Effectiveness
    b) The Efficiency of Business Processes
    c) Government Strategy for eGovernment
    d) Government Services Available On-Line
    e) PC Penetration Rate in Government
    f) The Level of Automation in Government Institutions
    g) The Level of Government Employee ICT Literacy

Human Capacity

11. **ICT as Formal Education**
    a) Education Levels in Lebanon
    b) ICT in Schools
    c) ICT in Universities
    d) ICT in Vocational Training
    e) The Access of Schools to the Internet
    f) Distance Learning
    g) ICT Educational Initiatives

12. **ICT as Informal Education**
    a) ICT Skills Training for Citizen
    b) The Private Sector and the Culture for ICT Training
13. **The ICT Brain Drain**

eBusiness and Economic Environment

14. Economic Climate

a) The Effectiveness and Health of Business Competition
b) Direct Foreign Investments
c) Postal and Courier Systems
d) Customs Regulations and ICT

15. ICT as a Production Sector

a) Lebanon and the Technology Achievement Index (TAI)
b) Business Culture and ICT
c) The ICT Sector
d) Information about the ICT Sector
e) The Status of the ICT Workforce and Job Opportunities
f) Current Usages of Security and Encryption
g) Copyright Violation and Software Piracy
h) ICT Research and Development
i) Specialized Technologies
j) The Availability of Locally Suitable Software Products
k) The Use of International Software Products
l) ICT Exports
m) Financing, Technology Parks and Incubators
n) Professional ICT Associations

16. eCommerce

a) The Government's Strategy for eCommerce
b) Regulations on eCommerce and eTransactions
c) eCommerce Taxation Laws
d) Consumer Protection While Trading Over the Web
e) ATMs
f) Payment Cards
g) The State of On-line Banking
h) eCommerce

Social Environment and Public Awareness

17. Usage of ICT in Everyday Life

a) Usage of Computers in Society
b) Poverty
c) Rural Disparity
d) Foreign Languages as Barriers to Using ICT and the Web

18. The Internet Society

a) Who is Online in Lebanon?
b) Businesses
c) Organizations on the Web
d) Government Online
e) Media Online
f) Restrictions on the Content of Web Pages
g) Web Services of Interest to the Lebanese

On a sectoral/ministerial/agency level, measurements are being taken into account in certain cases but no unique source of data is available nor is a specific set of indicators adopted. This is changing as leaders of the public sector are starting to appreciate the importance of indicators especially when international standards are being considered.

On the project level, OMSAR has within its projects, "performance improvement projects" and as such has used indicators in some of its projects to measure the impact of the work done at the Ministry/project level.

Currently, OMSAR in co-ordination with other Ministries and public and UN agencies will embark on collecting indicators as per the international standards. This will be part of the goals within its national eStrategy and eGovernment strategy.

Question 2: What are the main purpose and objective of e-government measurement and evaluation at national or sectoral level? Are measurable e-government targets and goals included in your national or sectoral e-government strategy? If yes, have indicators been developed to measure them?

The main purpose and objective of e-government measurement and evaluation is to aid in identifying priority areas of policy action, assessing and revising ICT strategies, allocating resources, monitoring progress, evaluating impacts and benchmarking national and/or sectoral development of the information society and the progress of e-government strategic goals.

Lebanon would like to develop and follow national set indicators; however, it has not yet started except in the education sector where the initiative begun. It will be setting indicators in its national strategy according to international standards.

Question 3: What is the purpose and objective of e-government measurement and evaluation at ministry/agency/project level (e.g. ex ante: to argue the case for new projects, or ex post: to assess efficiency and effectiveness)? Is e-government measurement and evaluation mandatory for ministries and agencies? To whom the results of e-government evaluation is made available (e.g. within the organization, to political decision makers, outside government)

At the Ministry/agency/project level, the purpose of evaluating ex ante is of utmost importance as it supports decisions and risk analysis and eventually aids in identifying feasible and effective projects. On the other, ex post evaluation would facilitate and quantify the assessment of the outcomes/impacts and benefits of deploying the project.

Currently, the use of measurable indicators is not a mandatory adopted procedure. This will be included in the updated e-government strategy for Lebanon.

Question 4: Have frameworks/methods/tools been developed and use to measure and evaluate e-government at sectoral / ministry/agency and/or project level? If yes, please indicate which ones and provide a short description below:

Minimal and incomplete initiatives.

Question 5: What are the main obstacles for e-government evaluating in your country? Please indicate them in ascending order (1: most important, 9: least important)

a) lack of evaluation tools	2
b) lack of evaluation culture	3
c) lack of evaluation skills	8
d) no common definition of cost and benefits	4
e) data are difficult to collect	5
f) no indicators available	1
g) not clear who are the clients of evaluation	6
h) not clear who should perform evaluation	7

i) other, please specify	-

Question 6: What kind of e-government data that you are already collecting is available today in your country?

a) data on readiness (e.g. statistics on digital divide, IT education of the population)	2003
b) data on access (e.g. number of computer per households, broadband penetration)	2003
c) data on inputs (e.g. cost of IT hardware)	2003
d) data on processes (e.g. time saved by process automation)	
e) data on outputs (e.g. number of services online)	2003
f) data on outcome (e.g. level of satisfaction of e-government users)	
g) other, please specify	2003

Please list below the data available for each category of data. Please also state whether this data is publicly available and where to find them.

Question 7: What would you see as the main challenges in building common indicators in e-government for the region? What next steps would need to be taken to at regional level to make progress in this area?

To attain common indicators in e-government on a regional scale, the following must take place:

- One set of indicators must be adopted for the region.
- A point of reference must be nominated in each country to be the focal point that will collect the results for the indicators.
- At each level in the country (ministry/public agency), a representative must be responsible for the indicators set for that sector in that agency. A team must be available to supply the data.
- A regional workshop must be set where all focal points from each country must be present to share their views and to agree on which indicators to use and how to measure them.
- A workshop at the level of each country where the representatives from each Ministry and agency must attend to follow the same methodology.
- The Central Agency for Statistics must also be present in the country workshop.

MOROCCO

Question 1: Have you undertaken or are you undertaking any activity focused on measuring and evaluating e-government in your country? If yes, please explain and state whether they were/are conducted at 1) national level, 2) sectoral level (e.g. health, education), 3) ministry/agency level or 4) project level.

Morocco, at present, is preparing for the national ICT observatory to examine the following:

- Electronic administration indicators.
- Household indicators.
- Businesses indicators.
- Capacity indicators.
- ICT industry indicators.

We are expecting the first results of these indicators in June 2007.
The government is also proceeding to a qualitative division of accomplishments in preparation of the periodic report on project implementation and components of the national programme for Electronic administration to be presented at the annual national e-forum.

The level of projects and applications is evaluated through the national award on e-government given in recognition of the best services rendered in the interest of citizens and businesses. This award is given during the annual national e-forum.

Question 2: What are the main purpose and objective of e-government measurement and evaluation at national or sectoral level? Are measurable e-government targets and goals included in your national or sectoral e-government strategy? If yes, have indicators been developed to measure them?

Objectives:

a. following up on and evaluating e-government and project implementation.
b. measuring the impact of projects adopted in Electronic administration on the levels of efficiency and productivity of administration and quality of services.

The national programme has highlighted some measurement objectives in order to realise annual results. They are as follows:

- 2 online services every year (completed).
- 50% of investment online (being undertaken).
- 80% of departments have a portal or Web site (87% in 2006).
- online public transaction s(completed).
- 390 online services (telephone – Internet – kiosks) by 2008; 176 have been completed and posted online.

Question 3: What is the purpose and objective of e-government measurement and evaluation at ministry/agency/project level (e.g. ex ante: to argue the case for new projects, or ex post: to assess efficiency and effectiveness)? Is e-government measurement and evaluation mandatory for ministries and agencies? To whom the results of e-government evaluation is made available (e.g. within the organization, to political decision makers, outside government)

The measurement under discussion concerns the e-government programme as a whole and is not specific to each ministry or government institution. This general measurement is overseen by the Ministry for the development of public sectors in collaboration with ministries. The results are first submitted to the

national committee on e-government then to all officials in the field as well as international partner organisations. They are also posted on the Web site www.idarati.ma.

Regarding businesses and households, the "national agency for the regulation of communication" undertakes an annual evaluation of Internet and equipment.

Question 4: Have frameworks/methods/tools been developed and use to measure and evaluate e-government at sectoral / ministry/agency and/or project level? If yes, please indicate which ones and provide a short description below:

a) officials statistics (e.g. number of PCs at home)	an annual poll in the field and online regarding the Internet and phones.
b) ad-hoc surveys (e.g. on customer satisfaction)	online survey on administrative procedures (2006)

Please provide a short description of the ticked frameworks/methods/tools below:

Some statistical studies and polls have been undertaken. These are:

- Transactions observatory: periodic and annual data on the development of Internet subscriber categories divided according to services.
- Annual poll for the evaluation of mobile phone services.
- A study on call centers in Morocco: diagnosis of the status and horizons for development. These results are posted on: www.anrt.ma

The aim of the ad hoc poll is to determine the clarity of existing administrative models online (www.service-public.ma) as well as the extent of absorption of those models by users.

Question 5: What are the main obstacles for e-government evaluating in your country? Please indicate them in ascending order (1: most important, 8: least important)

The main difficulties encountered in measuring e-government are as follows:

- government entities do not provide all data - the great number of overlapping studies and research	**Difficulty in collecting data**
- the lack of a clear division of services, administrative procedures and data - the lack of scientific indicators to estimate costs and benefits	**The absence of a common definition of costs and benefits**
- periodic reports do not evaluate return on investment - consumers and customers seldom visit regularly the same institution	**Lack of trust in evaluation**

Question 6: What kind of e-government data that you are already collecting is available today in your country?

a) data on readiness (e.g. statistics on digital divide, IT education of the population)	Body in charge: National Agency for the Regulation of Communication
b) data on access (e.g. number of computer per households, broadband penetration)	Body in charge: National Agency for the Regulation of Communication
c) data on inputs (e.g. cost of IT hardware)	Body in charge : Ministry of Finance and Privatisation

e) data on outputs (e.g. number of services online)	Ministry for the Development of Public Sectors
f) data on outcome (e.g. level of satisfaction of e-government users)	Being completed in Ministry for the Development of Public Sectors

Question 7: What would you see as the main challenges in building common indicators in e-government for the region? What next steps would need to be taken to at regional level to make progress in this area?

At present, it is difficult to determine common indicators to measure e-government for several reasons:

- the difficulty of measurement at each country level.
- the efforts of Arab organisations has shown the difficulty in collecting country data.
- the high cost of this project.

Preliminary steps to overcome these difficulties:

- Develop partnerships with Arab institutions or private companies capable of collecting data.
- As a first step, establish a measurement system based on general indicators.
- Support Arab countries in their efforts to build measurement systems.
- Organise training sessions for country statistics institutions.

OMAN

Question 1: Have you undertaken or are you undertaking any activity focused on measuring and evaluating e-government in your country? If yes, please explain and state whether they were/are conducted at 1) national level, 2) sectoral level (e.g. health, education), 3) ministry/agency level or 4) project level.

HM The Sultan has established a vision for Oman aimed at developing the country in every aspect, and that includes developing the Omani Government and transitioning the Government to an E-Government.

In devising the Digital Oman strategy for e-Governance, Oman conducted a structured hierarchical Readiness Assessment of Government to present the current state of readiness at a national level. Various elements taken into account while checking the degree of readiness were:

- Leadership
- Governance
- Management and Organisation
- Citizen Readiness and Support
- Legal and Security
- Technological
- Contextual

The strategy was drafted in 2003 including several measures to be undertaken along with success factors for measuring the effectiveness of implementation and the benefits reaching the society.

On 31 May 2006, the Royal Decree 52/2006 formed the Information Technology Authority (ITA) as the autonomous body for the implementation of the Digital Oman Strategy. It now carries on and manages nationwide projects for ICT such as infrastructure, standards, e-service integration, e-payment gateway, data centre for the public sector, centralised e-tendering for public sector, ICT awareness and IT literacy training. It works in close coordination with the Telecommunication Regulation Authority (TRA) and other telecommunication service providers in nation-wide infrastructure projects.

Every ministry measures several indicators on a periodic basis and the resulting data is compiled by the Ministry of National Economy. Core ICT indicators are collected by the TRA and the Household Survey and are published peridocally.

Question 2: What are the main purpose and objective of e-government measurement and evaluation at national or sectoral level? Are measurable e-government targets and goals included in your national or sectoral e-government strategy? If yes, have indicators been developed to measure them?

The development of indicators to measure the progress towards achieving the goals set at the World Summit on Information Society (WISIS) for different sectors will help decision makers in designing appropriate programmes based on actual needs and with the objective of achieving sustainable development in the Sultanate.

Metrics and benchmarks are essential to address issues such as current practices, their strengths and weaknesses, approaches to measure efficiency, effectiveness, quality, and social or economic impacts. It improves the level of transparency in public service management which in turns increases the level of public trust in adopting e-services in large numbers and volumes.

Periodical evaluation which measures core indicators has been approached on a sectoral basis as well.

Question 3: What is the purpose and objective of e-government measurement and evaluation at ministry/agency/project level (e.g. ex ante: to argue the case for new projects, or ex post: to assess efficiency and effectiveness)? Is e-government measurement and evaluation mandatory for ministries and agencies? To whom the results of e-government evaluation is made available (e.g. within the organization, to political decision makers, outside government)

Ministries and agencies are encouraged to build key performance indicators into all e-service-related projects. In addition these services and their integrated delivery model is being prioritised based on readiness for electronic delivery, and impact on the society as a whole.

Evaluation of Security Measures: in order to monitor compliance with standards and security policies, a framework is devised to audit government entities for compliance with specified standards by ITA.

Question 4: Have frameworks/methods/tools been developed and use to measure and evaluate e-government at sectoral / ministry/agency and/or project level? If yes, please indicate which ones and provide a short description below:

a) officials statistics (e.g. number of PCs at home)	Provided via Ministry of National Economy Statistical Reports.
b) ad-hoc surveys (e.g. on customer satisfaction)	E-Services data collection, number of services & associated specs to particular number of government entities.
c) expert panels / citizen panels	N/A
d) focus groups	A standards committee formed in Sultanate of Oman which is responsible for defining all IT Standards in the country and also responsible for ensuring compliance of all the government entities. The standards committee is appointed by the CEO of ITA and the committee is appointed with a chairman. The committee meets every month to review the progress of the activities. The committee ensures that appropriate standards, frameworks, tools are in place to ensure compliance.
e) cost and benefit analysis instruments and methodologies	The standards and Integration office has developed necessary tools and templates to perform cost benefit analysis for evaluation of e-governance initiatives and the same has been used across ministerial projects.
f) benchmarking instruments	ITA has defined the COI Development methodology to benchmark development of e-governance applications.
g) service quality standards	Appropriate SLAs are in place to ensure quality service offering to citizens and businesses. All projects are implemented as per these SLAs.
i) other, please specify	

Question 5: What are the main obstacles for e-government evaluating in your country? Please indicate them in ascending order (1: most important, 9: least important)

a) lack of evaluation tools	3

b) lack of evaluation culture	1
c) lack of evaluation skills	2
d) no common definition of cost and benefits	4
e) data are difficult to collect	7
f) no indicators available	5
g) not clear who are the clients of evaluation	6
h) not clear who should perform evaluation	8
i) other, please specify	9

Question 6: What kind of e-government data that you are already collecting is available today in your country?

a) data on readiness (e.g. statistics on digital divide, IT education of the population)	N/A
b) data on access (e.g. number of computer per households, broadband penetration)	Yes
c) data on inputs (e.g. cost of IT hardware)	Yes
d) data on processes (e.g. time saved by process automation)	N/A
e) data on outputs (e.g. number of services online)	Work in Progress
f) data on outcome (e.g. level of satisfaction of e-government users)	N/A
g) other, please specify	

Please list below the data available for each category of data. Please also state whether this data is publicly available and where to find them.

b) Data available at the Ministry of National Economy – www.moneoman.gov.om and at Telecommunication Regulation Authority – www.tra.gov.om.
c) Information Technology Authority – Not publicly available.
d) Information Technology Authority – Data gathered for e-service prioritisation and integration into the Government gateway portal under implementation.

Question 7: What would you see as the main challenges in building common indicators in e-government for the region? What next steps would need to be taken to at regional level to make progress in this area?

- Lack of common framework across Arab countries – Indicators for evaluating efficiency must be commonly agreed upon and additional national indicators could be added for further requirements.
- Suggest taking this up through regional workshops.
- Need for a national committee for this project to set broad milestones and deadlines.
- Periodical publication of e-government evaluation metrics compiled by collating data from each participating country.

SAUDI ARABIA

Question 1: Have you undertaken or are you undertaking any activity focused on measuring and evaluating e-government in your country? If yes, please explain and state whether they were/are conducted at 1) national level, 2) sectoral level (e.g. health, education), 3) ministry/agency level or 4) project level.

1) national level

Saudi Arabia has developed indicators to monitor the national adaptation of the eGovernment programme based on the National Action Plan. All government agencies are asked to fill in the indication form and submit it to the eGovernment committee every 6 months. An e-mapping project watches and aims to enhance Saudi Arabia's position internationally, working with the World Bank.

2) sectoral level (e.g. health, education) & 3) ministry/agency level

Those two levels are merged into one. There is a detailed Action Plan for each Ministry/Sector to be implemented in alignment with the eGov program.

4) project level

Yesser's PMO has developed its BSC to monitor all projects related to the eGovernment Initiative.

Question 2: What are the main purpose and objective of e-government measurement and evaluation at national or sectoral level? Are measurable e-government targets and goals included in your national or sectoral e-government strategy? If yes, have indicators been developed to measure them?

