Summary

e-Government has the potential to bring about higher quality and more cost effective government services, and better relationships between citizens and government. This briefing note aims to assist government leaders in better understanding what e-government is, and discusses three different types of e-government models - Government-to-Citizen (G2C), Government-to-Business (G2B) and Government-to-Government (G2G). It also provides a step-by-step guide to implementing e-government programmes, with key issues to consider.

This briefing note is drawn from the third of eight modules of the Academy of ICT Essentials for Government Leaders (Academy). The Academy is a comprehensive ICT for development training curriculum that aims to equip policymakers with the essential knowledge and skills to fully leverage opportunities presented by information and communications technologies (ICTs) to achieve national development goals and bridge the digital divide. More information on the Academy is available at http://www.unapcict.org/academy.

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e-Government or electronic government can be defined as government activities taking place through electronic communications among all levels of government, citizens, and the business community. These activities include acquiring and providing products and services; placing and receiving orders; providing and obtaining information; and completing financial transactions. In a broader sense, e-government is the application of information and communications technologies (ICTs) to enhance the performance of government functions and services.

1) highlights of conventional research papers, assessment and survey reports and publications; 2) policy considerations drawn from the Academy modules; and 3) key challenges and lessons learned based on analyses of best practices and case studies.

1 What is e-Government?

e-Government or electronic government can be defined as government activities taking place through electronic communications among all levels of government, citizens, and the business community. These activities include acquiring and providing products and services; placing and receiving orders; providing and obtaining information; and completing financial transactions. In a broader sense, e-government is the application of information and communications technologies (ICTs) to enhance the performance of government functions and services.

e-Government is not about business-as-usual, but rather a focus on using digital technologies to transform the structures, operations, and most importantly, the culture of government. e-Government should be value-driven and not technology-driven. The promised benefits of e-government do not come simply from digitizing information and placing it online. Instead, they come from leveraging the new ICT tools to provide better services to citizens and make government more effective and responsive.

e-Government is not a single event or a short project, but a long-term evolutionary process of transforming government to focus on citizen services. Thus, it is necessary to establish a high-level e-government roadmap (top-down design) with a bottom-up detailed implementation plan. In the top-down design, the roadmap should include long-term strategic plans, as well as corresponding annual plans. The bottom-up detailed implementation plan should focus on delivering services that are based on the needs of citizens and businesses. It is important that the services are prioritized and included in the roadmap tasks. Examples of popular services are payment of income tax and corporate tax, registration of new companies, application of personal documents such as passport and driver’s license, and employment services.

Generally, the online accessibility and
widespread use of e-government services yield a greater impact. e-Government requires a critical mass of e-citizens and e-businesses to have a sustainable impact beyond internal efficiency and transparency of government. The success of e-government depends on strong demand and support from the majority of the population. This demand will first come from a stronger awareness of the opportunities offered through efficient online government service delivery. Citizens and businesses also need to be motivated to use e-government services through the provision of compelling, relevant, and accessible digital content.

2 e-Government Models

e-Government primarily consists of two parts: front-office and back-office. The front-office part is comprised of online service delivery to citizens and businesses, through the Internet or other digital means. The back-office part is comprised of internal government administration and information sharing both within and between governments. In this briefing note, Government-to-Citizens (G2C) and Government-to-Business (G2B) services are categorized as front-office, and Government-to-Government (G2G) as back-office. Some of the most commonly offered e-government services are shown in Table 1. Each service can be grouped into either G2C or G2B.

<table>
<thead>
<tr>
<th>G2C services</th>
<th>G2B services</th>
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<tbody>
<tr>
<td>income tax</td>
<td>employees’ social contributions</td>
</tr>
<tr>
<td>job search services</td>
<td>corporate tax</td>
</tr>
<tr>
<td>social security</td>
<td>VAT declaration and notification</td>
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<tr>
<td>personal identification</td>
<td>registration of new company</td>
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<tr>
<td>car registration</td>
<td>statistical data submission</td>
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<tr>
<td>building permits</td>
<td>customs declaration</td>
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<tr>
<td>declaration to the police</td>
<td>environment-related permits</td>
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<tr>
<td>public libraries</td>
<td>public procurement</td>
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Table 1. G2C and G2B Service

2.1 Innovating Citizen Services (G2C) and Business Services (G2B) - Front-Office Delivery

G2C services include information dissemination to the public along with basic citizen services, while G2B transactions consist of various services exchanged between government and business. ICT-supported or electronic G2C services are characterized by a government-wide information sharing system and new Internet-based applications. These allow citizens to access information and other services using a single-window online portal. Such a portal can provide the following citizen services:

- Processing and issuance of various permits/authorizations and certificates
- Information on legislative/administrative notices and relevant laws
- Payment services, including tax refunds and social welfare payments
- Government administration participation, including requesting public hearings and casting electronic votes

Electronic G2B service delivery consists of a one-stop single-window service for businesses. The services covered include corporate civil administrative affairs, industrial information, and electronic transaction services. Examples of these electronic transaction services are procurements, bids and awards, and payment services for various taxes and public charges. Effective electronic G2B delivery requires the following ICT applications:

- An integrated e-procurement system - i.e., a single-window government procurement system in which all procurements-related processes such as registration, tender, contract, and payment are done via the Internet
- An e-customs system that would streamline customs administration in the import and export industry while establishing effective smuggling interdiction
- e-Commerce to support the buying and selling of goods and services online

2.2 Innovating the Way Government Works (G2G) - Back-Office Delivery

Electronic G2G delivery aims to reform government internal work processes to improve efficiency. More specifically, reforming government work processes using ICT is expected to have the following outcomes:

- Reporting systems of central and local governments are connected, resulting in increased accuracy
- There is information sharing among agencies to improve efficiency

A few examples of G2G services in the Republic of Korea include the following:

- Integrated National Finance Information System consisting of real-time management of national fiscal activities by interconnecting 23 independently operating finance-related systems in various government agencies.
- Local e-Government Information System consisting of 232 local government administrative affairs, such as resident registration and real estate, finance, and tax at the city, county and district levels.
- Education Information System and e-Learning, which brings together schools, provincial offices of education and their sub-agencies in a nationwide information network.
- Government e-Document Exchange, which includes preparation, approval, distribution, and storage of all governmental documents.

