Designing and Implementing e-Government: Key Issues, Best Practices and Lessons Learned

Executive Summary

ISG e-Government Practice in collaboration with IT Strategic Learning Center, e-Development Thematic Group, GICT, PREM, WBI and other partners delivered a very successful two-day training workshop for Bank staff and clients on April 26-27, 2005 during PREM Learning Week on "Designing and Implementing e-Government: Key Issues, Best Practices and Lessons Learned". The workshop brought together some 90 participants in Washington DC and over 200 participants in Azerbaijan, Rwanda, Costa Rica, Moldova, and other countries connected via videoconference or live Internet broadcast. Over 30 distinguished speakers shared their insights on the role of e-government in enabling the overall development agenda and specific policy objectives, such as public sector transparency and efficiency, improved public service delivery, private sector-led growth, and empowerment of the poor:

Among speakers were Jamil Kassum, Regional Vice President, East Asia & Pacific, who provided inspirational opening remarks and challenged the Bank Group to harness ICTs in Operations more systematically. Minister of ICT for Azerbaijan and Minister of Science and Technology for Costa Rica shared their ambitious plans for mainstreaming the e-government agenda and expressed a strong interest in closer collaboration with the World Bank in this area. The workshop participants also heard valuable insights from Mark Forman, former US CIO and the key architect of the US e-government strategy and Mart Laar, former prime Minister, who was behind the Estonian e-transformation miracle, as well as from Sam Pitroda who is often credited for bringing telecom services to the Indian masses. Jeongwon Yoon, one of the key e-government champions in Korea, shared some secrets behind success of e-Korea. Greg Georgeff, CIO of Ontario Province, Canada, provided a dynamic account of ICT-enabled government transformation in Canada. Learning about best practices and lessons learned from early implementers may help avoid common pitfalls and maximize returns on investment and therefore sharing of first-hand experience from e-government leaders was much appreciated by the audience. Many Banks speakers, including 9 managers and 12 task team leaders shared their experience and perspectives on mainstreaming e-government at the Bank.

The following summarizes the key messages and findings of this workshop:

What is e-Government? E-Government is a comprehensive approach to leveraging Information and Communication Technologies (ICT) for public sector transformation and private sector competitiveness. In addition to technology-based innovations, successful implementation of e-government requires a complementary set of government process changes to induce governance that is more client-oriented, transparent, effective, efficient, and empowering. It could establish a
new way of doing the business of government with a more integrated delivery of information, services and processes. e-Government is an important factor contributing to a country's economic development and competitiveness. It is perhaps too early to look for a macro impact of e-government initiatives but some evaluations indicate significant micro level impacts in specific agencies, cities, or regions. In particular, e-government can be a stimulus for business process reengineering within the government.

Why mainstream e-Government? There is a fast growing and increasingly sophisticated demand from more and more client countries for Bank's support in this cutting edge frontier of the development agenda. Our capacity to respond to this demand is a “fundamental test of the World Bank’s relevance in the years ahead” according to Jamil Kassum, EAP Regional Vice President.

What is the status of e-Government at the Bank portfolio? e-Government is already a big business for the Bank. Many countries are receiving Bank support and several integrated projects are under preparation or implementation (e.g. in Sri Lanka, India, Romania, Ukraine, Tunisia, Ghana, Indonesia, Vietnam, Ethiopia, Slovakia et al). New projects in this area are being discussed with counterparts and there seems to be some sort a competitive spirit among our client counties to collaborate with the Bank on e-government and e-development. The first integrated e-government project (Indonesia ICT Infrastructure Project) was completed recently. There is also a multitude of Bank sectoral projects with substantial ICT/e-government components (e.g. 40% of all projects in the South Asia portfolio).

What are the key entry points? Several possible entry points for key development goals have been proposed: improved management of public finances, greater government transparency, private sector development and competitiveness, and improved services to citizens. World Bank interventions should be rooted in country-specific contexts, and those entry points should be chosen that are aligned with Bank priorities as formulated in Country Assistance Strategies, are catalytic, scalable (ideally), sustainable, and providing the best balance between benefits and costs at appropriate levels of risk. A good example of an entry point and major Bank engagement in e-government at a sectoral level is the Trade Facilitation portfolio of some $1.5 billion which is primarily about e-government.