National level

There are 3 main objectives to measure eGovernment adaptation at the national level:

1. Provide Better Services by year 2010.
2. Increase internal efficiency and effectiveness.
3. Contribute to the country's prosperity.

See Figure 1 below.

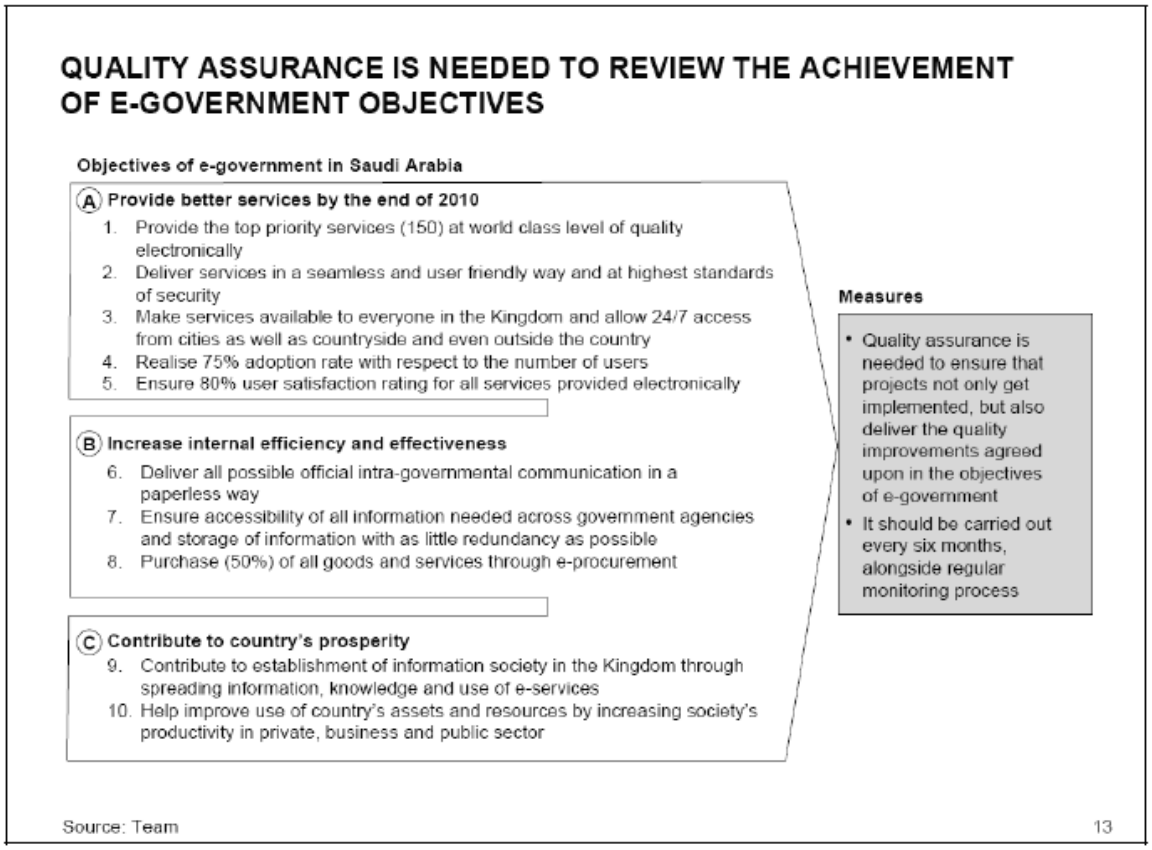

Figure 1: Objectives of National eGov and Measurements

Question 3: What is the purpose and objective of e-government measurement and evaluation at ministry/agency/project level (e.g. ex ante: to argue the case for new projects, or ex post: to assess efficiency and effectiveness)? Is e-government measurement and evaluation mandatory for ministries and agencies? To whom the results of e-government evaluation is made available (e.g. within the organization, to political decision makers, outside government)

The measurement of each item above in the National Plan, is carried out at sector and agency level. For example:

The objective to measure Item 1 above is:

1. To provide top priority services at a world class level of quality electronically.
The Dimensions of measurements are:
    1. Speed
    2. Accuracy
    3. Responsiveness
    4. Degree of Fulfillment

Please see Figure 2 for details.

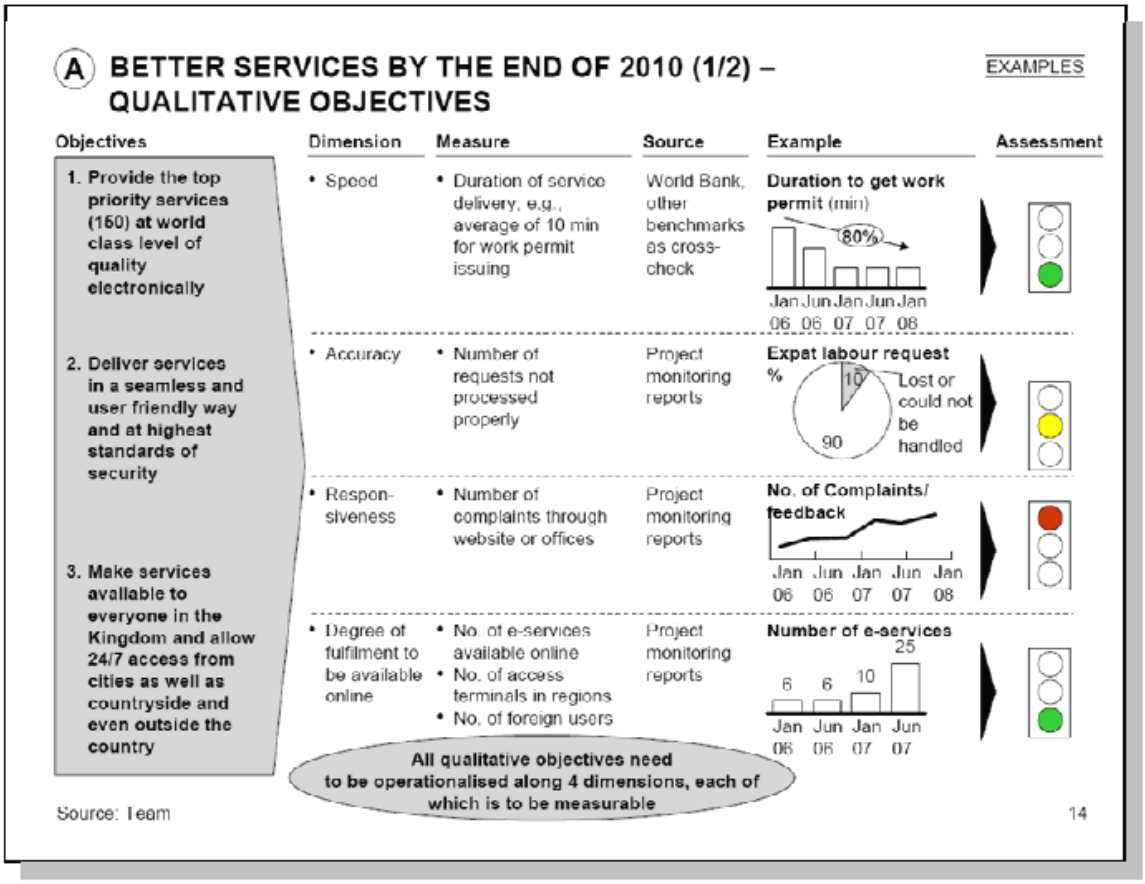

Figure 2: Agency/Objective Level Measurements

Is e - government measurement and evaluation mandatory for ministries and agencies?

Yes, every 6 months all government agencies update their progress and status reports based on the measurements defined.

To whom the results of e-government evaluation is made available (e.g. within the organization, to political decision makers, outside government)?

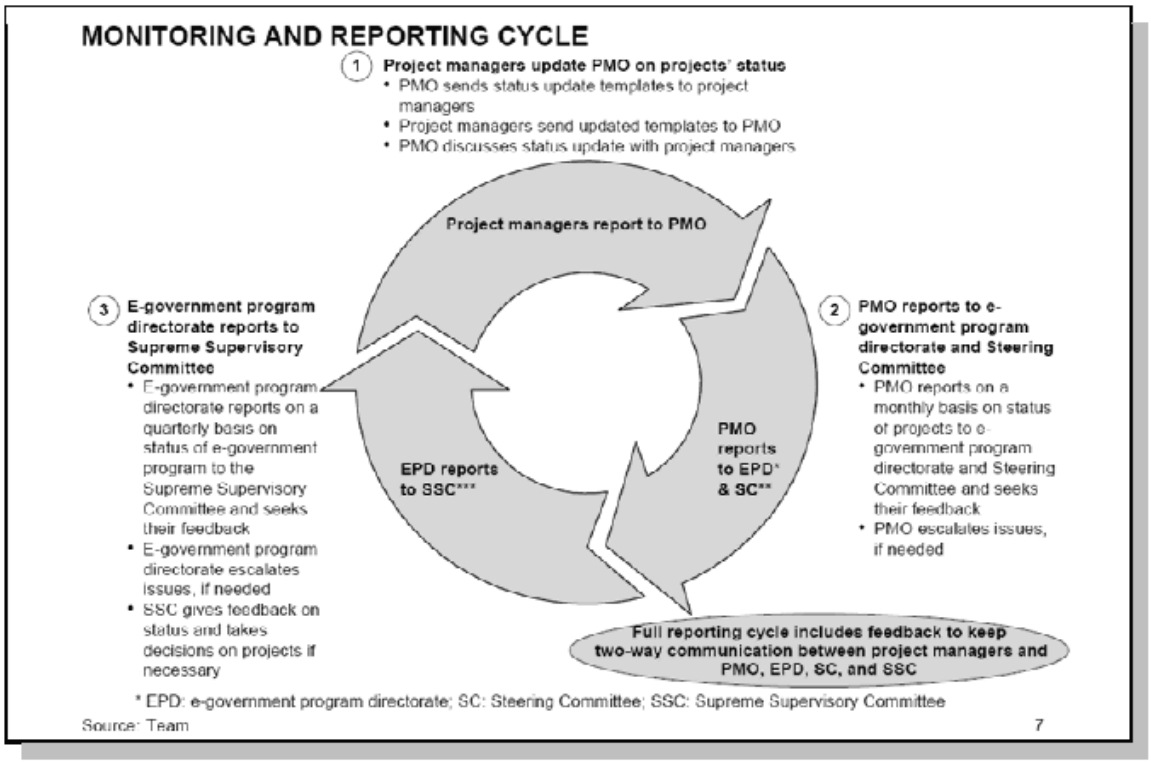

Figure 3: Monitoring and Reporting Cycle

Question 4: Have frameworks/methods/tools been developed and use to measure and evaluate e-government at sectoral / ministry/agency and/or project level? If yes, please indicate which ones and provide a short description below:

a) officials statistics (e.g. number of PCs at home)	Yes
b) ad-hoc surveys (e.g. on customer satisfaction)	Yes
c) expert panels / citizen panels	No
d) focus groups	No
e) cost and benefit analysis instruments and methodologies	Yes
f) benchmarking instruments	Yes
g) service quality standards	Yes
i) other, please specify	The eGovernment Program has developed a complete QA framework along with reporting and monitoring tools and template

Question 5: What are the main obstacles for e-government evaluating in your country? Please indicate them in ascending order (1: most important, 8: least important)

a) lack of evaluation tools	8
b) lack of evaluation culture	4
c) lack of evaluation skills	4
d) no common definition of cost and benefits	6
e) data are difficult to collect	2
f) no indicators available	9
g) not clear who are the clients of evaluation	9

h) not clear who should perform evaluation	9
i) other, please specify	

Question 6: What kind of e-government data that you are already collecting is available today in your country?

a) data on readiness (e.g. statistics on digital divide, IT education of the population)	Yes
b) data on access (e.g. number of computer per households, broadband penetration)	Yes
c) data on inputs (e.g. cost of IT hardware)	Yes
d) data on processes (e.g. time saved by process automation)	Yes
e) data on outputs (e.g. number of services online)	Yes
f) data on outcome (e.g. level of satisfaction of e-government users)	Yes
g) other, please specify	

Question 7: What would you see as the main challenges in building common indicators in e-government for the region? What next steps would need to be taken to at regional level to make progress in this area?

1. E-Government measurement is related to the local culture of the nation. Each programme has his own indicators which reflect their objectives and priorities in implementing the e-government initiatve.

2.It may be too early to talk about regional indicators. When the region starts to see real tangible results and world-class e-services would be a good time to start measuring regional achievements.

3. The next step should be measurement of local e-government programmes in each countries. It may be possible to extract common indicators from these case studies, which could be the basis for regional work.

4.If all countries in the regional started to adapt certain international indices for their own evaluation and measurements, then it would be much easier to come up with a regional indicator.

SUDAN

Question 1: Have you undertaken or are you undertaking any activity focused on measuring and evaluating e-government in your country? If yes, please explain and state whether they were/are conducted at 1) national level, 2) sectoral level (e.g. health, education), 3) ministry/agency level or 4) project level.

The government gives great importance to measurement, which should accompany the establishment of e-government. Each stage is measured upon implementation in order to be evaluated. Then the results are reflected in the second stage. Measurement and evaluation are undertaken on the central, national, provincial and local levels.

Question 2: What are the main purpose and objective of e-government measurement and evaluation at national or sectoral level? Are measurable e-government targets and goals included in your national or sectoral e-government strategy? If yes, have indicators been developed to measure them?

The national strategy has stressed the importance of finding tools to regularly evaluate the status of e-government. This is made possible through statistical surveys. Moreover, a national work group was created in order to determine the indicators that need to be measured as well as the entity which will be in charge of setting those indicators. To date, the indicators have not been finalised.

Question 3: What is the purpose and objective of e-government measurement and evaluation at ministry/agency/project level (e.g. ex ante: to argue the case for new projects, or ex post: to assess efficiency and effectiveness)? Is e-government measurement and evaluation mandatory for ministries and agencies? To whom the results of e-government evaluation is made available (e.g. within the organization, to political decision makers, outside government)

Measuring e-government aims at evaluating achievements and comparing them to the objectives set in the strategy. Hence, ministries are called upon to establish their strategies and plans in line with the national strategy, which means that they have to respect the measurement and evaluation process. This process will be completed through the work of the national work group to determine indicators.

Question 4: Have frameworks/methods/tools been developed and use to measure and evaluate e-government at sectoral / ministry/agency and/or project level? If yes, please indicate which ones and provide a short description below:

Efforts are being deployed in order to measure e-government through the creation of work groups and national committees to establish measurement standards in accordance with international standards while respecting national objectives. The necessary data to measure readiness has been collected.

Question 5: What are the main obstacles for e-government evaluating in your country? Please indicate them in ascending order (1: most important, 8: least important)

The main obstacle is colleting data given the large geographic area in the country as well as the high costs that entails. Regarding the degree of importance:

a) lack of evaluation tools	5
b) lack of evaluation culture	3

c) lack of evaluation skills	4
d) no common definition of cost and benefits	7
e) data are difficult to collect	8
f) no indicators available	2
g) not clear who are the clients of evaluation	6
h) not clear who should perform evaluation	1
i) other, please specify	

Question 6: What kind of e-government data that you are already collecting is available today in your country?

At present, the main data needed to measure readiness is available due to statistics on the communication sector infrastructure. A comprehensive survey to collect data about access and use is planned. This data can be requested from the communication organisational entity in the country and is due to be published upon completion.

Question 7: What would you see as the main challenges in building common indicators in e-government for the region? What next steps would need to be taken to at regional level to make progress in this area?

Past and present experiences in measurement:
Sudan elaborated its first strategy for 2001-2006 and then elaborated a second strategy covering the period up to 2011. The government undertook a national survey in the field to assess electronic readiness. The strategy stressed the necessity to undertake periodic statistical surveys in order to regularly guage status. Among the main objectives of the first national strategy was the liberalisation of the communications sector. The following standards were adopted:
1) Enlarging the network.
2) Reducing connection costs.
3) Increasing the number of service providers.
4) Using modern applications in communications.

At the sectoral level, a different strategy was adopted whereby a set of standards and indicators was elaborated. At present, activities focused on measurement and evaluation in building databases and collecting information on sectors are underway. This allows standardised questionnaires and models for collecting data and information. A unified encoding system for each sector is planned.

Moreover, ministries are participating in these efforts by elaborating their own public strategy and plan in line with the national public strategy and plan.

A survey was undertaken of each ministry to assess its electronic readiness. Measurement indicators such as the number of people trained to use computers and Internet in each department have been established. Data has been collected and will be inserted in a database. A number of seminars and workshops were organised to raise awareness about the use of ICT.

Sudan is still working on methods and tools for measurement and evaluation.

The kind of data collected in Sudan is:
1) Information about electronic readiness focusing on filling the digital gap.
2) Data on access focused on DSL broadband connections.
3) Data on outputs. At present, 142 services are on the Sudanese service site. No data about inputs, processes and results.

In conclusion, the main challenge in building common indicators in e-government for the Arab region is the clear disparity between countries. Few countries have elaborated ICT strategies. Most don't have electronic readiness at the national level. Others have strived to elaborate a general plan for e-government without any strategy or readiness. Some steps must be taken to incite countries to elaborate a strategy and undertake a readiness survey on the field within a set time frame. Available expertise must be at the disposal of countries to help them achieve these goals.

SYRIA

Introduction

E-Government is one of the main projects of the ICT ministry set in the tenth five-year plan. The implementation of the project is based on major components consisting of the project's pillars, among which are:

- National Data Center: has a nucleus in the ICT ministry and is capable of covering the project's needs during the launch phase.
- Public Access Centers: a number of centers were established as part of the rural knowledge network.
- Citizens Service Centers: distributed geographically on all the Syrian territory as part of the Syrian Telecommunication Establishment (STE) and post office establishment.

The e-government project is accompanied by another important project that was accomplished on the national level, which is the "unified standard system for administrative and financial affairs". The latter system aims at establishing unified standardisation of the back office for administrative and financial affairs. It is also the standard to be adopted by government entities in the automation of their administrative and financial affairs as well as for developing the software used. This system guarantees compatibility between software used in the various government entities without imposing a certain technology or resources on them. It also renders these programs an adequate environment for developing electronic governance in Syria.

Question 1: Have you undertaken or are you undertaking any activity focused on measuring and evaluating e-government in your country? If yes, please explain and state whether they were/are conducted at 1) national level, 2) sectoral level (e.g. health, education), 3) ministry/agency level or 4) project level.

1) national level: N/A
2) sectoral level (e.g. health, education): N/A
3) ministry/agency level: N/A
4) project level: project for e-payment (electronic wallet) to collect phone bills through using prepaid cards on an IVP system and on the Internet (http://epqy.ste.gov.sy). The project aims at:

- achieving rapidity in collecting payments.
- enhancing efficiency and effectiveness of services rendered to customers.
- reducing, as much as possible, direct contact between employees and customers.
- establishing the infrastructure for e-government applications.

It is expected that this system will be applied to all service sectors (electricity, water, fees…). Steps for evaluation are:

- Producing information and statistical reports in order to evaluate the success of this experiment.
- distributing a questionnaire to assess customer satisfaction and get their feedback.
- establishing a hotline for customer support.
- comparing this payment method with the other payment methods.
- appointing staff to analyse technical and marketing data.

Question 2: What are the main purpose and objective of e-government measurement and evaluation at national or sectoral level? Are measurable e-government targets and goals included in your national or sectoral e-government strategy? If yes, have indicators been developed to measure them?

This has only been done at the level of small projects. The objectives are:

- administrative simplification.
- resolve technical and marketing problems.
- acquire customer satisfaction.

Question 3: What is the purpose and objective of e-government measurement and evaluation at ministry/agency/project level (e.g. ex ante: to argue the case for new projects, or ex post: to assess efficiency and effectiveness)? Is e-government measurement and evaluation mandatory for ministries and agencies? To whom the results of e-government evaluation is made available (e.g. within the organization, to political decision makers, outside government)

Not available in the area of e-government.

Question 4: Have frameworks/methods/tools been developed and use to measure and evaluate e-government at sectoral / ministry/agency and/or project level? If yes, please indicate which ones and provide a short description below:

a) officials statistics (e.g. number of PCs at home)	
b) ad-hoc surveys (e.g. on customer satisfaction)	
c) expert panels / citizen panels	
d) focus groups	
e) cost and benefit analysis instruments and methodologies	
f) benchmarking instruments	
g) service quality standards	
i) other, please specify	

Please provide a short description of the ticked frameworks/methods/tools below:

Not available.

Question 5: What are the main obstacles for e-government evaluating in your country? Please indicate them in ascending order (1: most important, 8: least important)

a) lack of evaluation tools	
b) lack of evaluation culture	
c) lack of evaluation skills	
d) no common definition of cost and benefits	
e) data are difficult to collect	
f) no indicators available	
g) not clear who are the clients of evaluation	
h) not clear who should perform evaluation	
i) other, please specify	

Not yet reached this stage.

Question 6: What kind of e-government data that you are already collecting is available today in your country?

a) data on readiness (e.g. statistics on digital divide, IT education of the population)	
b) data on access (e.g. number of computer per households, broadband penetration)	
c) data on inputs (e.g. cost of IT hardware)	
d) data on processes (e.g. time saved by process automation)	
e) data on outputs (e.g. number of services online)	

f) data on outcome (e.g. level of satisfaction of e-government users)	
g) other, please specify	

Please list below the data available for each category of data. Please also state whether this data is publicly available and where to find them.

According to the digital access index, Syria is ranked among countries of low/medium income. The ICT ministry has established, in collaboration with the UNDP, a national ICT strategy for economic and social development for the next 10 years (e-strategy).

There are many obstacles impeding the development of ICT in Syria such as:

- High rates of illiteracy (17.1% in 2002).
- Weak public awareness about the benefits of ICT in addition to sanctions imposed by the United States which limit the arrival of technological products to Syria.
- The total number of companies working in ICT sector amounts to 120.
- Annual government expenditure on ICT amounts to approximately USD 600 million.

ICT infrastructure

By the end of 2006, the dissemination of landlines had reached 16% and mobile phone subscriptions amounted to 20% (it did not exceed 3% by the end of 2002). There are almost 50 ways to have international connectivity. The Syrian Telecommunication Establishment (STE) at present is member of Arabsat and Intelsat and uses Indiasat and Intersputnik. The STE has also its own Internet Service Providers in addition to a number of private sector service providers.

Internet subscribers reached 370 000 subscribers by the end of 2006 (in comparison, Syria's population amounts to 17.98 million). The Syrian Telecommunication Establishment has completed the National Data Network project, which will allow a number of ISPs to provide services.

Unofficial estimates show that the number of personal computers entering the Syrian market is about 110 000 PCs per year. At present, an assembled personal computer costs between USD 400 and 600.

Question 7: What would you see as the main challenges in building common indicators in e-government for the region? What next steps would need to be taken to at regional level to make progress in this area?

The main challenges in building common indicators in e-government for the region are:

1- Regional disparity in e-government applications, transition phases and e-government culture.
2- Regional disparity in infrastructure, access rates, and the extent of technological development in e-government.
3- Disparity in administrative procedures, responsibilities and prerogatives, regulatory laws and financial infrastructure in Arab countries.

Note:
A number of memorandum agreements have been signed with public and private establishments from neighboring Arab countries in order to benefit from their experience in e-government. At present Syrua is working on implementing outputs of these agreements by establishing a long term e-government strategy and building an e-government portal.

TUNISIA

Question 1: Have you undertaken or are you undertaking any activity focused on measuring and evaluating e-government in your country? If yes, please explain and state whether they were/are conducted at 1) national level, 2) sectoral level (e.g. health, education), 3) ministry/agency level or 4) project level.

Measuring e-government in Tunisia remains general: setting of qualitative objectives for each project as opposed to quantitative objectives. Some indicators relative to certain e-government pillars have been adopted. Meeting deadlines is considered as the most important standard used to evaluate the achievement of projects. Measuring user satisfaction for some e-services is also used for evaluation.

Question 2: What are the main purpose and objective of e-government measurement and evaluation at national or sectoral level? Are measurable e-government targets and goals included in your national or sectoral e-government strategy? If yes, have indicators been developed to measure them?

At the national and sectoral levels, some development objectives are set and e-government is the means used to achieve them. These objectives are translated into projects and programmes with a determined timeframe. The respect of deadlines and achievement of goals are the standards used to evaluate projects and programmes.

Question 3: What is the purpose and objective of e-government measurement and evaluation at ministry/agency/project level (e.g. ex ante: to argue the case for new projects, or ex post: to assess efficiency and effectiveness)? Is e-government measurement and evaluation mandatory for ministries and agencies? To whom the results of e-government evaluation is made available (e.g. within the organization, to political decision makers, outside government)

At present, Tunisia is evaluating government projects by examining the achievement of objectives, policies and programmes. Furthermore, progress, respecting deadlines and the achievement of set objectives are also being evaluated during the implementation of the project. This is ensured, at the centralised level, by the e-government division in the cabinet, which is responsible for follow up of e-government programmes as well as for the operational structures for implementation which will then be submitted to decision makers as guidelines.

Question 4: Have frameworks/methods/tools been developed and use to measure and evaluate e-government at sectoral / ministry/agency and/or project level? If yes, please indicate which ones and provide a short description below:

a) officials statistics (e.g. number of PCs at home)	Yes
b) ad-hoc surveys (e.g. on customer satisfaction)	Yes
c) expert panels / citizen panels	Yes
d) focus groups	No
e) cost and benefit analysis instruments and methodologies	No
f) benchmarking instruments	No
g) service quality standards	Being elaborated
i) other, please specify	-

Some of the standards adopted worldwide are used for measuring e-government, for instance: Internet access indicators, owning personal computers, number of computers in the administration, number of e-services available, number of Web sites, and the average number of visits to Web sites.

Question 5: What are the main obstacles for e-government evaluating in your country? Please indicate them in ascending order (1: most important, 8: least important)

a) lack of evaluation tools	2
b) lack of evaluation culture	1
c) lack of evaluation skills	6
d) no common definition of cost and benefits	3
e) data are difficult to collect	4
f) no indicators available	5
g) not clear who are the clients of evaluation	Not applicable
h) not clear who should perform evaluation	Not applicable since the entity is known
i) other, please specify	

Question 6: What kind of e-government data that you are already collecting is available today in your country?

a) data on readiness (e.g. statistics on digital divide, IT education of the population)	Yes
b) data on access (e.g. number of computer per households, broadband penetration)	Yes
c) data on inputs (e.g. cost of IT hardware)	Miscellaneous
d) data on processes (e.g. time saved by process automation)	No
e) data on outputs (e.g. number of services online)	Almost
f) data on outcome (e.g. level of satisfaction of e-government users)	In some cases
g) other, please specify	

Question 7: What would you see as the main challenges in building common indicators in e-government for the region? What next steps would need to be taken to at regional level to make progress in this area?

Nothing prevents the region from adopting common e-government indicators. Arab countries should agree on common indicators and measuring should strive to reach global indicators for developing the electronic administration. Hence, it is vital to agree on indicators, their components, and the best means to guarantee that the data they produce is reliable. In this context, it is possible to organise training sessions for building measurement and evaluation capacities as well as to develop the required tools.

ANNEX 4: OECD BACKGROUND DOCUMENTATION

Monitoring and Evaluation of E-Government in OECD Countries

The text of this paper has been extracted from the section on monitoring and evaluation of the OECD report "E-government Imperative" (2003). It gives an overview of the practices and discusses specific tools that OECD countries have developed to monitor and evaluate e-government (assessment of costs, benefits, demand and service quality) at the time the report was written.

While the paper in large part reflects the status of the discussion on this topic at the time the report was produced, many considerations outlined in this paper are still relevant in today's debate on this topic and could help Arab countries in their attempt to better understand the risks and opportunities associated to monitoring and evaluating e-government.

Introduction

It is necessary to monitor and evaluate e-government to understand demand, assess the benefits to users of alternative proposals and evaluate the effectiveness of proposals in meeting their objectives. Evaluation is needed to argue the case for new projects and expenditures, to justify continuing with initiatives, to allocate additional IT funds, to assess progress towards programme goals and to understand impacts. Additionally, monitoring and evaluation can assist with programme consolidation and selection of standards. OECD countries recognise the importance of this issue, and e-government policies and strategies reflect this recognition.

A number of promising initiatives exist in this area, although OECD countries acknowledge the need for improvement. Current efforts may be suitable for evaluating online services but do not take into account the back-office changes that accompany e-government.

Background and context

Current tools for programme and project evaluation provided by the private sector are a good starting point to evaluate e-government initiatives but should also take into account the public dimension of e-government in order to be effectively applied. Evaluation tools in this context demonstrate the limits to capturing the qualitative and/or financial value generated by large ICTs projects. (Van Gils, 2002):

E-Business evaluation tools like the **DMR Results Chain, the E-business Balanced Scorecard** and **Cranfield's Process Model** have been successful in evaluating e-business, but to be suitable for e-government, they would need to incorporate social dimensions and the expected benefits of governance goals.

The **EFQM Excellence Model** was introduced in 1992 for self-assessment of quality in organisations. Building on this model, the **Common Assessment Framework (CAF)** was designed for self-assessment in the public sector. While both frameworks are useful for government assessment, neither takes into account the difficulty of measuring the benefits of ICTs.

Obstacles to evaluation

Monitoring and evaluation of government programmes is generally difficult, given the frequent lack of clarity of objectives owing to the different and often competing views held by different stakeholders. In addition, overlapping initiatives and policies and continuous fine-tuning of initiatives complicate monitoring and evaluation efforts. The fact that e-government is relatively new and that there are few advanced services means fewer models and actual outcome experiences that can be used for benchmarking.

These problems are magnified when attempting to monitor and evaluate e-government programmes. ICT projects are hard to evaluate because of the pervasive nature of ICTs, the integration of ICT goals with policy goals and the organisational changes that necessarily accompany e-government initiatives. Effective evaluation requires good metrics, regular monitoring and reporting, disciplined and professional use of robust evaluation frameworks and the use of long-term evaluation practices. These qualities depend on a government's overall evaluation culture. Table 3 summarises some of the barriers to e-government evaluation and gives various examples.

Table 6. Obstacles to evaluating e-government

Obstacle	Example
Lack of clarity of objectives-- stated goals may not have associated measures of progress; there may be multiple objectives	Hard to measure "quality of life"
Hard to define success	If people are spending more time online, is that good or bad?
Easy to be too ambitious	Several countries have set targets of "all services online" by specific dates. But not all services are appropriate to put online.
Information paradox	The benefits of ICT investment may not be visible for some time (see OECD Growth Study)
Question of who are the clients; multiple clients	Should one evaluate benefits for the users, the employees, the government at large, partners, etc?
Hard to measure shared benefits	Shared infrastructure, multiple projects benefiting from shared portal, etc.
Private sector tools may not work for governments	Governments place importance on social values that are not incorporated into private sector tools and objectives
Available indicators may not be the good ones	Current indicators (such as number of employees with Internet connections) are helpful, but have limits
Government definitions and methodologies vary from one country to the next	Collecting data is easier at the local level, but at that level administrations are highly decentralised
Incentives to misstate evaluation results	If an organisation succeeds in saving money, telling others may result in their losing that money
Challenge of sharing results	Hard to get organisations to report unsatisfactory results
What you measure may become focus of organisation	If you measure number of services online, but not service quality, priority will be on putting services online butnot on service quality

Source: OECD.

To overcome these barriers and monitor and evaluate e-government successfully, a number of issues must be addressed:

The knowledge that the evaluation may be used to determine the survival of the project or future funding creates a danger that the organisation's sole focus will be to meet specific targets. This is particularly a problem when the indicators for e-government evaluation may not be representative

of the programme's goals. To the extent possible**, e-government indicators should be designed to reflect programme goals.**

For an evaluation to be useful, **results need to be available to decision makers at the right time**. When information on longer-term outcomes is not available in the requisite timeframe, alternative indicators should be used. Evaluation procedures should be realistic and focused on specific issues of value. All e-government evaluation will inevitably be a compromise between rigorous evaluation on the one hand and practical realities on the other.

The **evaluation process should be unbiased and independent**, so that it can be used as a basis for revising e-government initiatives. It should also be non-threatening to participants. It should be general enough to apply to more than one agency, initiative or programme.

E-Government evaluations should be **based on a mixture of qualitative and quantitative indicators**. Qualitative indicators are useful because they may be better suited to some e-government benefits (such as improved quality of life) than quantitative indicators. However, qualitative indicators may be difficult to use when comparing projects and levels of success. Quantitative indicators are useful because they are more readily comparable and can be used to demonstrate concrete benefits. However, quantitative indicators are not always suited to e-government goals, and there is the danger of overvaluing their importance. As evaluation efforts become more advanced, there may be a greater reliance on qualitative measures.

The evaluation process should take into account both **direct and indirect costs and benefits**. While indicators should be based on stated targets, they should also be flexible enough to take into account unexpected outcomes or be adapted for a later point in time.

Finally, **e-government should be repeatedly evaluated** over time. The process should include pre-analysis, implementation analysis and post analysis.

Benchmarking

Evaluating national policy

Evaluating e-government programmes at the national level involves assembling data from a wide range of inputs, using consistent definitions and methodologies. Benchmarking sectors or national efforts with other sectors and programmes requires common approaches and definitions.

It is much more difficult to measure e-government at the national level than to evaluate specific projects. Evaluation **requires a large degree of compatibility between data from different agencies**, but their data are rarely comparable.

Current efforts to evaluate national policy have largely focused on the evaluation of online services. These studies tend to focus on: online service breadth (*e.g.* the number of services provided); online service span (*e.g.* the customer target group to which online services are delivered); online service depth (*e.g.* the complexity of the online services provided); and to a lesser extent online service quality (*e.g.* the extent to which online services achieve their stated objectives). However, these measures are only for online services, and are not well suited to evaluating e-government at the back-office level (except for advanced services, which generally require back-office changes). Specific measures that can be used for a broader e-government evaluation include:

- Pre-requisites for online services (e.g. Internet penetration, necessary skills, etc.).

- Level of shared infrastructure (e.g. are different agencies sharing the same infrastructure resources, or is each obliged to build its own?).

- Channel delivery strategy and/or existence of a one-stop shop (e.g. one point of access for all government services, whether national, regional or local and whether all agencies are working through it).

- Level of regulatory framework and enforcement at national level (e.g. privacy and security standards, authentication).

- Prevalence of national standards.

- Extent of co-operation and co-ordination among organisations.

- Level of public-private partnerships.

- Existence of financing mechanisms supporting e-government.

Box 2. Italy: E-Government observatory

The Department of Public Administration established as a pilot project an observatory to examine the impact of ICT on public administration. At both the central and local levels, the project aims at measuring quality improvements in the provision of a public service (mainly to citizens and businesses, but also to other branches of local and central government) as well as efficiency gains within public administrations. The observatory aims at providing policy makers as well as managers with a tool allowing more thorough decision concerning both e-government policy and projects

Source: Corsi and Gullo (2002).

Post-implementation reviews for e-government projects

Post-implementation guidelines provide evaluation requirements to be included by agencies in post implementation reviews (PIR). Once a project has reached its end, a PIR should be conducted, generally 3-12 months later. The focus of the PIR is to provide an assessment of the implemented project, including an evaluation of the development process and indicate the extent to which the organisation's investment decision-making processes are sustaining or improving the success rate of IM/IT projects.