How to mainstream e-Government? What kind of approach is needed? There is an appropriate kind of e-government strategy worth supporting for every country. The ultimate long-term goal of e-government should nevertheless be an integrated single-window service delivery by a seamless government operating across territorial and departmental lines for the benefit of citizens and businesses. E-Government is a driver for cross-government integration both vertically and horizontally. Standards are therefore essential, and it is critical to have an e-government strategy and interoperability framework architecture in place. While it is important to have an overarching strategy and always remember the big picture of the seamless e-government of the future, even more important is to constantly pursue innovative ways of leveraging technology through “quick wins” and “low hanging fruits” as well as more strategic “killer applications” that can improve the quality of life for citizens and investment climate for businesses. Every country is ready for some form of e-government, from most basic online information sharing to sophisticated multi-functional one-stop transaction portals. Two key principles could be followed. First, “do no harm”—i.e., what may seem to be a shortcut today will be a roadblock tomorrow. “Let the thousand flowers bloom” strategy may work in the beginning but may cause serious interoperability problems later on. Second, plan
top-down, and implement bottom-up—i.e., have an overall framework ready, but start with flexible pilots that could be scaled up later.

There are many challenges in implementing ICTs in the public sector. Both public and private sector ICT investments have been criticized for high failure rates and not delivering on the expected potential. E-Government projects have to be chosen and defined creatively to work within several constraints, not losing sight of the targeted benefits and reform goals. In all cases, the ICT and e-government strategies must be firmly grounded in a country’s development strategy, and it is essential for linking ICTs with economic development goals, setting up a suitable policy and institutional framework, and maximizing effectiveness of ICT in the government. However, “not everything has to be automated.” The key is to improve processes, start small, and scale up gradually.

What are some critical success factors? Role of e-Leadership, M&E and PPP. In order to achieve these goals, the importance of leadership for ICT-enabled reform and development, and strong, customized institutional arrangements cannot be emphasized enough. Empowered Chief Information Officers (CIO) or equivalent e-government champions with adequate understanding of technology and business can effectively steer process reforms. They need to be positioned close to the top leadership in the organizational structure to have the requisite authority to mandate changes. Both leadership at the highest level of government as well as at the implementation level are critical to success. Leadership needs to be properly institutionalized according to the local needs and conditions and appropriate incentives and agencies created. Furthermore, monitoring and evaluation (M&E) should be used as a strategic tool for key decisions as an integral part of project concept, design, and implementation, rather than only for post-project evaluation. Many speakers also underlined the importance of using public-private partnerships (PPPs) and outsourcing in ICT/ e-government projects to increase effectiveness, reduce the burden on the taxpayers and boost private sector development.

How to package Bank’s assistance? Assistance can be provided to clients at two levels: as support for implementing ICT/ e-government strategies at the national level and through ICT/ e-government components at the sectoral and project level. Sectoral applications of e-government will remain important to achieve improved governance in client countries that are not ready for more comprehensive programs which require strong leadership at the highest level of government. However, as a counterbalance to the fragmentation across sectors, ensuring horizontal interoperability among vertical ICT applications should be a priority for Bank assistance.

Does the Bank have a comparative advantage in this area? Many speakers agreed that the Bank has a unique comparative advantage in e-government. As the integrating institution bringing together many dimensions of social and economic life of our client countries, the Bank is actively involved at both macro and micro-level, operating in almost all sectors and countries and having very strong partnerships with governments. Based on its depth and breadth of sectoral knowledge, ability to transfer lessons learned across countries, and reputation of an honest broker, the Bank is positioned very well to play a role of the global leader in the e-government for development agenda.

How can the Bank get its act together?

There was a general agreement that ICTs must become an integral part of Bank Operations. The Bank needs to put together a more cohesive institutional and strategic framework for mainstreaming
e-government in its operational portfolio. The Bank’s capability in e-government although quite comprehensive is nevertheless highly fragmented across units and projects. Responding to demand for e-government assistance will require a cross-sectoral and interdisciplinary approach, as well as interdepartmental collaboration to increase organizational effectiveness and avoid reputational risks. All relevant units should work all together and assume a shared responsibility for this agenda. Informal model for collaboration in the knowledge sharing area through E-Development Thematic Group may be one way to go. Another interesting model of collaboration has emerged in the South Asia Region which has developed a regional strategy to mainstream ICT in Operations in which regional task managers from Sector Units take a lead on ICT/ e-government projects and components but outsource more specialized/ technical tasks and areas to ISG and GICT.