Three essential areas have to be evaluated as part of a complete PIR:

– Citizens/end users: Surveys should be conducted to determine users' satisfaction with the end product. Many of the intangible benefits identified at the outset will relate to how citizens and end users feel about the final projects.

– Mission/programme impact: A close look should be taken to determine whether the system implemented has achieved its intended effect and whether this effect still fits mission goals. There should be a focused look at how well the project supports the organisation's various processes. An assessment should also be made of other project-specific aspects, such as an estimate of the cost savings achieved, compliance with the information technology architecture, along with evaluations of the information product (accuracy, timeliness, adequacy and appropriateness of information) and identification of additional maintenance or security issues.

– Technical capability: Finally, an evaluation should be made of the technical aspects of the project, both current and future. This evaluation may focus on such factors as the competency of the work force to use the new system, employee satisfaction or retention, the extent to which advanced technology was used and the methodological expertise of the development team.

Source: Van Gils (2002)

International benchmarking

Measuring progress against other countries (international benchmarking) is a common way of determining the success of national policy. International benchmarking can be a powerful tool for capturing the attention of ministers and generating political commitment to achieving certain national goals. However, international benchmarking studies to date lack accuracy and are judgmental, so they can conceal as much as they reveal. Finding common measures across countries is a very difficult task, especially as countries take different approaches to the provision of online services. Finding effective and comparable measures is also more difficult when dealing with complex variables such as quality versus the more simple quantity of services online. For this reason, existing statistical surveys tend to focus on the aspects of e-government that are easier to measure, such as percentage of services online or use of e-government services, but do not take into account the more complex and back-office changes that are fundamental to e-government.

Current benchmarking studies are limited for the following reasons:

- They tend to focus on the supply side and do not generally include the demand for and use of e-government.
- They tend to be output rather than outcome oriented.
- They focus on government-to-citizen and government-to-business interactions, but do not measure government-to-government or government-to-employee interactions.
- The process is not transparent to governments and does not include a clear methodological statement.
- The process is not internationally agreed (each survey employs its own definitions and measuring tools, and other countries are not consulted).
- A country's overall performance is measured on the basis of only a small number of elements.
- No account is taken of countries' priorities, approaches or e-government objectives.

Box 3. The Netherlands: The need for evaluation tools

A recent Dutch study proposes developing a common system of concepts for measurement of e-government and international benchmarking. At present, there is scarcely any quantitative material available, at either the international or national level. The few internationally comparable publications often include no more than a few readiness indicators. While there are valuable national studies, they do not lend themselves to international comparison or benchmarking.

To measure e-government, OECD countries need to develop a measurement tool which covers all relevant aspects and indicators of e-government. Each country would measure and analyse its situation with regard to e-government using the same set of research tools, preferably during the same time period. Some adaptation would be possible, *e.g.* large countries might use a larger sample than smaller ones. In their report to the OECD, countries would be able to contextualise results in the light of specific national characteristics, such as the structure and extent of the government.

A benchmarking exercise should offer space for considering qualitative aspects along with the quantitative data, thus providing a more nuanced view of each country's position.

Source: Holland (2002)

Standard OECD statistics

Using standard statistics to make international comparisons of e-government is not easy. Not only is it difficult to delineate the concept of e-government (it may range from publishing basic government information on the Internet to letting citizens engage in dialogue with elected officials), but governments have different structures for service delivery and e-government co-ordination.

The statistics produced by OECD countries often refer to evaluation of national policies on the Information Society, but even here the statistics may vary from country to country. The OECD's *Measuring the Information Economy* (2002b) provides some internationally comparable statistics on aspects of e-government.

Very few countries implement dedicated surveys of e-government, i.e. surveys in which government agencies are asked how they use ICTs as tool for improved service and communication. Countries that do use such surveys include Australia, Canada, Denmark and Norway.

The OECD Working Party on Indicators for the Information Society (WPIIS) is currently developing guidelines and model surveys covering aspects of e-government. The model questionnaire on measuring ICT use and e-commerce currently includes one e-government question for enterprises, which asks about business use of the Internet to communicate with public authorities. For households and individuals, the model questionnaire includes questions about obtaining information from government Web sites, downloading or submitting forms and other dealings with government.

WPIIS is aiming eventually to create separate modules on e-government in the enterprise and household/individual model questionnaires by further developing the current questions, and adding one new one. By taking on this task, WPIIS hopes to act as a forum for developing common indicators on e-government demand and use. However, no plans exist for developing guidelines and model questionnaires for ICT use in government; the very different structures of government would make it difficult or impossible to compile comparable statistics.

Evaluation of e-government activity

A focused examination on **elements of e-government activity** would be very valuable to most OECD countries. Cost-benefits assessments can assist agency decision makers in facing specific choices when implementing projects or help central e-government co-ordinators identify priorities for limited central funds.

Monitoring and evaluation of e-government is a broad area. The following discussion focuses on aspects judged priorities by the project working group, namely: costs and benefits, demand and service quality.

Box 4. Australia: National Evaluation of E-Government, February 2003

In early 2002, the Australian National Office for the Information Economy (NOIE) commissioned a study into the demand for and benefits of e-government. The aim of the study was twofold: (i) the development and application of a methodology to assess the success of the Commonwealth's government online programme through an analysis of past and future demand, benefits and return of investment; and (ii) the development of a methodology for measuring the success of future online initiatives allowing comparison. Preliminary findings of the study were released in November 2002.

The Findings – Demand
From 1997/98 to 2001/2002, the Prime Minister's commitment and agency client service strategies appear to have provided the major stimulus for agencies to offer services online to citizens and businesses.

The study found that there is ongoing demand for online services and that users believe significant benefits are available. It found that future demand for online government services might increase by approximately 30% in the period 2002 to 2004.

Citizens and businesses indicated that in the next twelve months they would use the Internet to access Commonwealth Government information related to education, health, taxation, employment, weather, community support, and to a lesser extent family assistance information.

Benefits to Users
The vast majority of users of government online services see significant benefits from being able to access services online. 86% of government online users felt that the overall benefit of government online was either significant (36%) or moderate (50%). However, only 45% were able to quantify actual cost savings associated with interacting with Government online compared to traditional channels.

As a result of interacting with government online:
- over 80% of all users indicated a moderate to significant improvement in the ease of finding information.
- approximately 75% indicated some or significant improvement in service quality.
- 75% saw either some (24%) or significant improvement (51%) in their ability to make decisions.
- over 80% of businesses and nearly 90% of government employees saw either some or significant improvements in the quality of their decision-making.
- access to public records was considered more open by 68% of all users.

Benefits to Government
The study estimated potential financial benefits over the period 2000 to 2004 to government agencies through a reduction in costs:
- 67% expected to reduce costs significantly due to improved business processes.
- 64% expected to reduce costs significantly by directly reducing costs of servicing – i.e. direct cost reductions, such as advertising, printed material, staff costs and client management costs.
- 17% expected to reduce costs significantly by using multi agency delivery channels.

Future Beneficial Features
The study found that citizens and businesses considered that there would be further benefits from features, such as:
- a seamless online government presence that provides more information, structured so that it is easy to find and does not require an understanding of how the government works.
- further integration and clustering of services across agencies at all levels of government.

The final results from the study are available on the NOIE Web site.

Source: www.noie.gov.au

Cost/benefit analysis

Discussions of the utility of cost-benefit analyses for e-government initiatives are ongoing. Some argue that countries should not rely on cost-benefit analysis as the single basis for public budgeting and that other non-financial gains must be considered. Cost-benefit analysis is typically readily calculable for bricks and mortar projects like dams and roads, but is less obviously of value for government initiatives where the expected benefit may be public convenience or even improved public perceptions of public services (Reeder, 2002).

For example, there is considerable debate regarding the economic value of small time savings. If the public, on average, spends 30 minutes less time waiting in line for a driver's licence to be issued, are those small increments truly recoverable and put to other economically productive uses? Put differently, if

100 000 individuals each save 30 minutes once a year, has the economy realised the equivalent of 25 work years in savings?

Cost and benefits need separate measures before they can be combined into cost/benefit analysis. A few areas for consideration include:

- Available tools to measure the costs of an e-government project and justify launching an initiative.
- Comparing costs of an e-service and the traditional equivalent.
- Investment and uptake costs.
- Operational costs, including maintenance and training.
- Long-term costs, including the cost of updating systems and depreciation.
- Expected cost savings in the longer term.
- Opportunity costs of launching an e-government initiative.

The benefits flowing from ICT investments can be difficult to identify, given the integration of ICTs into broader policy goals and organisational change. More specifically, assessing the benefits of e-government initiatives to governments and to service users is difficult because:

- Benefits may be unclear, overlapping and reliant on the performance of other initiatives.
- Goals may be expressed in terms of putting services online, or putting infrastructure in place. While these goals can be evaluated in their own terms, they do not take into account uptake or the actual benefits desired or achieved by end users.
- It may not be clear who actually benefits from e-government initiatives (government, users, employees, etc.), especially as some of the beneficiaries may be unintended. It is also unclear whose benefits should be counted when adding up benefits.
- Benefits from shared arrangements such as common infrastructure can be difficult to assess.
- Benefits include both direct outputs (such as the reduction in the time needed for compliance by small businesses using online services) and broader outcomes (such as the impact of the reduced time on business viability).
- Benefits will inevitably involve elements that are both quantifiable (*e.g.* cost and time savings) and non-quantifiable (*e.g.* improved service quality), raising the issue of valuation of non-financial benefits.
- Benefits will not be static, but will change over the life of the initiative as user expectations evolve.

In practice, the evaluation of benefits has focused on estimates of efficiencies in government and improved convenience for users. These estimates are often made at the project initiation stage, to justify

commencing a project. Assessment of realised benefits resulting from initiatives also needs to be emphasised to identify lessons learned from project implementation and operation.

Box 5. Australia: The Victoria Government Online intermediate benefits review, 2001

The Victorian State government, a leader of e-government efforts in Australia, undertook an intermediate benefits review (IBR) of its government online programme. The goal was to provide an accurate summary of delivered and planned GOL benefits and funding in Victoria. An independent consultant conducted the IBR in three phases over a 20-week period commencing 13 November 2000. Some 460 online government projects encompassing 155 programmes, 56 agencies and a sample of 274 citizens, as well as in-depth analysis of 26 individual case studies, were surveyed. At the time of the IBR, 46% of programmes were described as complete and 54% were still in progress.

Phase 1 involved surveying project data from agencies of the Victorian Public Service over a four-week period. As it was assumed that benefit tracking was not a core competency of all Victorian government agencies, the consultant hosted pre-survey briefing sessions to prepare the respondents for calculating expected benefits and cost savings. Agencies were asked to specify expected and delivered benefits of social worth ranging from nil to significant and agency worth in financial terms across a range of bands. Finally, the agencies were asked to estimate the extent to which benefits had been realised and what risks might prevent the benefits from being realised. Agencies were asked to supply where possible or at least identify suitable metrics and baseline data for future time series analysis. When the survey ended, the consultant performed a quality-control analysis of the data before freezing the database.

Phase 2 involved surveying a sample of users of GOL services (Victorian citizens, businesses and departments) to confirm the benefits identified in phase 1 from a social perspective and identify unexpected benefits and gaps where benefits were not achieved.

Phase 3 concerned future funding recommendations.

The benefits framework was built on the basis of GOL objectives, benefits estimations developed by the consultant and validation of data by opinion surveys of the population.

Source: Van Gils (2002)
Original source: Victoria Government Online – Intermediate Benefits Review, 2001 – http://www.egov.vic.gov.au/

Assessing demand

A major focus of e-government activity has been increasing the supply of online services with relevant targets. Given their relative novelty, many services were developed without reference to potential demand. However, as services become more complex and include transactional services, **assessment of demand becomes critical** to ensure that the benefits of initiatives both to governments and to end users match the costs involved.

As for other forms of service delivery, measuring demand for potential online services is complex. Issues to be addressed include identifying the potential pool of users, assessment of accessibility, including general online access by the target group, ease of use and the requirements of groups with special needs, such as the disabled.

Experience has shown the difficulty of predicting usage patterns before the online services are implemented. Potential users cannot be expected to have identified specific requirements for online services, as these emerge only in the light of actual experience. As services become more complex, the

need for pilot testing and prototyping becomes more important. As services are implemented, **structured feedback arrangements** enable adjustments to be made in the light of experience.

Box 6. Finland: E-Government-related surveys

Since 1999, the Ministry of the Interior has made annual surveys of citizens' views on the delivery of electronic services by the public administration. The results have suggested that while citizens are familiar with services provided by their own municipality or local state authority, they have little awareness of other public-sector electronic services. These limited surveys indicate that Finns support the development of public e-service, but they do not reveal much about the level of citizen demand for e-government.

As a part of building the national citizen portal, the Ministry of Finance carried out a user survey of 100 citizens and civil servants in 2000. The results showed that citizens recognised the need for a portal that could provide: i) information about public-sector organisations and their services; ii) advanced electronic services for which transactions are possible; and iii) feedback mechanisms on specific questions.

For regional portals, the most commonly used services were public services. Even though the attitude towards these services was positive and they were frequently used, these services were also seen as the ones that needed the most development.

The Chamber of Commerce and the Association of small and medium-sized enterprises have also conducted several surveys on companies' interest in electronic services.

Source: OECD report on E-Government in Finland (2003).

Box 7. United Kingdom: The People's Panel

In 1998, the Cabinet Office's Modernising Public Services Group set up the "People's Panel" to be better able to provide the services that people want. Citizens' panels had already been used in local government for many years, but this initiative was a world first at the national level. The panel is composed of 5 000 members and is representative of the UK population in terms of age, gender, region and a wide range of other demographic indicators. An additional 830 members were recruited from ethnic minorities to ensure that the sample of minority groups is large enough to be used for quantitative research.

The government is using the People's Panel for many service delivery issues on a regular basis and has recommended that departments use it when starting and implementing e-government projects and programmes.

For instance, in April and May 2000, the Cabinet Office's Performance and Innovation Unit (PIU) created six focus groups from the People's Panel to get a better understanding of people's attitudes towards electronic delivery of public services. The findings have been used by PIU in compiling their report on e-government, "Electronic Government Services for the 21 Century".

Source: People Panel's homepage: http://archive.cabinetoffice.gov.uk/servicefirst/consumerfocus/guide_general.htm#The%20People's%20Panel

Box 8. Australia: Victoria Tourism Online

Victoria Tourism Online has performed customer surveys to establish performance baselines, conducted focus groups with representative users and participated in industry forums to understand the likely need for tourism services online. This knowledge of customer demand is cited as a critical element of the project's success.

Source: Detailed Benefits Report, Multimedia Victoria Government Online, Intermediate Benefits Review, Phase 2, 27 June 2001.

Service quality

Measuring service quality is of particular importance for e-government, as most governments regard improvement of the quality of public services as an important objective of e-government programmes. Quality standards, which will vary for individual projects, need to be developed in the context of broader service charters and standards. The quality of e-government services is often assessed as citizen satisfaction, measured through interviews or online questionnaires. Frequent **surveys of citizen satisfaction** are of particular importance in e-government, as customer's expectations and habits are evolving rapidly in a changing service environment. Results from these surveys may be used to identify improvements that meet user needs by making services more accessible and effective. Results may also be used to update service quality standards.

Box 9. United Kingdom: Customer segmentation and Web site testing

The Office for National Statistics (ONS) has used a number of means to better understand customers' needs. Throughout 2001, customer-segmented focus groups examined its product portfolios, the type of data provided and how best to deliver it – on paper or electronically via the Web site, for example. Customers were segmented by type and by how frequently they used the data. On the basis of this research, the ONS decided how to deliver data and services for each group.

The ONS launched a new Web site in 2001 after conducting the focus groups and laboratory usability testing to understand how its users navigated to find the information they needed.

These findings were systematically used as part of a development programme. Users are being involved at key stages of development and will influence the look, feel and functionality of the site.

Source: National Audit Office (2002).

Box 10. Canada: Service quality and Common Measurement Tool (CMT)

The CMT was developed by the Canadian Centre for Management Development's Citizen-Centred Service Network to improve the measurement of client satisfaction. The CMT asks questions about service delivery at the operational level. It is conceived around five key elements: client expectations, perceptions of the service experience, satisfaction levels of importance, and priorities for improvements. There is a core set of questions for inter-jurisdictional comparisons of client satisfaction in a few key areas of service delivery, as well as a larger question bank from which organisations can choose based on their needs and particular situations.

Source: http://www.tbs-sct.gc.ca/si-as/tools-outils/tools-outilstb_e.asp

Monitoring and evaluation – the role of e-government co-ordinators

Improving monitoring and evaluation is a major task for e-government co-ordinators. Improvements in this area will require a balance between the practical needs of agencies – producing information that will

actually be used – and the difficulty of maintaining a quality evaluation and analysis process. While countries' priorities will differ, the need to better articulate the benefits of e-government activity means that the focus should be on the benefits of initiatives. Without clearly stated benefits, e-government implementers cannot expect political and public support. E-government co-ordinators should consider the following action:

- Establishing a network of practice across key agencies, focused on e-government evaluation issues.

- With the use of this network, developing a framework for assessment of demand, benefits and user satisfaction for use by agencies to assess individual agency projects.

- Gaining agreement of central budget authorities to use this framework as a standard, acceptable method for assessing these impacts for the purpose of budget decision making.

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THE BUSINESS CASE FOR E-GOVERNMENT: AN OVERVIEW

The text of this paper is included in the chapter "The business case for e-government" contained in the OECD report "E-government for better government" (2005). This chapter is based on a paper prepared for the OECD by Professor Paul Foley, de Montfort University, UK, and Shazad Ghani, UK.

The first part of the chapter looks at the impacts of e-government and the studies that have been undertaken to investigate its costs and benefits. It then provides an overview of OECD countries that have evaluated e-government projects and the methods they have adopted. A checklist of key elements of evaluation studies is provided and the strengths and weaknesses of different approaches are reviewed. Finally, an overview of the benefits to government and users of e-government projects is presented.

Introduction

E-Government is now widely regarded as being fundamental to reform, modernisation and improvement of government. The OECD defines e-government as "the use of information and communication technologies (ICT), and particularly the Internet, as a tool to achieve better government". However, the real costs of and benefits of e-government have rarely been soundly and systematically evaluated.

During the dot.com boom, e-government enjoyed a healthy level of political and financial support. ICTs and e-government were seen as key tools for modernising public administrations and providing better government. However, the next stage of e-government is likely to require investment in the development of services and systems whose benefits will sometimes be less readily apparent to politicians and policy makers, and to the public.

This means that robust evaluation and monitoring of the costs and benefits of e-government needs to be better incorporated into e-government planning and investment. This is commonly referred as the need for e-government to be supported by a strong "business case". Without this, e-government implementers will find it increasingly difficult to obtain support for making the investments required to enable them to achieve the objectives that governments set for them. This chapter looks at some aspects of how countries can address this issue.

Why examine the business case for e-government?

The business case for e-government projects has rarely been evaluated or systematically monitored, and OECD countries acknowledge the need for improvement in this area (OECD, 2003). Decision-makers, policy advisers and practitioners need to be better informed about the costs, benefits, risks and outcomes of e-government in order to be able to assess the merits of proposed e-government initiatives and their likely effectiveness in meeting stated objectives, and also to improve their implementation.

In 2003, it was suggested that e-government had enjoyed a healthy level of political and financial support among OECD governments (OECD, 2003). Many initiatives, such as the establishment of national Web portals, have had a high profile and support has been easy to find. The next stage of e-government activity is likely to involve more e-government initiatives that develop services and

solutions based on the redesign and joining-up of back-office business process and IT systems. This will be more complex and challenging, possibly more costly, and potentially more risky, especially because they will often require changes that may be quite disruptive of established public sector structures, culture, and management arrangements. Benefits of these initiatives are likely to be less readily apparent to policy makers and the outside observer.

In the face of this, while the priorities of both countries and individual government organisations may differ, the need to better articulate the case for continued investment in e-government drives a need for improved identification, evaluation and monitoring of e-government costs and benefits. Without this, those implementing e-government will find it increasingly difficult to obtain political and public support.

Preparation of robust pre-investment business cases that outline the impacts of e-government initiatives, coupled with sound post-investment evaluation of these impacts, will enable decision-makers to: 1) rank and compare proposals for investments in e-government with competing demands for scarce public funds; 2) hold implementers to account for delivering projected benefits within proposed costs; and 3) better identify opportunities for benefit from future e-government investments. Overall, successful efforts in this area can assist governments in maximising the benefits of e-government while containing its costs and risks, and in prioritising resource allocation decisions (especially if the approach to evaluation and monitoring is consistent across government).

Impacts of e-government projects

The impacts of e-government are usually divided into two groups: those costs and benefits accruing to government, and those experienced by users. To date, the benefits for government have primarily been seen as relating to gains in efficiency achieved through the application of ICTs by individual agencies, while costs have been seen as those directly related to development and implementation of software applications and IT systems supporting new forms of information or service delivery. However, costs and benefits for employees, investors and other agencies are also important (E-government Workgroup of the Directors General, 2002). User costs and benefits arise for both citizens and businesses. Some observers have suggested that more general costs and benefits to society or the environment might comprise a third group (Rimmer, 2003).

Benefits arise at each stage of e-government "maturity". The four levels of e-government maturity are:

Level 1: Information.

Level 2: Interaction.

Level 3: Transaction.

Level 4: Transformation.

(OECD, 2003)

The E-government Workgroup of the Directors General (2002) argues that the benefits of e-government increase as e-government activities progress further along the maturity model towards data sharing and transformation. The OECD (2003) highlights the mass processing tasks that present governments with major opportunities for improving efficiency through application of ICTs. The IAB (2003) notes that process improvements and streamlining achieved by e-government can provide significant savings and/or cost avoidance.

So far, only two countries have attempted to move beyond the analysis of the costs and benefits of individual e-government initiatives. Australia and the United Kingdom have examined the aggregate

case for e-government projects by using a consistent methodology (different in each country) to investigate a large number of e-government projects.

In Australia, the National Office for the Information Economy surveyed 38 e-government projects (NOIE, 2003). Every project was expected to improve the quality of service delivery, and 87% of projects also expected to generate some financial benefit for service users. A user survey estimated user cost savings of AUD 14.62 per transaction compared to traditional channels. Businesses estimated savings of over AUD 25 per interaction.

NOIE (2003) found that 24 projects claimed cost reductions (or increased revenues). For an estimated investment of AUD 108 million , these 24 projects were expected to achieve cost reductions of AUD 100 million. This represents a benefit/cost ratio of 92.6% (the estimate omits user benefits). Across surveyed projects, including those that had no expectation of generating a financial benefit, the aggregated benefit/cost ratio was 61.1% (again this estimate also omits user benefits).

In a study of 14 e-government projects the UK government found that all except one forecast positive returns. Payback periods for projects varied between four months and 11.5 years, with an average of 4.8 years.

Evaluating the economic impact of e-government projects

Several studies have reported results from research evaluating the economic impact of e-government projects (IAB, 2003; NOIE, 2003; OGC, 2003). The range of benefits and returns on investment identified can be seen in Annex 1. These studies provide an interesting overview of the magnitude of savings that can be derived from e-government projects.

However, they raise almost as many questions as they answer. Nearly all use different methodologies and their results are presented in different ways. Some provide details about costs, others do not. This makes it difficult to be certain that benefits exceeded costs and that a positive return on investment was realised. The value of these studies would be enhanced if more was known about the methodologies used to calculate costs and benefits.

Many studies have evaluated the economic impact of e-government projects in the early stages of the e-government maturity model (information and interaction). However, there are fewer evaluations of more advanced projects such as transformation initiatives. Many governments indicate that they are not yet near this stage of e-government, or that evaluation of the limited number of such projects that they have conducted has not yet been undertaken.

The studies that do exist have also emphasised total benefits or cost savings, while the particular beneficiaries of these savings have rarely been identified. For information and interaction projects, the reports have placed greater emphasis on benefits to users, given their visibility. Benefits to users indicated by the studies include 24/7 service delivery, improved convenience, and faster turnaround of service delivery.

Previous impact studies of e-government projects have not differentiated between the maturity level of projects, or the distribution of costs and benefits to users and government. Benefits to government from less mature projects appear to be smaller than the benefits from higher level projects. Indeed, UK government studies suggest that as projects move from the information to the transformation level, payback periods on e-government investments decline and net present values rise.

Benchmarking studies

A better understanding of the costs, benefits and beneficiaries of e-government can help policy makers and e-government managers to make e-government more efficient and effective. Benchmarking studies of e-government are regularly undertaken by private sector organisations such as IBM, the Economist Intelligence Unit, Accenture and others. However, these are frequently little more than "bean counting" exercises that measure the number of services provided on line[i]. These benchmarking studies are limited for two main reasons. First, they focus on the visible interface between government and users, while neglecting the more complex, and often more significant, back-office aspects of e-government.

Second, they take no account of the cost of e-government. A cost-effective e-government strategy would focus on introducing those services that can provide the greatest benefits while also achieving the greatest cost savings. For some countries it may not be cost-effective to provide some services on line, or may only be sensible to do so when sufficient users can be expected to use the e-government service.

Third, these studies often fail to account for the differing national constitutional, legal, political, economic and administrative contexts that influence how, where and when countries implement e-government initiatives. Finally, existing studies tend to focus on the supply of services and neglect service demand and use. They are output rather than outcome-oriented, their methodologies are not internationally agreed, and countries' overall performance is frequently measured on the basis of only a small number of elements of their e-government programmes (OECD, 2003).

One way of overcoming these concerns is to work towards an internationally agreed approach to examining the impacts of e-government that governments may use separately or collectively to self-evaluate their e-government initiatives.

The benefits of evaluation

OECD countries are at different stages in their development of e-government evaluation and monitoring tools and methods. The benefits of evaluation extend beyond the simple estimation of the costs and benefits or rate of return on an e-government investment. Evaluation can help policy makers to better understand of both the benefits and beneficiaries of e-government projects, and the costs associated with achieving such benefits. They can also be valuable in ensuring the realisation of benefits and project efficiency. Also, more advanced *ex ante* studies often incorporate risk analysis so that the potential impact of things like delays in implementation, unexpected cost-increases or lower levels of service use can be modelled and understood.

It is also important to highlight that evaluation methods frequently change and develop in robustness in line with the increasing magnitude of an initiative, or its stage of development. Very detailed and costly evaluation methods are often inappropriate for small projects or for preliminary feasibility studies. The primary benefits of more detailed e-government evaluation include:

- A more robust framework for comparing investment decisions or projects within and between agencies.
- A better understanding of the drivers of project efficiency or factors enhancing return on investment.
- A better understanding of the costs, benefits and beneficiaries of different types of projects.
- A better understanding of whether higher-level projects produce more benefits and/or have greater costs.

A positive contribution to evaluating the efficiency and effectiveness of e-government programmes.

Box 11. Findings from the Dutch and Danish case studies

Netherlands

The Ministries of Transport and Economic Affairs in the Netherlands have worked with Dutch economic research institutes for a number of years to investigate the impact of major infrastructure projects. These projects are known to affect markets throughout the economy and every effect is systematically estimated using cost-benefit analysis. Effects that cannot be expressed in monetary terms are reported separately.

The information produced by cost-benefit analysis is useful at almost every stage of policy preparation. In the early stages of infrastructure projects, decisions are supported through a broad approach to analysis. Before final decisions are taken, a thorough cost-benefit analysis is carried out. The analysis is an iterative process in which quantitative details and improvements are accumulated as research progresses. Risk aversion is incorporated into the analysis by increasing the discount rate, above the usual value of 4%. In this way less weight is given to benefits that lie further in the future.

Denmark

The development and use of business cases and evaluations in the Danish public sector is at an early stage. In the past the development of some government projects was not based on business cases.

The Digital Taskforce and the Ministry of Science, Technology and Innovation are starting to develop suitable tools and a more systematic approach to e-government evaluation. Best practice is being established through cross-sector projects that involve many different organisations. The taskforce has developed a financial business case tool as well as a cost-estimation tool and made it available to the public sector through their homepage (www.e.gov.dk). The reason for the explicit focus on financial information was the urgent need to alter previous methods and establish evidence of the economic benefits in project evaluations.

Towards a Methodology for Evaluating E-Government

Why develop a methodology to evaluate e-government?

The development of a robust common methodology to evaluate and compare benefits and costs of different e-government projects can assist in the development of better practice and more effective e-government. This section provides an overview of evaluation activities undertaken in OECD countries, the different methodologies employed and the common problems encountered. A simple equation with supporting checklists of key items for consideration in the preparation of e-government business cases, or the evaluation of projects has been produced by drawing together key elements of the methodologies used by different countries.

E-Government evaluation activity and methods in OECD countries

Nearly half (14) of OECD member countries have evaluated the impact of their e-government projects and policies. Many countries have only begun their evaluation activity in the last two years. Table 1 provides an overview of activities in each country.

Table 7. E-Government evaluation activities in OECD countries
Type(s) of e-government evaluation employed

Country [1]	Active in e-government evaluation	Non-economic assessment methods [2]	Economic assessment methods [2]	Source
Australia	Yes	KPI	NPV, ROI, VA	NOIE (2003)
Austria	Yes	Benchmarking		Federal Chancellery (2004)
Canada	Yes	Capacity check	VA	OECD (2002)
Czech Republic	Yes	Benchmarking		e-Czech (2004)
Denmark	Yes		NPV	e-government workgroup of the Directors General (2002)
Finland	Yes	KPI	CBA	OECD (2003)
Germany	Yes	KPI		Information Society Germany 2006 (2003)
Italy	Yes		CBA	E-mail reply for this study
Japan	Yes			E-mail reply for this study
Netherlands	Yes	KPI		www.elo.nl
New Zealand	Yes	KPI	NPV, Financial analysis	States Services Commission (2003)
Poland	Yes	KPI		ePoland (2003)
United Kingdom	Yes	Benchmarking	BA, NPV, CBA	OGC (2003)
United States	Yes	KPI	ROI, NPV, CBA, IRR, VA	IAB (2003)

1. Evaluation activities for Belgium, France, Greece, Hungary, Iceland, Ireland, Korea, Luxembourg, Mexico, Norway, Portugal, Slovak Republic, Spain, Sweden, Switzerland and Turkey not available.

2. BA = breakeven analysis; CBA = cost benefit analysis; IRR = initial rate of return; KPI = key performance indicators; NPV = net present value; ROI = return on investment; VA = value assessment methods.

Source: Various published studies and responses to OECD requests for information.

Table 7 reveals the range of methods used in OECD countries' evaluations of e-government. Most countries appear to begin by developing methodologies that focus on single e-government projects.

Towards a common framework for evaluation

It is possible to develop an approach or methodology for examining e-government in two ways. One is to start from scratch, and the other is to use the common or best features of existing methods. The latter approach is adopted here. An OECD questionnaire used in preparation of this chapter sought the views of those that have evaluated e-government costs and benefits on the technical and practical opportunities and problems associated with the development of robust approaches for undertaking this work.

Based on the questionnaire and the review of existing studies and approaches to e-government evaluation, it was agreed by an OECD expert group that met to discuss this subject that, at the most basic level, the costs and benefits of e-government can be simply represented as:

(Government benefits + User benefits) - (Government cost + User cost) = Cost/benefit impact

Annex 2 provides a checklist for unpacking and assessing each of the four elements of the above equation. The equation is applicable to both *ex ante* preparation of business cases for investment in new e-government initiatives, and *ex post* evaluations of the costs and benefits of existing ones. Robust evaluation also requires consideration of risk factors that might cause a project to fail or not reach its

full potential. An *ex ante* study needs to consider these risk factors in order to avoid or to minimise impact. Only when the predicted benefits outweigh the potential risks should a project commence.

Table 8 shows the range of methods used by different countries in their evaluation of e-government. The complexity and comprehensiveness of these methods increases as the table progresses towards value assessment methods. Transaction cost methods provide a relatively quick and easy way to estimate potential cost savings related to e-government projects. The method appears to offer a good compromise between the two, often contradictory, components of any evaluation: rigorous assessment and practical reality.

Most countries undertaking evaluation have used simple return on investment metrics such as net present value, internal rate of return, savings to investment ratios. Such studies tend to focus government costs and benefits, perhaps because they are "controllable" and because it is easier to gather the relevant data.

More complex methodologies developed by countries such as Australia, Finland, the United Kingdom and the United States incorporate methods for estimating costs and benefits to users. The calculation of user costs and benefits is much more complicated owing to problems in producing a monetary or other value for issues such as better service quality or savings of user time.

Table 8. E-Government evaluation methodologies

Method	Description	Use
Transaction costs	Uses segmentation methods to calculate use and benefits to different user groups	Quick and easy way to estimate potential cost savings from the introduction of e-government
Net present value	A straightforward method that examines monetary values and measures tangible benefits	Relatively straightforward; use when cash flows are private and benefits tangible
Cost benefit analysis	A flexible method that measures tangible and intangible benefits and assesses these against net total cost	Good consideration of all benefits, but can be expensive and time consuming
Cost effectiveness analysis	Focuses on achieving specific goals in relation to marginal costs	Good for considering incremental benefits against specific goals
Portfolio analysis	A complex method that quantifies aggregate risks relative to expected returns for a portfolio of initiatives	Good for consideration of risk, must use a consistent approach across a portfolio
Value assessment	A complex method that captures and measures benefits unaccounted for in traditional ROI calculations	Used by several governments to consider performance against all policy goals

Several governments (such as Australia, Canada, the United Kingdom and the United States) have lengthy documents describing how e-government user costs and benefits can be calculated. These documents deal with technical issues such as valuation techniques, discount rates and additionality.

Many of the evaluation methodologies currently used are based on the *Demand and Value Assessment Model*, the *Enhanced Framework for Management*, the *Value of Investment Methodology* and the *Value Measurement Methodology* used respectively by Australia, Canada, the European Commission and the United States,.

The Australian case study (Box 11) describes how and why the value assessment method was developed and implemented in Australia. The purpose of the Australian approach is to define, capture and measure value associated with electronic services unaccounted for in traditional ROI calculations. It also fully accounts for costs, and identifies and considers risk.

Box 11. Australia's decision to use the value assessment methodology

The Australian government believes that investment in e-government should deliver tangible returns, whether in the form of real cost reductions, increased efficiency and productivity, or improved services to business and the broader community.

As a first step to measuring the benefit-cost ratio, the Australian Government Information Management Office (AGIMO) developed the Demand and Value Assessment Methodology to assist agencies. The methodology provides a consistent framework for measuring the social and financial benefit-cost ratio and for alignment with broader government and agency objectives for existing and proposed government online programmes. It also provides managers with a framework for determining and then for assessing, on an ongoing basis, the intrinsic worth of online and government online programmes provided as integral components of their overall service delivery strategies.

The components of financial, economic and social benefits flowing from e-government services are documented in a demand and value assessment framework handbook.

All four approaches are slightly different, but nearly all incorporate aspects of traditional business theories and methodologies, as well as newer hybrid approaches (CIO Council, 2002). Important factors for value assessment (Rimmer, 2003) include:

Economic factors, including agency costs, efficiency and revenue, all provide for a net economic impact.

Consumer financial value, including user costs, efficiency for users and direct cost savings.

Social economic value, including increased consumer financial participation in the economy.