Speakers also mentioned the need for some type of quality assurance mechanism, a high-quality knowledge base (including best practice materials, standardized toolkits and databases), rigorous evaluation of impact of previous Bank investments in ICT/ e-government (e.g. by Operations Evaluation Department), training program for Bank staff and capacity building for clients, the need to integrate ICT/ e-government both at the project level and in the CASes and PRSPs, and to develop an e-government strategy for the World Bank Group.
Detailed Summary of the World Bank E-Government Workshop

Opening Session: Introduction, Bank and Client Perspectives

In his opening remarks, Jemal-ud-din Kassum, Regional Vice President (East Asia & Pacific), provided an overview of the central developmental role offered by ICTs in East Asia and the Pacific (EAP) region and challenged the World Bank to do more to meet the growing and increasingly sophisticated demands of its clients in these areas. The Bank’s ability to meet this demand would be a, "fundamental test of the World Bank’s relevance in EAP in the years ahead”.

Almost every country in the region has recognized the potential of ICTs to increase competitiveness, modernize government, support the expansion of the private sector and upgrade educational capacity, and all countries are doing what they can to promote the adoption of ICTs. Although it was often not engaged with country clients at the broad e-government level, or at the overall telecommunications level, the World Bank was beginning to demonstrate a growing capacity to successfully introduce ICT applications at the sectoral and project levels to enhance specific developmental impacts.

Whilst there was a wide range of opportunities for the use of ICTs, EAP experience indicated that the areas of public financial management (increasing the efficiency and transparency of budget, payment and cash management systems); governance (strengthening the legal system, providing citizens with greater access to information and increased opportunities to participate in process that affect them) and; education (overcoming the tyranny of distance through use of distance and e-learning) appeared the clearest targets of opportunity.

In pursuing these and other areas, the World Bank needed to recognize that e-government, or e-learning initiatives were often extremely complex and difficult to manage. Analysis indicates that only about one in six ICT projects in developing countries succeed in meeting its objectives. This high failure rate was partly explained by lack of in-country capacity and here, the World Bank could and should do more to provide sustained support, guidance and training to agencies undertaking reforms involving ICTs.

Other significant impediments to more systematic approaches to promoting ICTs include external constraints such as a lack of ICT infrastructure or poorly regulated policy environments in the telecommunications sectors, but also internal obstacles such as a lack of understanding of ICTs amongst the Bank’s project team leaders and insufficient exchange of ideas and lessons about ICT usage.

In proposing a way forward, Mr. Kassum made three suggestions. Firstly, the World Bank should build on what we know works and is successful. Here, the Bank can provide support to national ICT plans and strategies and help focus them on a country’s development priorities. Secondly, the Bank should build on its experience to promote appropriate ICT applications in sectoral interventions where they could be managed more effectively than at the national level. Finally, World Bank staff should be given the knowledge and resources they need to make greater use of ICTs in project and sectoral work.
Concluding, Mr. Kassum thanked the workshop participants for all that they were doing to promote more systematic use of ICTs and urged them to take up the challenge to accelerate the Bank’s level of engagement on these issues, and to respond effectively to new situations and new client needs.

Ali Abbasov, ICT Minister of Azerbaijan, shared his country’s client perspective on e-government. Azerbaijan’s economy has been among the fastest-growing in the world; however, there are still several challenges to address, such as the prudent use of oil revenues and the development of non-oil sectors of the economy. Both as an instrument and as a dynamically growing sector, ICT plays an important role in addressing these challenges. In particular, e-government will improve governance, reduce transaction costs of doing business with the government, decrease bureaucracy, improve the quality of government services, support economic growth, help extend connectivity in the rural areas, contribute to the development of the ICT industry, improve agricultural practices, and strengthen democracy and the protection of human rights. In an effort to deploy ICTs to benefit the poor, the Azeri government is working on promoting e-government services through the postal network by installing information kiosks in postal offices in rural areas. Considerable progress has been made in implementing ICT applications in several other agencies, such as the National Bank, Customs, and the Ministry of Economic Development. It is understood, however, that administrative reform and a regulatory framework are prerequisites for a successful e-government. To that end, the National ICT Strategy has been adopted by the President. The ICT Ministry has elaborated a State ICT Program and is the lead agency to roll out e-government applications. Azerbaijan strives to become a regional ICT hub and is looking to establish a regional center of excellence in e-government in Baku. Apart from public-private partnerships (PPP), which can be used to support e-government development, the Minister further expressed that the Azeri government is strongly interested in World Bank assistance on e-government and wants to consider including e-government in its Country Assistance Strategy (CAS).