Social factors, including increased education or health outcomes, better access to jobs.

Whole-of-government benefits that offer increased transparency and accountability.

The New Zealand case study (Box 12) demonstrates that value assessment methods can be used to analyse solutions to problems prior to implementation. Their use is not restricted to simple *ex post* studies of impact.

Box 12. The *ex-ante* application of the value assessment methodology to authentication

The New Zealand government recognises that to deliver many kinds of government services on line agencies need a way to ensure that these services go to the right person and come from an authentic source. Authentication and safe online transactions are important in achieving many of New Zealand's e-government goals.

An all-of-government approach to authentication has been deemed essential. Owing to the magnitude and complexity of this objective a comprehensive value assessment methodology has been used to investigate the business case for online authentication. The Cabinet established an Authentication Project that has consulted widely with citizens and directors of all government agencies. During a thorough six-month study, the value assessment methodology was used to appraise different solutions and provide the vision, solution and implementation steps required to create an all-of-government approach to authentication.

It would obviously be imprudent to propose a best or generic methodology. Evaluation methods must be selected to match the resources available for evaluation, the magnitude of an initiative, and individual country circumstances. In addition, many countries are developing and adapting their own methodologies. However, it would be inappropriate to prescribe a specific methodology for examining these factors.

E-Government evaluation: Additional problems and opportunities

It is important to consider some of the practical problems that have arisen in evaluation studies, because they highlight issues that need to be considered by those who undertake evaluation at agency, country or international level.

One major challenge relates to treatment of the potential costs and benefits of additional organisational changes that may have to be implemented alongside the direct development of e-government initiatives. This is an important factor that should be considered in both individual and aggregate or comparative evaluations of e-government. E-government initiatives often involve cooperation, coordination and collaboration across service or agency boundaries. This is frequently accompanied by organisational restructuring or business process and IT systems reengineering. It is difficult to break down the allocation of the direct and indirect (or spillover) costs and benefits of such initiatives, either to government or users.

In the United States and the United Kingdom there is evidence that both public and private sector projects that involve this type of change produces greater rewards (*e.g.* higher NPVs), partly due to positive spillover effects (Harris and Katz, 1989; Brynjolfsson and Hitt, 1998; IAB, 2003). However, the adoption of a common evaluation methodology makes it possible to compare projects in which e-government activities have been undertaken in isolation, with those in which accompanying changes (such as restructuring or re-engineering) have also been introduced. This creates an opportunity to identify and leverage opportunities for achieving increased benefits or reduced costs related to the spillover effects of e-government initiatives.

Another challenge which may be important to consider when undertaking e-government evaluations of cross-government projects is how to evaluate and account for costs that are sustained by an agency funding an e-government project and benefits that are diffused across government (sometimes called the "sow/harvest" problem). This issue presents a significant challenge to e-government, as it can impact unevenly on the incentives that government agencies face to involve themselves in multi-organisation e-government initiatives. Finding ways to consistently evaluate these costs and benefits can assist governments in creating optimal incentives for collaborative e-government.

Another opportunity arising from robust evaluation of e-government costs and benefits is that can enhance transparency in government as it highlights where savings (or enhanced revenue) have been achieved by e-government projects and increases the cost of "dishonest" behaviour (such as obscuring efficiency gains in order to retain savings from e-government projects). Greater transparency in this regard may enable governments to introduce incentives to enhance savings, and methods to regulate the retention of savings by agencies.

E-Government evaluation: Analysis of benefits and beneficiaries

Many OECD countries contributed reports and data derived from evaluation studies which have been used in the elaboration of this chapter. It was possible to adopt a common approach to analysing the data provided by some OECD countries and thus to compare evaluation results, quantify costs and benefits, and investigate who receives benefits and bears costs.

The UK case studydemonstrates the value of undertaking aggregate analysis to realise benefits and help define the key drivers for e-government efficiency.

Box 13. Undertaking aggregate analysis of the benefits and drivers of e-government

The United Kingdom has undertaken an aggregate review of the business cases for around 30 high-impact e-government services. These services were provided at a variety of levels of sophistication on the OECD maturity model. A common framework for analysis was agreed. A Treasury handbook outlining protocols for evaluation was supplemented by an e-government template, toolkit and guidance notes.

A key objective of the study was to highlight the need to focus on the realisation of benefits. When a business case was completed successfully, it resulted in a high-quality proposal that identified clear and auditable benefits that could be tracked through to their realisation. Performance could then be changed or enhanced to ensure the realisation of benefits. When business cases did not exist (or were undertaken poorly), key performance indicators were rarely identified, no baseline values were collected, no evidence of impact was sought and efficiency and performance remained obscure.

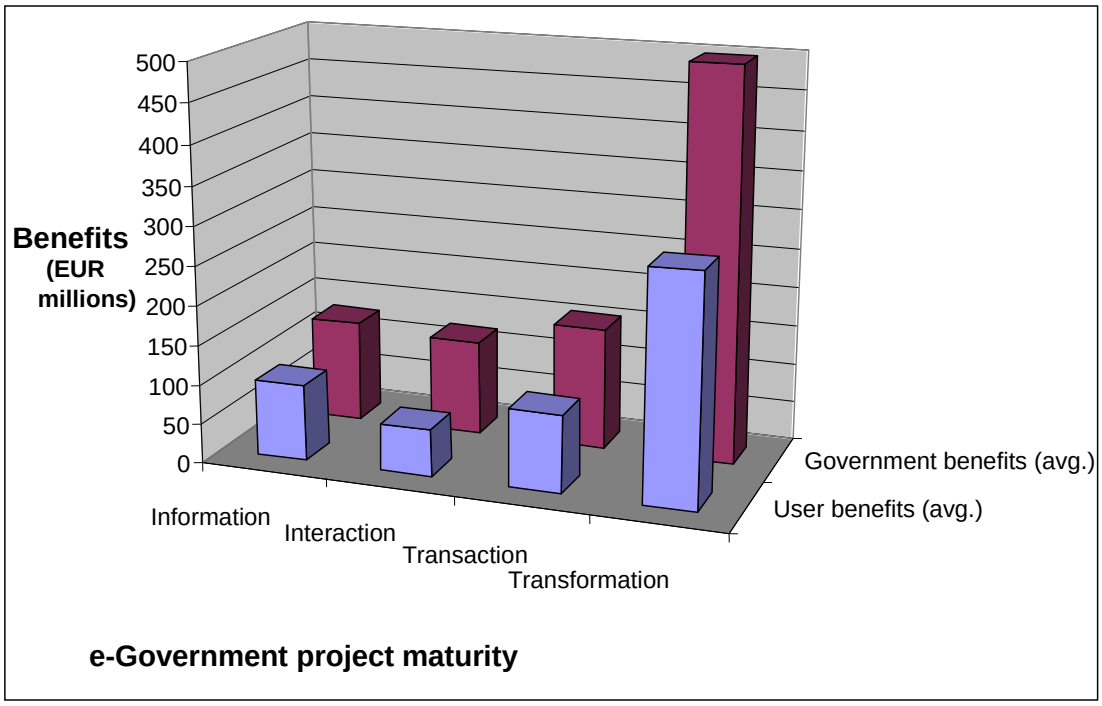
Figure 4 shows the magnitude of benefits and beneficiaries derived from a comparison of 28 e-government services using a very thorough cost-benefit plus net present value (NPV) methodology to examine costs and benefits to government and users. The e-government projects were divided into the four levels of the OECD e-government maturity model (information, interaction, transaction and transformation). The projects analysed included citizen and business taxes, benefits applications, company registration, e-voting, driving tests and hospital and doctor appointments.

The average level of benefits for government and users from projects at each level of sophistication are shown in Figure 4. Benefits for both groups clearly arise for all projects. However, the average value of benefits for government is greater than for users at all levels of sophistication.

Of the projects compared, those at higher levels of the e-government sophistication model achieved greater benefits more quickly than projects at lower levels. The NPV of transformation projects was more than 100 times greater than that for low-level projects. The average payback period for low-level projects was eight years, compared to only four years for transformation projects. Transformation projects produced benefits more than three times greater for government and users than projects at any of the other three levels of sophistication.

Higher benefits and faster payback periods were thought to arise for higher-level projects because they automated back-office operations and were less dependent on user adoption.

Figure 4. The distribution of benefits for users and government for e-government projects at different levels of sophistication



Conclusions

The need for robust methods to examine the benefits of e-government

It has been observed that the next stage of e-government activity is likely to involve the development of lower-profile services, the joining up of back-office activities and IT systems and the integration of e-government programmes across organisations at all levels of government and beyond (OECD, 2003; IAB, 2003). These developments will provide users with "one-stop" sources of government information and services. They should also enable government to operate more efficiently and effectively.

The amount of complexity and change associated with these more advanced e-government developments will be considerable. High up-front costs may make integrating processes, programmes and systems appear uneconomic, while organisational barriers to change present a daunting challenge. Future costs and benefits will be less apparent to policy-makers than even those arising from the limited number of impact studies already completed (OECD, 2003). It is therefore important to highlight the present costs and benefits of e-government, and to develop robust studies of the overall impact of e-government projects.

. Comparison of methodologies that OECD countries have used to evaluate e-government projects has made it possible to develop clear checklists of the factors that can used for measurement, valuation and risk assessment when developing, comparing or auditing business cases for e-government initiatives. These factors provide a sound basis on which agencies or national governments can develop their own evaluation methods.

Better use of evaluation in e-government will have several benefits, including:

A robust framework for comparing projects within and among agencies.

The establishment of auditable figures supporting greater transparency.

A better understanding of drivers for successful e-government projects.

A better understanding of the beneficiaries of different types of projects.

A positive contribution to evaluating the efficiency and effectiveness of e-government programmes.

Finally, using a robust methodology this chapter has shown for the first time that considerable benefits for both government and users arise from e-government projects at the transformation level of e-government, and that these benefits are more significant than those arising from less advanced initiatives The results of this study and future evaluations will be important in providing evidence that the more complex transformational e-government projects that are likely to become more common in future achieve the objective of creating better government.

ANNEX 5

BENEFITS FROM E-GOVERNMENT PROJECTS PROVIDING SERVICES AT DIFFERENT LEVELS OF SOPHISTICATION

Four tables show the benefits identified in studies of e-government impact. Results are presented by grouping together e-government projects that focus on each of the four levels (information, interaction, transaction and transformation) of the OECD maturity model.

Table 9. The impact of information projects

Project	Activity	Economic benefit
Centrelink, Australia	Information service for citizens, started in 2001.	Breakeven over two years. AUD 8.9 million benefit after four years
District of Columbia Business Resource Centre	Business resource centre. Savings by rationalisation of some services.	Saves USD 1.8 million a year
Information Network of Kansas (INK)	State portal of more than 215 000 pages, 90% free, 10% have fees.	Nine years after creation revenue is more than USD 7 million a year.
Iowa Single Contact Repository	Delivers information to the public. Cost USD 277 000	Saves USD 264 000 a year
MyFlorida.com	Search engine that reduces the number of calls to the state's call centre.	Saves USD 1.5 million a year, reduces call centre calls by 1%
New Jersey Portal	Virtual gateway to government information	2.7 million hits per day
North Carolina Security Portal	Gives 24/7 information on ICT security issues to ICT personnel. Cost USD 160 000	Saves USD 2.2 million a year
State of Kansas	Online job listings, enhances job searching, reducing benefit payments.	Saves nearly USD 9 million a year in unemployment compensation
US one-stop for business legal information	Federal government initiative to assist with businesses' legal compliance	Businesses will save at least USD 275 million annually

Table 10. The Impact of interactive projects

Project	Activity	Economic benefit
Australia: e-tax	Tax returns can be filed on line	AUD 15.5 million in accrued benefits by 2004 over a five-year period
Colorado Secretary of State Business Centre	Provides business-related information and allows online document filing	Saves USD 2 million a year
Hertfordshire County Council, UK: Services Online	Undertakes queries with customers on line instead of face to face	Reduces transaction costs from GBP 4 per transaction to GBP 0.10 per transaction
Kansas State online nursing license renewal	Delivery of services and information to users	Reduced phone calls by 90% over five years
Massachusetts Educator Licensure and Recruitment Initiative	Streamlined the state licensing process	Saves USD 1.6 million a year
Missouri e-grants	Delivery of services and information to the public	86% reduction in processing time; 360% in technical support
Missouri Internet Online Claims Filing	Unemployment insurance claims can be filed on line	Potential savings of USD 61 250 a year
Nebraska's UIConnect	Delivery of services and information to users	Saving USD 361 000 a year to employers and USD 63 000 to government
Singapore: Tax e-filing	Tax returns can be filed on line or over the phone.	Saves SGD 20 million a year
Virginia Employment Commission (VEC)	A USD 250 000 system that enables claimants to key in unemployment insurance information on line.	USD 821 000 operational savings, USD 6.5 million savings for claimants.

Table 11. The Impact of transaction projects

Project	Activity	Economic benefit
CAL-Buy Online Procurement System, US	State of California's procurement project, saving USD 37 per purchase	Cost savings USD 9.7 million a year
Colorado business centre	Delivery of services and information to businesses	USD 2 million a year to businesses
Consip e-procurement project, Italy	Italian government procurement project. Provides savings of up to 30% on goods	Savings on administrative costs estimated to total ITL 1 500 billion in 2001
eMaryland Marketplace	Procurement project	Saves USD 100 per purchase
GSA Advantage!™, US	Federal government's online acquisition programme	Closed six of eight distribution centres and forward supply points in 2001
Iowa single contact repository	Delivery of services and information to the public	Saving USD 132 000 a year to employers and USD 132 000 to government
OGC, UK: E-tendering	Allows tendering to take place on line	GBP 13 million savings over 4 years. Reduces costs to suppliers by GBP 37 million
ServiceArizona	Allows citizens to register vehicles. Online processing is about USD 4 less than a counter transaction	Saves more than USD 1 million a year

Table 12. The impact of transformation projects

Project	Activity	Economic benefit
Idaho Paperless Online Personnel and Payroll System	Integrated payroll system costing USD 1.65 million	Saves USD 430 000 a year in administration and another USD 75 000 a year in printing
The Dolphin project, Ohio	Automation of the Ohio Bureau of Workers' Compensation scheme, cost USD 15 million	Saves over USD 120 million a year
Washington State Combined Application programme	Combined the benefit programmes of a few agencies, cost USD 400 000	Saves USD 6.37 million a year
Wisconsin Workers' Compensation Insurers' Web Reports	Enables administrators and insurers to have real-time access to compensation claims	Saves over USD 1.5 million a year

CHECKLISTS TO EVALUATE THE ECONOMIC CASE FOR E-GOVERNMENT

Here is a simple framework for investigating the economic case for e-government:

(government benefits + user benefits) - (government cost + user cost) = cost/benefit impact

Four checklists document the constituent items of the above equation. These items should be considered in any investigation of the costs and benefits for established e-government projects. In addition, checklists for three risk factors – business impact risks, technical risks and change and uncertainty factors – are provided in three further checklists. These should also be included when developing an *ex ante* assessment or business case for future e-government projects. The checklists are adapted from a number of sources, most notably:

Office of Government Computing (2003), Measuring the Expected Benefits of e-Government.

CIO Council (2003), Value Measuring Methodology: How-to Guide.

Finally, the draft checklists were discussed by participants at the OECD Expert Meeting on the Business Case for E-Government, 17 September 2004 in London, who provided considerable input into these final versions.

Checklist of benefits to government

Direct cash benefits

Greater tax collection, revenue

Reduced fraud

Reduced travel costs, field force expenditure

Reduced publication and distribution costs

Lower fines to government from international bodies

Additional revenue from greater use of commercial services and data (*e.g.* use of electoral roll data)

Additional revenue from newly available services and newly charged-for services

Reduced need for benefits, *e.g.* through faster job searches

Reduced costs through the need for reduced physical presence

Efficiency savings (monetisable benefits)

Time savings

Reduced processing through common standards for data and processes

Time saving of public servants

Reduced error rates, re-work, complaints

Reduced need for multiple collections of data from single customers

More flexible working hours

Information benefits

More accurate, up-to-date and cleaner data and more reliable information

Capacity for greater information sharing across government

Risk benefits

Improved risk management

Improved security and fewer security breaches

Future cost avoidance

Lower costs for future projects through shared infrastructure and valuable knowledge

Reduced demand for service (through better information provision), *e.g.* health

Reduced need for future government capacity expansion

Encouragement of increased take-up of other e-services

Resource efficiency

Reduced redundancy through integrated systems

More effective use of existing (e and non-e) infrastructure and reduced capacity wastage

Other non-monetisable benefits

Improved service delivery

Enhanced customer service

Improved service consistency and equality

Improved user satisfaction

Improved communication

Greater take-up of entitlements

Improved reputation and increased user trust and confidence

Integrated view of customer

Enhancements to policy process

Enhanced policy alignment and outcomes

Better information to facilitate policy making

Enhancements to democracy

Increased user involvement, participation, contribution and transparency

Allows more, greater and new data to be collected

Improved security

Checklist of benefits to users

Monetary benefits

Price reduction of charged-for service, avoidance of future price increases

Reduced cost of transmitting information – phone, post, paperless interactions, etc.