A similarly ambitious vision has been presented from a very different corner of the world by Fernando Gutiérrez, Minister of Science and Technology of Costa Rica. He also believes that e-government will allow Costa Rica to participate in the knowledge society and become more competitive globally. Costa Rica’s e-government strategy is to be elaborated by June 2005. The central e-government portal is the key component of the strategy: it will feature informational, communication and transactional services. These online services will connect citizens with public institutions in an improved manner.

By way of capturing the concept of e-government, Subhash Bhatnagar, Adjunct Professor at the Indian Institute of Management, Ahmedabad and e-Government advisor to the World Bank, noted that e-government essentially presupposes an ICT-enabled reform in the way the government works, shares information and delivers services to external and internal clients with a view to achieving greater efficiency and transparency. He pointed out that e-government means different things to different people. There are different e-service delivery models, ranging from agency-level Web sites to online delivery of multiple services through integrated channels (these “one-stop shops” are certainly the preferred model of service delivery). In his words, “not everything has to be automated”; the key is to improve processes and some parts may remain manual. Client countries should look at the benefits and not the sophistication of technology to be deployed. There is an appropriate level of e-government worth supporting for every country, one that balances the risk of doing it with the risk of not doing it. However, he warned that the expectations with respect to the impact of a particular e-government project should be realistic. First, there is a need for scaling up pilot initiatives in order for the macro impact of e-government to be realized. In terms of evaluation,
Professor Bhatnagar believes that it is still too early to look for the impact of e-government initiatives at the macro level. For example, even significant improvements will not be visible in national statistics if they occur in one city or a number of villages, yet they may be very important. Instead, one should look at the impact at the micro level of specific agencies, as well as cities and regions, and include such benchmarks as the improvement in satisfaction with government services, reduction of transaction costs, and the measurable decline in corruption.

Module 1. Designing and Implementing e-Government Strategy

Deepak Bhatia, Manager, ISG e-Government Practice (ISGIF), echoed Professor Bhatnagar’s comment that different people mean different things by e-government, but it is essentially about applying ICT to all aspects of government to improve efficiency and effectiveness. He underlined that an e-government strategy is essential for linking ICTs with economic development goals, setting up a suitable policy and institutional framework, and maximizing effectiveness of ICT in the government. E-government strategy involves a conceptual framework, a business case, an implementation process, and the measurement of results. The e-government strategy’s conceptual framework has several dimensions, including leadership, HR development, policy and institutional reform, technology, and financing, all of which must be addressed. Regarding a business case, it comprises defining worthwhile goals, demonstrating financial feasibility and sustainability, and developing an incentive scheme. Insofar as the strategy involves business process reengineering, there should be an ownership of the strategy by line ministries. In terms of World Bank assistance, Mr. Bhatia stressed that it has to be country specific, depending on government commitment and the country’s e-readiness status. Since ICT investments are high-risk, it is important to have a strong implementation strategy. He suggested that lagging countries should target “low-hanging fruit” projects that could be easily implemented, while for more advanced countries (with already working pilots) the Bank can help scale up those systems that best fit within the CAS.