Reduced travel costs

Reduced associated costs (*e.g.* professional advice, software tools, equipment, etc., predominantly for businesses)

Revenue generating opportunities for citizens, businesses and intermediaries

Time-based non-monetary benefits

Reduced user time (hours saved)

Reduced need for multiple submission of data for different services and events

Reduced travel time

Reduced user time (hours saved)

Value-based non-monetary benefits

Quicker response

Reduced application processing time (elapsed time saving)

Improved response time to events

Improved interactive communication, particularly between government and remote communities

Improved information

More reliable and up-to-date

Faster and easier access

Transparency (*e.g.* status of "live" applications)

Can be live or real time

Enhanced democracy and empowerment

- Improved reliability
  - Reduced error rates
  - Greater confidence and certainty of transaction
  - Service consistency
  - Overall reliability
- Choice and convenience
  - Range of access channels – increased choice and ease of access
  - Greater user convenience (24/7 service delivery)
  - Decrease in abandoned transactions and complaints
- Premium service
  - Extra tools and functionality for users
  - Improved customer service
  - Personalised service
  - Service integration

Checklist of costs to government

Market planning and development

- Business planning and options analysis
- Market research
- Due diligence and plan audit
- Tendering

System planning and development

- Hardware
- Software licence fees
- Development support
  - Programme management
  - System engineering architecture design
  - Change management and risk assessment
  - Requirement definition and data architecture
  - Test and evaluation
- Design studies
  - Customer interface and usability
  - Transformation or business process redesign
  - System security
  - User accessibility
  - Data architecture

- Network architecture
- Other development phase costs
  - Facilities: offices, office equipment, etc.
  - Travel

System acquisition and implementation

- Procurement
  - Hardware
  - Software
  - Customised software
  - Web hosting
- Personnel
  - Additional programme management
  - Internal communications
  - Process redesign
  - System integration
  - System engineering
  - Test and evaluation
  - Data cleaning and conversion
- IT training

System operations and maintenance

- Hardware
  - Maintenance
  - Upgrades and replacement
- Software
  - Maintenance
  - Upgrades
  - Licence fees
- Telecoms network charges
- Operations and management support
  - Programme management
  - Operations
  - Back-up and security
  - IT helpdesk
- On-going training
- On-going monitoring and evaluation

Other operations and maintenance

Financing costs

Market and process implementation

Personnel

Internal communications

Training

Redeployment

Customer helpdesk

Call centres

Marketing and communications

Customer inducements and rebates

Legal advice

Checklist of costs to users

Direct costs

Computer hardware and software

Computer operations and maintenance

Telecoms and Web access charges

IT training and support

Digital signature setup

Printing forms and information

Time factors

Web search

Reading time

E-mail and form completion

Phone time

Checklist of business impact risks

Impact on business processes (includes changed processes): Impact that the project will have on the organisation (during development and after implementation).

Impact on government services at implementation: Impact that the project will have outside the organisation, for example on other agencies, the public and businesses during development and after implementation.

Impact on other projects and changes: Degree to which the project is dependent on and connected to other projects and changes.

Checklist of technological risks

Technological dependence: Dependence on new technology or new methods.

Degree of innovation: Extent to which the project involves innovative solutions and staff experience to deal with innovation.

Impact and integrity with legacy systems: Degree to which the project will need to develop interfaces to existing systems and data.

Security: Robustness of physical and technological security controls.

Scope of IT supply: Extent of IT consultant and supplier activity, support and maintenance now and in the future.

Checklist of change and uncertainty factors

Change management	**Uncertainty**
Culture change required (*e.g.* working practices)	Inexperience in dealing with third-party suppliers
Leadership direction	Dependence on third-party suppliers
Management resistance	Use of untried methods
Lack of staff experience and inadequate training to accommodate change.	Time constraints and critical deadlines
Lack of motivation	Economic or market changes
Poor communication with appropriate staff	
Lack of responsiveness to change	

THE TRANSACTION COST METHODOLOGY

The best source of information about the transaction cost methodology is the report by the Office of Government Computing (2003), entitled "Measuring the Expected Benefits of e-Government".

The transaction cost methodology is comprised of three key elements:

Calculation of the cost of a traditional process.

Calculation of the cost of an e-government process.

Forecasting customer take-up.

To calculate the cost of an existing or traditional process it is necessary to:

1. Identify each step of the transaction.
2. Identify the cost associated with processing each step of the transaction.
3. Understand how these costs will fall as the number of transactions using the existing process declines.
4. Using 2 and 3, calculate how the total cost of processing transactions will decrease as the number processed falls.

To calculate the cost of an e-government process it is necessary to:

1. Identify each step of the new process.
2. Identify the cost associated with processing each step of the new process.
3. Understand how these costs will fall as the number of transactions using the new process increases.
4. Using 2 and 3, calculate how the total cost of processing transactions will rise as the transactions processed in this way grows.

By breaking a transaction down into discrete steps, it is possible to estimate the time saved by e-enabling a process. The UK government (OGC, 2003) used this method to assess savings from e-enabling the retirement pension process. The process was broken down into eight transaction steps; for each, estimates were made for the time taken before and after e-enablement.

Table 10. Step-by-step time savings for retirement pensions

Transaction step	Step description	Current time (mins.)	e-enabled time (mins.)	Saving (%)
1	Pre-claim activities	32	13	59
2	Build claim	32	16	50
3	Resolve claim issues	25	18	28
4	Award pension	1	0	100
5	Decide	29	15	48
6	Finalise payment	3	1	67
7	Post award action	16	12	25
8	Pay claim	21	20	5
	Total	159	95	40

Source: OGC (2003), "Measuring the Expected Benefits of e-Government", p. 26.

The method acknowledges that users and their requirements are not identical; some applications require more human judgement and intervention. Nevertheless, it is possible to focus on "typical" or "straightforward" transactions. The important thing is to make reasonable assumptions about which transaction elements will, for the majority of claims, be transformed by the introduction of an e-government project.

Having identified transaction elements, it is then possible to estimate the costs of performing each transaction step. Tables 11 and 12 illustrate how these costs can be calculated.

Table 11. Example of the cost of an existing process

Cost element	Variability
Postage	GBP 0.25 per transaction. Not required if transaction carried out electronically.
Payment processing	Cheaper processing of payments; saving of GBP 0.10 per transaction.
Staff cost of processing transaction, dealing with enquiries, training, etc.	One processing staff member freed for every 2 000 transactions received electronically. Average saving of GBP 18 000 a year per person
Indirect costs (finance, human resource functions associated with relevant activity, head office overheads)	One administrative staff member freed for every 50 processing staff released. Average saving of GBP 18 000 a year per person
Cost of running legacy systems or other overheads associated with traditional transaction channel.	Total cost of running these systems is saved when old channel is completely switched off. Saving of GBP 4 million a year

Source: OGC (2003), "Measuring the Expected Benefits of e-Government", p. 27.

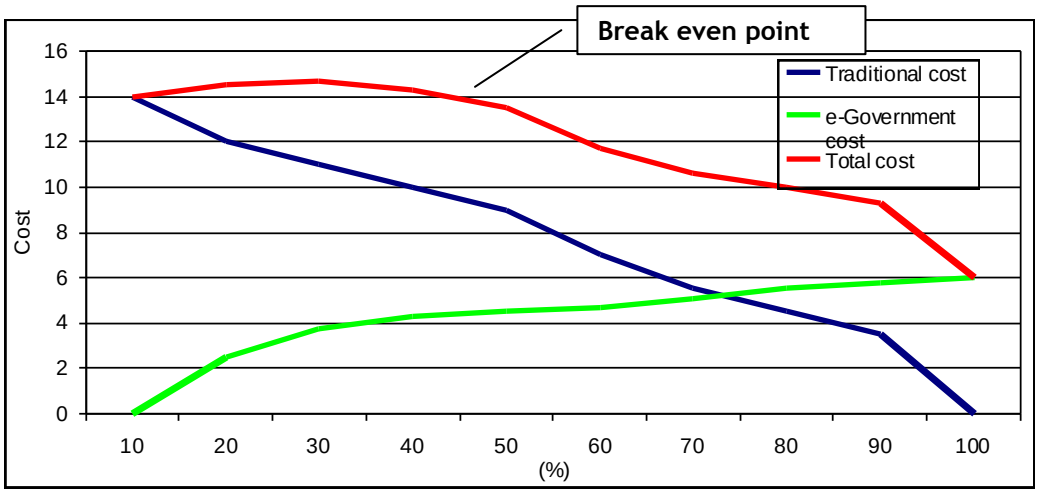
Table 12. Example of the cost of a new e-government process

Cost element	Variability
Cost of setting up and running IT systems	Fixed cost of GBP 2 million a year regardless of take-up.
Marketing/ raising awareness of new channel	GBP 5 000 a year for first 3 years.
Staff cost of processing transactions and dealing with enquiries, training, etc.	One member of staff required to process every 4 000 transactions.
Indirect costs (finance and human resource functions associated with relevant activity)	One member of administrative staff required for every 50 processing staff.
Security costs (*e.g.* costs of providing digital certificates)	GBP 5 per transaction.

Source: OGC (2003), "Measuring the Expected Benefits of e-Government", p. 27.

To calculate cost savings and the break-even point it is necessary to calculate the cost of running the new e-government project and the existing process at varying take-up levels. Adding the two together and plotting the results enables a break-even point to be calculated.

Figure 4. Example of cost savings and break-even calculation



Source: Adapted from OGC (2003), "Measuring the Expected Benefits of e-Government", p. 28.

The figure provides an example of cost savings based on the percentage (between 0% and 100%) of customers who use the new e-government service. The rate at which users start using a new online service will affect the internal benefits and costs that an e-government project is able to realise (and the benefits derived by users). This will have a major impact on the rate of return or the net present value of an e-government project. Take-up differing substantially from forecasts is one of the biggest risks confronting any e-government project.

For many existing e-government projects, the proportion of customers already using the e-government channel can be known and forecasts of future use can be more robustly calculated. As a result, take-up (on the x axis) in Figure 4 can be replaced by a time line to plot take-up over time (probably a number of years). Analysis and forecasts of take-up using a time variable make it possible to calculate the rate of return or net present value of an e-government project.

Several countries have developed segmentation methodologies to forecast future use of e-government projects. For each customer segment, data are collected and forecasts are made of the number of people that have access to the channel (*e.g.* Internet, digital TV, mobile phone, etc.) for the e-government service. These data are usually collected by government statistics departments. Data for the proportion of each segment using the e-government service are collected and forecast. Data and forecasts for each segment are then combined to estimate take-up for the entire population.

Take-up trends usually follow an S-shape, with demand picking up slowly at first, accelerating as the bulk of customers adopt the service and then slowing as usage saturates and late adopters finally begin to use the service.

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ANNEX 6

DRAFT PROJECT CHARTER FOR CONDUCTING PEER REVIEWS OF E-GOVERNMENT IN ARAB COUNTRIES

Foreword

This document, which was prepared by the OECD Secretariat, presents a generic draft proposal for e-government peer reviews in Arab countries, including main purpose, methodologies and analytical frameworks. This document targets Arab country e-government decision makers, potential OECD donor countries and interested international partners (e.g. international organisations).

It was shared with Arab and OECD delegates attending the 3rd Meeting of the Working Group Meeting 2 in Dubai on 13 March 2007 with the purpose of stimulating participants' discussion on the possibility to conduct e-government peer reviews in Arab countries during session 3. In particular Arab delegates were invited to comment on this project charter, with a particular focus on the analytical framework, and provide input for its further refinement and improvement.

Introduction

The purpose of this document is to present to the *[country]* government and potential interested OECD donor countries key elements of the project to conduct a Peer Review of E-Government in *[country]* in the framework of the activities of Working Group 2 on E-Government and Administrative Simplification organised in the context of the Good Government for Development (GfD) in Arab Countries Initiative.

The Peer Review of E-Government of *[country]* is to be considered as part of *[country]* efforts and initiatives in support of the implementation of its plans for reform including the GfD National Action Plan of *[country]*[3].

This document attempts to provide *[country*], potential OECD donor countries and other interested international partners (e.g. other international organisations) with a draft detailed project outline for their consideration. In particular the document:

1. Presents an overview of the main features and components of the work on e-government in the context of the GfD Initiative in MENA countries (Section 2).

2. Presents the draft proposal for a Peer Review of E-Government in *[country]*, including:

[3] This plan resulted from a stocktaking of key public sector policy areas and from a detailed action planning exercise, which took place from September 2005 through April 2006 and was presented by *[country]* at the 2nd Steering Group Meeting of the GfD Initiative on 19-20 May 2006 in Sharm El Sheik

Defining what an OECD Peer Review of E-Government is and outlining the expected results of the review in terms of the benefits for *[country]* in having its e-government initiative peer reviewed by OECD and other Arab countries (*e.g.* better identifying and addressing the barriers hindering e-government implementation, showcasing good practices and experiences on using ICT to improve the quality of life of its citizens, and promoting a more efficient and effective private sector). (Section 3)

Illustrating its main purpose, methodology (*e.g.* surveys, data collection missions) and analytical framework. These review components are based on the model developed by the OECD E-Government Project and used in OECD standard peer reviews, and could be adjusted to take into account the specific social, economic and development context of Arab countries. (Section 4)

E-Government as a component of the GfD Initiative

The Good Governance for Development (GfD) Initiative in Arab countries - which aims at strengthening Arab countries' capacity for designing, implementing and monitoring public governance reforms - focuses on e-government as a key tool and catalyst for public sector reform. Faced with the pressure of increasing government performance and modernising public administration while improving the quality of life of citizens and businesses, Arab countries have realised that e-government can be a powerful instrument for government reform. E-government goes beyond the simple exercise of putting information and services online as it can be used to transform the structures, process and culture of government to make it more efficient, user-oriented and transparent.

The GfD activities in the area of e-government are developed and carried out by the GfD Working Group 2 on E-Government and Administrative Simplification, which is chaired by Dubai, Italy and Korea and composed of senior e-government decision makers in Arab and OECD countries. This working group is mandated to act as a high-level discussion forum to build knowledge and capacities, promoting policy dialogue and exchange of ideas on e-government issues between OECD and Arab countries. This group has met twice, in 2005 and 2006, to drive the GfD policy agenda and assess progress (see summary table below) and is meeting again in March 2007.

Table 13. GfD Working Group 2 Meetings

Meeting	Date and Place	Objective	Participants	Main outcomes
1st Meeting of WG 2	12-13 September 2005, Dubai, United Arab Emirates	Present Arab countries' national approaches, experiences and challenges in implementing e-government and administrative simplification.	12 Arab countries + 7 OECD countries	- Launching of a questionnaire for the preparation of country Action Plans. - Identification of four action groups to move forward on a results-oriented thematic agenda. - Scheduling of capacity-building seminars on key components of e-government and administrative simplification.

2nd Meeting of WG 2	6 March 2006, Dubai, United Arab Emirates	Present selected Arab countries' draft action plans identifying concrete actions to be implemented within the framework of the GfD Initiative.	10 Arab countries + 5 OECD countries	- Discussion of the main challenges in administrative simplification around which an agenda for a future high-level seminar is defined. - Presentation of Action Plans by Lebanon, Egypt and Bahrain - Reports on Capacity building seminars (*e.g.* E-procurement, Naples).

As a way to strengthen technical expertise and exchange of practical knowledge between Arab and OECD countries, a number of countries have offered to host high-level capacity-building seminars on e-government issues (see summary table below). Seminars were successful in that they provided the organisational platform for mutual learning and sharing of experiences. This is attributable to the seminar format introduced by Italy at the Naples meeting on e-procurement, which focused on maximising the exchange of know-how between countries at different stages of e-procurement development. Following Arab country interest to host additional seminars, Working Group 2 continues working with country sponsors to produce capacity building seminars on specific issues related to e-government and administrative simplification.

Table 14. Capacity Building Seminars

Seminar	Date and Place	Objective	Participants	Main outcomes
1st High Level Seminar on E-procurement	30-31 January 2006, Naples, Italy	Exchange practical experiences and technical know-how on implementing e-procurement systems.	18 high-level experts from 10 Arab and OECD countries.	- Proposal for creation of a network of e-procurement experts to support bilateral exchange of technical know-how and expertise on the implementation of e-procurement systems. - Agreement to convene for a follow-up seminar with user groups on how to effectively implement e-procurement. - Collection and analysis of country papers from Arab countries, to feed into the preparation of country Action Plans.
2nd High Level Seminar on "How to make an action plan"	7 March 2006, Dubai, United Arab Emirates	Discussion of key issues and steps in designing and implementing an action plan (*e.g.* translating a strategy into actions, mobilising consensus around e-government objectives, and communicating the plan across government).	24 high-level experts from 10 Arab and OECD countries.	- Detailed presentation by some countries (*e.g.* Ireland and Morocco) of their experiences in preparing an e-government action plan and the challenges they encountered during the process. - Draft guidelines on how to make an action plan.

3rd High Level Seminar on "Personalised Service Portals"	11 December 2006, Paris, France	Exchange of experiences and strategic advice with practitioners from other Arab and OECD countries .in designing and developing online service portals.	15 experts and delegates from 7 Arab and 5 OECD countries	- Detailed presentation by invited OECD and Arab countries of their experiences in setting up and developing information and service portals. - Collection of country presentations.

The OECD e-government review: Features and benefits

After describing what an OECD e-government peer review is, this section illustrates the benefits to *[country]* of an OECD e-government peer review.

Box 14. OECD Peer Review of E-Government

What is an OECD Peer Review of E-Government?

Undertaken at the request of individual member countries, OECD e-government reviews place e-government in an administrative and policy context, identify the strengths and weaknesses of national e-government policies and initiatives as a tool for public sector transformation, and look at the opportunities and obstacles to successful implementation.

An OECD Peer Review of E-Government:

- Is an independent and collegial assessment of achievements within e-government. The OECD peer review of e-government policies provides an assessment of a country's achievements by e-government experts from OECD countries. The main outputs are proposals for action addressed to decision makers in the reviewed country for improving its e-government performance.

- Allows exchange of knowledge from OECD countries. Three peer reviewers with practical e-government experience in their respective countries are chosen to examine the country's e-government initiatives. They participate in all phases of the review process. The OECD Secretariat supports the review process by providing the analytical framework, producing documentation and analysis, stimulating discussion, upholding quality standards, and maintaining continuity of the historical memory of the process.