In his presentation via videoconferencing, Mart Laar, former Prime Minister of Estonia, revealed that successful implementation of e-government was a major factor in helping Estonia become the most competitive economy among new member states of the EU within ten years after restoration of independence in 1992. One of the key factors of success was strong leadership and advocacy for e-government. Yet it was not an easy task, since political support is generally very difficult to achieve for projects that stretch over many years and only deliver results later. Moreover, e-government is not always popular among civil servants; therefore, sustained leadership is needed to overcome resistance. Overall, e-government had such a strong impact on economic growth that it essentially helped Estonia turn into a high-tech country (40% of exports are high-tech). One strategy that the government followed was wide-scale outsourcing of everything except decision making. Mart ironically concluded that having a tight budget is a not a bad thing since it forces people to think and avoid wasteful investments. He also called attention to the role of public-private partnerships in e-government services. Furthermore, in order to make all partners interested in cooperation, e-government initiatives were framed as part of the larger agenda of building an information society, one goal of which is to empower citizens. But for people to be able to use e-government services effectively, awareness raising and training are imperative. Their formula was to train all, connect all, and serve all. E-government projects should create evident value for the citizens, so that these projects also gain the support of the public. Luckily, the Estonians opted for the challenge of modernization. In the age of open borders across Europe governments have to compete for their citizens! Mart cited the paperless Cabinet meetings as a good example of transformed and modernized government in Estonia.
As a true e-government practitioner, former Administrator of the U.S. Office of E-Government and Information Technology Mark Forman elaborated on the design and implementation of e-government as business processes and the need for leadership at the highest levels of government (in the case of the US, the President and the Office of Management and Budget). According to Mr. Forman, e-government only has an impact when it is used for policy execution. It is also useful to structure e-government in an enterprise-wide architecture and to stress the need for interoperability. His advice was to be more concerned with business processes and their transformation, and only then should one map the technological components to them. Therefore, IT managers, strategists, and architects will have the skills that are needed, not simply application programmers. The IT manager and the organizational manager should work in synergy to produce change. Thus, leadership, need assessment, and mapping out strategic opportunities are crucial. CIOs need to be positioned close to the top leadership in the organizational structure to have the requisite authority to mandate changes. However, the management of the transformation process cannot be outsourced. One key aspect of IT governance is structuring and managing relationships with the private sector to avoid waste of resources (e.g., different agencies being sold the same product by a vendor). He also highlighted the importance of cybersecurity and privacy concerns from users.

Sam Pitroda, former adviser to the Prime Minister of India, also acknowledged that technology can be a driver for development, in general, and, in particular, that e-government can be a stimulus for business process reengineering within the government. In recent efforts, the citizen has been the focal point of service delivery (vs. data collection). He listed some key challenges to overcome: Information is power, and not many people want to share it. Therefore, one objective of e-government should be to stimulate information sharing. In order for e-government projects to succeed, however, political will is indispensable. But it is also important to find champions and identify stakeholders in the target organization, and deal with them in coordination. Focusing efforts is also vital for success, as Mr. Pitroda pointed out. It is best is to reengineer a number of selected processes and services with the greatest impact on the client, rather than trying to cover all of them at once. Finally, the importance of standards in e-government was mentioned because it is key for scaling and it also reduces risks.

Module 2: Enabling Environment for e-Government

The presentation by Randeep Sudan, Senior ICT Policy Specialist (CITPO), highlighted the importance of government policy and regulatory framework by reference to three cases: rural broadband development project in Andhra Pradesh, G-cash project in the Philippines, enabling SMS-based financial services through mobile networks (microfinance, peer-to-peer payments); GCNet in Ghana, a system for processing customs documentation. Mr. Sudan also underscored the importance of leadership, specifically CIO officers, and a strong customized institutional arrangement (exemplified by several successful examples from countries that have taken a different model).

During the Q&A session, a good discussion emerged about the allegedly large proportion of failed ICT projects. One panel discussant, Samia Melhem, Senior Operations Officer (CITID), called attention to the problematic nature of “project failures.” She hypothesized that perhaps the objectives and expectations had not been set appropriately, or that the time frame to implement the project was too short. She stressed that change management and culture change were much more difficult to achieve and put in place than technology and applications. While the project might not
have achieved the intended objectives, it could have produced a potentially strong effect that was not anticipated ex ante, such as knowledge transfer and digital literacy amongst civil servants who could then take on future projects and make them successful, with their new experience and stronger ownership. Her comments were reinforced by Ake Gronlund, Swedish e-Government Expert, Örebro University, who mentioned that in many cases, "a failure" referred to a budget overrun or other project management setbacks, but that did not imply that no social-economic impact was actually produced.

The central message of the presentation by Bruno Lanvin, Adviser (CITPO), was the necessity of ICT and e-government strategies (e-strategy) to be firmly grounded in a country’s development strategy (d-strategy, PRSP, CAS, etc.). Furthermore, monitoring and evaluation (M&E) should be used as a strategic tool for key decisions as an integral part of project concept, design, and implementation, rather than only for post-project evaluation. In particular, Mr. Lanvin voiced the need for a Monitoring & Evaluation Toolkit for E-strategies Results (METER), and linked the elements of the LogFrame model to M&E indicators (specifically, policy goals to impact, strategic priorities to outcomes, key initiatives to outputs, and actions to deliverables). He noted, however, that measurable impact of ICT would not necessarily coincide with strategic impact. He further reiterated some of the direct effects of e-government, such as increased public sector efficiency, better access to public services, and improved economic governance, as well as indirect effects, including transparency, business competitiveness, IT knowledge and literacy, and building information societies.