- Reviews qualitative and quantitative factors. The review is based on independent observations and judgments gathered from interviews with government officials at all levels of government, interviews with stakeholders, review of reports and official documents, and analysis of the results of surveys of central and local government officials

The Peer Review of *[country]* would provide the *[country]* government with a systematic assessment of *[country]*'s performance and challenges within the specific policy area of government transformation with the goal of helping *[country]* to:

1. Improve e-government policy development and implementation.

2. Analyse barriers hindering e-government implementation.

3. Prioritise actions to be taken to overcome such barrier.

4. Provide other Arab countries with experience and good practices in addressing e-government challenges.

The reviewed country receives an initial report of preliminary findings laying out major themes, followed by a comprehensive country report on e-government. From an initial meeting to explain the review process through the formal presentation of the peer review results, the OECD Secretariat will ensure that the final report is useful and provides learning opportunities for *[country]* and other countries in the region.

The review will:

Provide decision makers with an objective assessment of how *[country]* uses ICT to become more efficient, effective and competitive.

Assist *[country]* to further understand how well its e-government goals are aligned with public sector transformation objectives, and suggest possible next steps.

Provide recommendations to policy makers in the *[country]* government on how to improve their initiatives and to establish strategic next steps to further the use of e-government to bring better government.

Provide an independent evaluation of *[country]*'s accomplishments for interested observers of *[country]* and for countries that would like to learn from *[country]*'s experiences.

The peer review of *[country]*: Project components

This section presents key elements of the OECD's peer review of e-government in *[country]*.

Purpose of the review and intended outcomes

The project has two major purposes:

1. To apply the OECD's e-government analysis framework so as to provide *[country]* with a report which identifies e-government challenges and assesses e-government strategies and solutions, with a focus on how they contribute to its good governance objectives in the information age.

2. To further develop the *[country]*'s e-government analysis framework and adapt it to the e-government development context of Arab countries.

Major project deliverables

The main outputs of the project will be:

1. An independent and neutral assessment of the status of e-government in *[country]*, focusing on identifying key challenges to implementation in the country.

2. A follow up strategic plan including proposals for action to move forward with the implementation of e-government in *[country]*.

The project will produce the following major deliverables:

A detailed project plan for the review.

A questionnaire for completion by civil servants to be nominated by *[country]*.

A programme of interviews with subjects identified by *[country]* conducted during two fact-finding missions (one exploratory mission and one major data collection mission; the first could take place back-to-back with the major data collection mission). These could also include structured focus group interviews with different levels of government, and representatives of businesses and citizens.

A preliminary assessment report of e-government implementation in *[country]*. This report will be based on the result of the missions, background documentation and results of the questionnaire. This report will be written in English and translated into Arabic by *[country]*.

A draft report including a final assessment and a follow up strategic plan for future steps. This report will be presented and discussed by the GfD Working Group 2 on E-Government and

Administrative Simplification. The draft report will be written in English and translated into Arabic by *[country]* for publication.

A final published report. Subject to agreement on the final text by *[country]*, the OECD will arrange for publication of the Peer Review of E-Government in *[country]* as an OECD document.

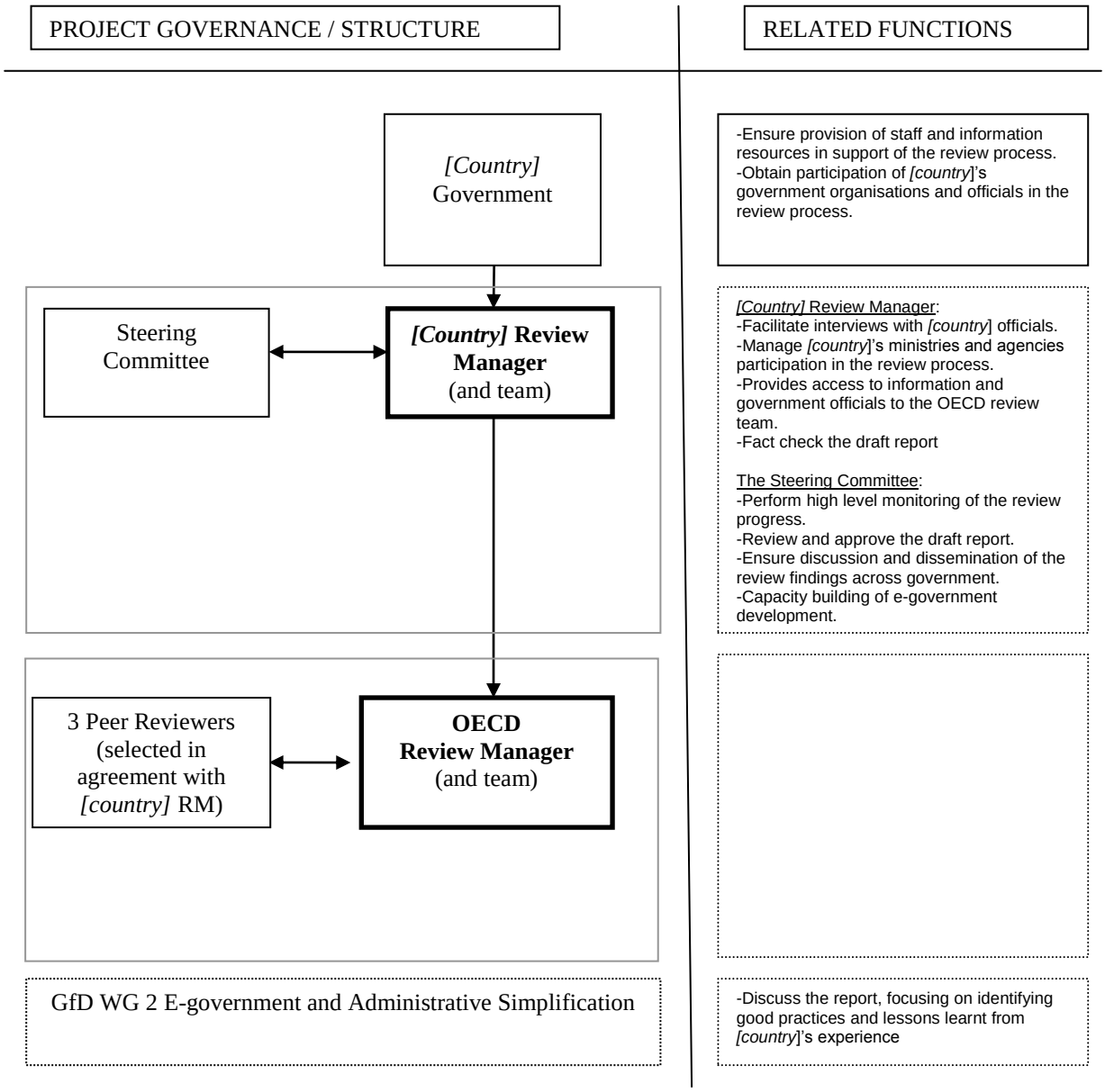
An additional deliverable may be a short report assessing the status of the implementation of the proposals for action following the production of the report (after 6-12 months).

The outcome of the review will be that *[country]* is better positioned to further develop and implement e-government in pursuit of various national government objectives.

It is acknowledged that the study will not rank *[country]* in terms of its progress compared with other countries.

Project governance

The review project has three main actors: the government of *[country]*, the OECD Secretariat, and OECD and Arab countries. Their roles and responsibilities for the governance of the project are presented below.



Management and timing

The peer review will be carried out by the GOV/IID e-government team and is expected to be completed in eight (8) months. Any substantial modification of the scope of the review may require adjustments of the review timeframe.

The peer review will be divided into four (4) major stages:

Set-up phase – This beginning phase will include development of peer review management arrangements, work plan and other frameworks; first discussions with representatives from *[country]*. Agreement between GOV and *[country]* on study arrangements, identification of key people and information sources, including peer reviewers.

Input phase – The focus of this phase will be to organise the rapid exchange of e-government information and experience among the OECD, the peer reviewers, and selected *[country]* agencies, and to consolidate information and build a basis for detailed analysis. It is proposed to conduct face-to-face interviews during visits by the e-government team to *[country]* and establish regular contacts by e-mail for information sharing.

Output phase – This phase will involve the production of: 1) a preliminary assessment report; and 2) the draft report, including final assessment and strategic plan, which will be submitted to *[country]*; 3) a published final report taking into account comments from representatives from *[country]* and from Arab and OECD countries.

Monitoring and reporting phase (optional / requires additional funding) – This phase will feature the production of a short report assessing the status of the implementation of the proposals for action following the production of the report (after 6-12 months). This could be complemented by *ad-hoc* follow-up seminars in support of implementation (for example, in areas such as benefit realisation, e-authentication, etc.).

A detailed project timeline will be developed in co-operation with *[country]*. An outline of specific actions is given below:

Action 1	First meeting with *[country]* representative(s)/discussion of the analysis framework for the peer review	*Insert date*
Action 2	Agreement reached between *[country]* and the OECD on study proposal and terms of reference; transfer of voluntary contribution to the OECD	*Insert date*
Action 3	Provision by *[country]* of contact information and data sources	*Insert date*
Action 4	Background research by the OECD, including a first visit to *[country]* by OECD e-government staff (Mission 1 - could also take place back-to-back with Mission 2)	*Insert date*
Action 5	Administration of OECD questionnaire	*Insert date*
Action 6	Principal visit to *[country]* by e-government team, including peer reviewers, for interviews and focus groups (Mission 2)	*Insert date*
Action 7	Draft preliminary assessment	*Insert date*
Action 8	Produce a draft report including final assessment and action plan for future steps	*Insert date*
Action 9	Discussion of draft report with OECD and Arab countries at the meting of the GfD Working Group 2 on E-Government and Administrative Simplification	*Insert date*
Action 10	Revision of the draft report	*Insert date*
Action 11	Presentation of final report to *[country]*; report published (Mission 3)	*Insert date*
Action 12	Follow-up short report by OECD Secretariat assessing the status of the implementation of the proposals for action (if requested)	*Insert date*

Review team composition

The review process features the participation of two review teams: the OECD review team (based in Paris) and the *[country]* review team (based in *[country]*).

The OECD review team is composed of staff providing a well-balanced range of experience and knowledge in public management, e-government, OECD peer reviews, research design, quantitative data analysis, and general project administration. In particular, the team is composed of a review

manager, a data analyst and an administrative assistant. The IID Division Head oversees the internal review process.

In addition, a consultant/analyst with good knowledge of e-government in the region and command of the Arab language will be added to the review team to contribute to the project implementation.

The OECD team is augmented by peer reviewers from OECD and Arab countries. Peer reviewers will be identified by OECD, in agreement with *[country]*, among senior government officials with in-depth experience in e-government and public governance. One possible criterion could be their membership and participation in the activities of the Working 2 on E-Government and Administrative Simplification.

The *[country]* review team, based in *[country]*, is composed of a review manager and support staff. The review manager is responsible for managing the review for *[country]*, liaising with OECD and *[country]*'s government officials involved in the review, and facilitating OECD country missions by providing access to information and people to the OECD review team.

***[Country]*'s role in the review**

Experience with past reviews shows that being able to easily retrieve documents and have easy access to *[country]* resources and people within the *[country]* administration is fundamental for the success of the review. To produce a high-quality review in the interest of the review country, the OECD team must have complete and easy access to relevant information, *[country]*'s officials, and any other individuals that may have relevant and useful information to contribute to the review. Therefore, *[country]* must provide adequate support, maintain a spirit of collaboration and engage in constant dialogue with the OECD team throughout the entire review process. In particular, *[country]* is requested to:

Ensure that high value is gained from time spent in *[country]* conducting fact-finding missions by providing a preliminary list of potential interviewees and arranging all the interviews with country officials.

Ensure that the final draft of the review report is thoroughly discussed and verified by relevant *[country]* officials and agencies, so that it can be confidently finalised by the OECD project team for presentation to the OECD's Public Governance Committee as an accurate assessment of e-government in *[country]*.

Manage, following discussion with the OECD review manager, any risks to the effective conduct of the review that it is agreed should be the responsibility of *[country]*.

Establish a steering group composed of the major e-government stakeholders in *[country]*. This group will have the responsibility to: 1) supervise the review process and monitor the progress of the report; 2) review and approve the draft report; and 3) facilitate discussion and dissemination of the report findings across the administration.

Furnish the review team with relevant information in key areas. Wherever possible, *[country]* translations of this information should be provided.

Project Status Reporting

The OECD Review Manager will maintain a register of all risks and issues faced by the project, and report on the management of these to the project sponsors monthly.

Analytical framework

The framework for analysis to be used in the study is set out in summary form below. It has been developed since 2001 and incorporates input from the OECD E-Government Working Group meetings of 2002, the 1st Symposium of Senior E-Government Officials (9 June 2003), and the Public Governance Committee's ongoing examination of the project.

The analytical framework builds on the reports *The E-Government Imperative* and *The E-government for Better Government*, and has been applied in the series of OECD e-government studies of Finland, Norway, Mexico, Denmark, Hungary, the Netherlands and Turkey.

It is expected that the review will address all of the below-mentioned topics, but priorities among them will be mutually defined by *[country]* and the OECD in order to provide greater focus to the review. Any modification and/or extension of the scope of the review will need to be assessed in terms of its impact on the project resources and budget.

APPENDIX: ANALYTICAL FRAMEWORK

CHAPTERS	CONTENT DESCRIPTION
Assessment and Proposals for Action	Summary of the main findings of the report and follow up policy recommendations suggesting areas where increased efforts need to be directed and/or actions to be implemented by the reviewed country.
E-Government in Country @-a-Glance	Brief overview of main indicators on e-government covering ICT penetration, Internet access and usage by individuals and enterprises, e-service maturity and availability, ICT investments in the public sector, e-commerce, ICT security, e-procurement, skills and competencies.
Chapter 1. Introduction E-Government Context Drivers for E-Government Public management reform Information Society goals E-Government Planning Vision Strategy Goals Indicators	- Provide information on the current social, political and economic context for the implementation of e-government; structure of government at central and local levels. - Identify the main drivers for e-government, including public management reform, development of the Information Society, economic efficiency, etc. - Discuss e-government strategy and action plans; describe the main goals for e-government and how they are aligned with the overall objective to modernise the public sector.
Chapter 2. Challenges to E-Government Legislative and Regulatory Challenges Budgetary Challenges Multi-year budgeting Budget mechanisms for collaboration projects E-Government statistics Use of business cases	- Identify and describe the main challenges to e-government, including legislative and regulatory challenges, budgetary challenges, and barriers to the Information Society which impact e-government (*e.g.* the so called digital divide). - Analyse the progress to date in setting up an IT infrastructure supporting e-government implementation. - Discuss the extent to which IT competencies and skills (computer literacy, advanced skills, ICT-sector-related skills, Information Society skills) have been developed across

Digital Divide Main indicators and figures Policies (at whole-of-government, agency and sectoral levels) Infrastructure Internet backbone Broadband IT hardware (*e.g*. PC, mainframes, etc.) Networks and common applications (*e.g.* e-mail, intranets) IT Competencies and Skills Basic IT and computer literacy Advanced skills ICT sector skills Info-society skills Capacity building	the country.
Chapter 3. E-Government Leadership Leadership Structures, mandates and roles Central Local (regional/municipal, local entities associations) Exercise (tools and incentives) Co-ordination Structure and mechanisms for co-ordination (CIO, e-government co-ordination committees, ministerial level) Central government Local government Central-Local interaction	- Identify the main e-government leaders in the country and discuss their roles; analyse the extent to which leaders have helped set up a framework allowing e-government development and have provided incentives to organisations for advancement. - Describe the structure of e-government co-ordination at central level; discuss the co-ordination mechanisms at central level (*e.g*. e-government co-ordination committees, CIOs, etc.); discuss the extent of central co-ordination and collaboration among agencies.
Chapter 4. Implementation Management Monitoring and evaluation Incentives Organisational structures (outsourcing, “arms length agencies”, PPPs) Skills ICT competencies and skills (public sector) Project management skills	- Analyse the monitoring and evaluation process at the central government level, the agency level and the individual project level. Analyse the service delivery mechanisms, and the system and incentives (financial and non-financial) to move forward with e-government implementation. - Organisation structures: describe the organisational structures for e-government co-operation; analyse private / public sector partnership models for e-government implementation. - Identify ICT competencies and skills across the public sector; identify and discuss the

Implementation competencies Capacity	managerial competencies required for e-government implementation at the organisational level and the policies to provide these competencies; discuss organisations' overall capacity to deliver e-government services.
Chapter 5. Collaboration Frameworks Common Business Processes (policy areas, functional processes, portals, databases, forms) Data Standards Enterprise Architecture Interconnectivity Multi-Channel Strategies	- Analyse the extent to which common frameworks for e-government are in place; discuss policies related to common framework development. - Discuss the extent to which agencies collaborate and the form of collaboration (*e.g.* information sharing, joint projects, and common strategies).
Chapter 6. Outputs and Outcomes G2C Services Takeup Satisfaction Efficiency (unit cost) Effectiveness G2B Services Takeup Satisfaction Efficiency (unit costs) Effectiveness G2G Efficiency/costs (intra-organisational) Effectiveness (sector delivery, whole of government delivery objectives)	- Discuss demand, take up, user satisfaction, and the effectiveness and efficiency associated with the provision of services: o G2C (government to citizens). o G2B (government to businesses). o G2G (government to government). - Assess impact of ICT use on knowledge sharing, information management, etc.
Appendices A. Country political and administrative system B. Reports, decisions and acts related to e-government C. Selected implementations (e-learning, e-health, e-procurement, e-justice, e-commerce)	

D. Methodology E. Glossary	

For more information on this event and on the activities of the Working Group on E-government and Administrative Simplification organised in the framework of the OECD Good Governance for Development (GfD) Initaitive in Arab countries, please contact:

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