In his presentation, Charles Watt, Senior ICT Policy Specialist (CITPO), laid out a number of challenges for e-government in Europe: making public services provision user-centric, organizational change - sharing information across departments, introducing positions of “e-ministers” (e-Envoy, etc.), interoperability, political leadership, trust, pay-off period, digital divide, etc. Several successful European e-government projects had different focuses, such as improving quality of life, boosting competitiveness, or streamlining customs procedures. Among the lessons learned, he found inclusive access, trust and confidence, better use of public sector information, public procurement, Pan-European services, interoperability, and organizational change the most important. Mr. Watt also presented the “CoBrA recommendations” for the 2005-2010 period, aimed at developing a sustainable model for modernizing public administration.


Discussing e-government in World Bank operations, Subhash Bhatnagar proposed that e-government can be an entry point for key development goals: improved management of public finances, greater transparency, private sector development (PSD), and services to citizens. As he put it, Bank interventions should be rooted in country-specific contexts, and those entry points should be chosen that are aligned with Bank priorities, catalytic, scalable (although not everything is scalable), sustainable, and providing the best balance between benefits and costs at appropriate levels of risk. Successful examples exist in the fight against corruption, delivery of government services, PSD/competitiveness, and public finance management. Possible entry points for early movers and the strongly committed include integrated Web portals, one-stop urban services centers, multi-functional rural access points, and single-agency multiple-service centers. In case of services for the rural poor, for example, centers may not be cost-effective given the dispersion of the population. However, offering a larger basket of services and bringing in the private sector may well be the solution. For a successful public-private partnership (PPP), he cited the eSeva project in Andhra
Pradesh, India, which greatly facilitated access of the rural and urban poor to government services through single window kiosks and Web portal.

Panel discussant Eduardo Talero, Consultant (ISGIF), added e-procurement as a choice application for entry into e-government as it tests the political will to introduce the principles of client orientation, transparency and accountability into public administration with support of Internet technology. E-Procurement's first stage focuses on full disclosure of public procurement transactions. It is a technically simple system to implement, inexpensive and does not require all the enabling conditions (e.g., legal framework) of advanced electronic tendering systems. According to him, first-stage e-procurement is very visible, client-focused and can produce significant impact in a short time on society's perception of transparency and accountability in government and therefore on government's credibility. Introduction of such system, he pointed out, requires nevertheless formidable political will to achieve government-wide compliance with new procedures and disclosure requirements. It should therefore not be allowed to fall hostage to over-complication from complex strategic planning, legal reform and chain supply integration requirements which are necessary in due time yet not indispensable to start.

Roberto Panzardi, Senior Public Sector Management Specialist (LCSPS), pointed out that politicians should understand that e-government will benefit them as well. He then cited several examples and success stories from the LAC region in the areas of transparency, service delivery, integrated financial management systems (IFMS), taxation, and e-procurement.

From the Africa region, Navin Girishankar, Senior Public Sector Specialist (AFTPR), suggested that the e-government agenda was rapidly moving from advocacy to implementation. There is urgent need for countries, particularly in low capacity settings, to ensure that e-government investments are rooted in public management fundamentals and are responding to very specific public sector reform needs. The sustainability of the agenda will likely depend on many factors including demonstrating tangible results early on, ensuring that the fiscal implications have been fully taken into consideration, and leveraging the capacities of public, private, and tertiary education sector actors in operations and maintenance. He also noted that e-government applications by themselves will not change the politics of public sector reform unless they are also responding to the demand for change, for greater accountability and transparency. The challenge of implementation will continue to serve as major constraint including in areas such as IS procurement and contract management, as well as managing IS roll out across tiers of government in decentralized settings. From a strategic perspective, a key issue in PRSPs and CASs is whether countries can deploy IT solutions to the "business of government" in a manner that balances the need for improving automating core systems for financial management and human resource management (where the pay off is in the medium term) against the need to improve delivery of services at the frontline (where the pay off is more immediate and tangible). On the margin, these trade offs need to be made carefully to reinforce public support for reform. Ultimately, in terms of mainstreaming e-government in the Bank, Mr. Girishankar recommended a focus on upstream diagnosis in PRSs and CASs, and the development of successful implementation support methods in specific projects or programs.

In closing, Mark Dutz, Senior Private Sector Development Specialist (SASFP), offered examples of PPP for e-government and cited several reasons for making use of them: they allow risk transfer to the private sector, draw on commercial knowledge and management skills, provide for enhanced
government accountability, encourage entrepreneurship, and allow access to private finance to meet public objectives.

In his summarizing remarks, Bruno Lanvin described the area of e-government as a frontier in a risk-averse organization like the World Bank. He advocated the mainstreaming of e-government in Bank sectors and urged the task team leaders (TTL) to follow words with action. However, responding to demand for e-government assistance has implications for the Bank’s organizational structure since it requires a cross-sectoral and interdisciplinary approach, as well as interdepartmental collaboration. But there are many opportunities for intervention that will present themselves since e-government is as much a demand-driver as an agenda-setter.

**Module 3 (Part 2): Mainstreaming E-Government in Bank Sectors**

In her presentation on the case of e-government in Rwanda, Arleen Seed, Senior Information Officer (ISGIF), reported that the country aspires to become a middle-income country by 2020. To achieve that goal, Rwanda has an aggressive ICT agenda, and as a part of it, the government takes very seriously investment in e-government. She cited two examples of such projects: Poverty Reduction Strategy Credit II (PRSC II), an e-government service being used to strengthen the government’s ability to provide quality services to its citizens and to improve internal governance (where ISGIF’s main input is assistance to the M&E activities); and Public Sector Capacity Building Project (PSCBP), the Government of Rwanda’s use of ICT as an input to economic transformation and growth. This will be accomplished through three subcomponents: ICT policy and strategy, ICT training and employment, ICT planning and infrastructure, all of which are very much in line with Rwanda’s overall ICT vision for the country.

Ms. Seed’s presentation was followed by a statement by Charles Karake, the Director General of the implementation agency in Rwanda responsible for the PSCBP. He stressed the importance of ICT as a tool which will enable the achievement of other sectoral goals and how the Rwandan government is providing the all-important leadership which will enable the project to succeed.

Giving another example of mainstreaming ICTs in World Bank operations, Hamid Alavi, Senior Private Sector Development Specialist (MNSIF), talked about how ICTs can help trade facilitation in the MENA region. He acknowledged that e-government applications can clearly improve trade transactions, as has been shown by recent experiences in MENA and East Asia. He also pointed out that the success of e-government application to trade transactions would depend on adoption of a holistic and strategic approach that not only includes customs, but also other agencies involved in control and clearance of trade transactions. E-trade facilitation is not easy to implement, but the experience has shown that it is possible and brings important benefit to the country in terms of export and GDP growth and job creation, through its impact on transactions costs and competitiveness. Many countries, however, have been focusing mainly on e-customs. The key issue is the entire trade process, which is complex, with interlocking steps of procedures, and e-customs is just one link in the chain. When implementing e-customs, the whole trade system must be considered, and one will also find resistance to any change in that process. But once the restraints are overcome, it can yield significant benefits.

Discussing a different application of e-government, Waleed Haider Malik, Lead Public Sector Management Specialist (LCSPS), clarified that ICT is a means, not an end in itself in judiciary reform. Technology can be a significant component of reform but it is most effective when its
presence and complexities are hidden. The judiciary is constantly learning how they can harness the power of ICTs. One example is the mobile mediation service ("mobile justice"), which has yielded great success.

On the public finance side, **Fernando Rojas**, Lead Public Sector Management Specialist (LCSPS), discussed the basic and advanced reforms in the areas of accounting, expenditure management, tax management, and regulation, and the necessary instruments to achieve them. Similar to other areas, change management is one of the key challenges here. Resistance to change is also a major issue. He further mentioned that critical inputs from other units for the success of the projects came in the form of process documentation, review, and reform.

**Module 4: The Future of E-Government**

At the beginning of the last session, **Ramesh Siva**, Lead Information Officer (ISGIF), reiterated that on the service delivery side, the long term goal of e-government should be an integrated single-window service. But e-government is a driver for cross-government integration both vertically and horizontally. In terms of what to integrate, Mr. Siva categorized them as business processes (service delivery models and service levels; clarity for roles, responsibilities and hands-offs), technical processes (common data model and standards, common infrastructure, interoperability across back-ends), and user experience (consistent and predictable, across government agencies). In all these tasks, coordination is the key. He mentioned the example of the U.S. Federal Enterprise Architecture as the most comprehensive enterprise view of government systems. However, in a typical developing country context, back-ends have grown organically (business processes are “owned” by specific process owners; there is vested interest, including rent-seekers). There is an automation of manual processes (step-by-step, without process reengineering), but information is exchanged manually. Data standards are often non-existent. The infrastructure is unreliable, and the staff lacks the capacity for ICT. According to Mr. Siva, the solution should be to get the building blocks right: (1) implementation of core government services (treasury, GIFMS, tax, customs, revenue admin systems, registries), (2) development of government data standards, (3) inter-agency coordination mechanisms, (4) stabilizing the infrastructure, (5) continuous change management, (6) stakeholder input, and (7) legal and regulatory framework. During implementation, one has to strike a balance among several issues, whether the approach should be a “big bang” or incremental; with a master plan, or in a coordinated framework; top-down (by an e-government agency) or bottom-up (sector-driven); in a whole vertical integration, or surface integration only. In conclusion, he suggested two central principles: First, do no harm—i.e., what may seem to be a shortcut today will be a roadblock tomorrow. Second, plan top-down, and implement bottom-up—i.e., have an overall framework ready, but start with flexible pilots that could be scaled up later.

As the corporate CIO of the province, **Greg Georgeff** introduced the online public services of Ontario, Canada. For them, e-government means an economical, efficient, and engaged government. The reasons for connecting the government with the public and businesses are cost efficiency, synergy, complexity, technology, and public expectations. Examples include business registration and student loan applications online. Their efforts are concentrated in four areas: service delivery, capacity, strategy, and dialogue with constituents. The characteristics of this new vision of government are SMART: simple and seamless, manageable and measurable, accountable and accessible, responsible and responsive, and trusted and transparent. Mr. Georgeff also emphasized the importance of leadership and an architecture in which the budget can be used as an instrument of planning and control. Incentives of retaining cost savings by departments and agencies can help
align them to a centrally coordinated plan. The aim is to transform and improve services to be more client-focused with minimum quality service standards for all staff. It should be integrated across channels, integrated across programs and ministries, and integrated across jurisdictions, involving multiple delivery partners in public and private sectors. Obsolete and incompatible systems need to be gotten rid of. The result will be increased accountability and transparency in the way government works.

The Director of the Department of International IT Business at the National Computerization Agency (NCA), Jeongwon Yoon elaborated on how his agency is working on the implementation side of a single-window government in Korea. They are pushing the enterprise architecture concept into government agencies and using business reference models. He brought up a private sector example of a single window (Hilton). He described the simplified concept of components of integration made up of resource integration, process integration, and service integration. Mr. Yoon noted the trend toward creating values of government services in e-government. He also mentioned that all core government data processing now takes place in a consolidated data center. The availability and reliability of an underlying information infrastructure is key in this transformation. As one of the heaviest investors in broadband connectivity in the world, Korea is steadily realizing the vision of a network-based, knowledge-based government. While only 15% of the work processes were online in 2003, they anticipate 85% by 2008. Each year, Korea invests 400-500 million USD in e-government projects. It will also pay off financially: the G4C impact on budget savings was 1.2 billion USD during the last five years. The data center alone will save more than one billion USD during the next five years.

In his summary of the session, Randeep Sudan emphasized again the need to have an IT interoperability framework architecture in place. The question is how the standards are enforced. One possible approach is setting up a government interoperability framework accreditation agency (as in the U.K.). He applauded the citizen-centric approach laid out by all presenters. For e-government applications, he underlined the necessity to have a gateway to interface with government data centers and channels. Data centers should be done in PPP - the private sector can invest in implementing data centers and can later use them jointly with the government. The same could be done with wireless networks - governments should pursue PPPs to promote services over wireless networks. Reacting to the Korean example, Mr. Sudan indicated that clearly specified outcomes in quantitatively measurable terms and strong top leadership, as well as a unique social and cultural setting all contributed to success. Investments in ICT to make Korea a knowledge society was an act of faith for growth and competitiveness. But it has, indeed, spurred government investments and enabled some bold decisions in developing e-government (such as the central data centers).