Digitizing document processing in government agencies and moving to paperless government operations is a key G2C initiative. e-Document exchange is expected to ensure efficiency, security and reliability in administration.

3 Key Considerations

In this section, the following three key issues are discussed: 1) the benefit of successful e-government implementation; 2) critical success factors and risk factors of e-government deployment; and 3) strategic planning.

3.1 Benefits of Successful ICT Implementation in Government

Table 2 shows the beneficial changes to
government work processes that come from effective ICT-supported reform.

Table 2. Changes in government work processes from e-government

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper-based government work processes</td>
<td>Electronic-based document processes</td>
</tr>
<tr>
<td>Department-oriented procedures</td>
<td>Service-oriented procedures</td>
</tr>
<tr>
<td>Many government contact points and personal (face-to-face) visits to government offices</td>
<td>Many government contact points and personal (face-to-face) visits to government offices</td>
</tr>
<tr>
<td>Department-level information resource management, with a lot of duplication and redundancy among different departments</td>
<td>A single contact point and online access, making personal visits to government offices unnecessary</td>
</tr>
<tr>
<td>Government-wide information resource management using a common standard and characterized by convergence</td>
<td>Government-wide information resource management using a common standard and characterized by convergence</td>
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These changes improve efficiency, transparency, and accountability in government by reducing transaction times and removing redundant layers of bureaucracy. In addition, e-government helps build trust between government and citizens by enabling direct interaction between government offices and citizens. Information is made universally available.

3.2 Critical Success Factors

There are five critical success factors that government leaders should consider in implementing e-government:

I. Vision, objectives, strategy

A long-term plan with a clearly articulated vision and strategy is vital to the implementation of e-government. A quick fix or piecemeal approach will not work. The more effective approach is to think big and have a ‘big picture’ (top-down design). During the implementation process, it is important to start small and prioritize tasks (bottom-up design). In sum, successful e-government requires:

- A clear leadership vision
- Strong support from citizens
- Agenda setting

II. Law and regulations

It is important to plan for sufficient time and direct efforts toward legislative changes that may be required to support the implementation of new processes. The following laws need to be in place for e-government to succeed:

- Law on privacy and related issues
- Law related to changes in business processes and information systems
- Law regarding the government information technology architecture and establishing an integrated computing centre

III. Organizational structure

The effort required in this area should not be underestimated. Organizational restructuring typically makes up between 30-50 per cent of total effort. Change in organization structures must be well planned and implemented in a systematic manner. The following are important in effective organizational change:

- Strong and committed leadership
- Planning - IT management and change management
- Budget preparation and budget execution
- Coordination and collaboration
- Monitoring and performance measurement
- Government-private sector-citizen partnership

IV. Business process

The existing way of doing business may not necessarily be the most appropriate or effective. One of the tools used to carry out business process innovation is Business Process Reengineering (BPR). This involves redesigning the work flow within or between department levels to increase process efficiency (i.e. to eliminate inefficiency in the work process).

V. Information technology

Information technology changes rapidly. Factors to consider when choosing technology and vendors are:

- Level of application technologies required
- Network infrastructure
- Interoperability and standardization
- Technical and human resource capabilities

3.3 Risk factors in e-Government deployment

It is widely believed that e-government implementation in many countries has failed to meet high expectations. One study shows that 35 per cent of e-government programmes around the world have failed, 50 per cent are partial failures, and only 15 per cent can be considered successful. Factors leading to failure of e-government deployment in developing countries include:

- Lack of agreement within the public administration system; Internal resistance by government
- Inadequate plans and strategies; e-Government is introduced in a piecemeal and unsystematic fashion
- Lack of adequate human resources; Insufficient institutional and human capability building
- Absence of an investment plan
- Shortage of IT and system suppliers
- Immature technologies and overemphasis on technology or technology-oriented deployment
- Rapid implementation without adequate testing and preparation, and without adequate input from key local stakeholders

The most important challenge to overcome is realizing that there is no one solution to fit every situation. Asia and the Pacific are characterized by vastly different political, economic, social and governance contexts, which require different approaches.

3.4 e-Government Strategic Planning

A sound strategy is essential for effective e-government implementation. A strategic plan provides a roadmap for an organization to move from its current state to its desired medium or long term future state. The strategic planning process consists of five steps as shown in Figure 1.
 Figures  1. Five steps in the strategic planning process

**Step 1: Analyse the present environment.**

A SWOT analysis can be used to identify the internal and external factors that are favourable or unfavourable to achieving a particular e-government aim or goal. SWOT stands for Strengths, Weaknesses, Opportunities and Threats.

**Step 2: Articulate a vision statement.**

A vision statement is a statement that articulates what an organization aspires to be. It is future-oriented and serves to inspire members of the organization towards reaching the organization’s future desired state. A vision statement should be clear. While stating an inspiring ideal, it should also express realistic, achievable aspirations. In addition, it should be aligned with the organizational culture and values.

**Step 3: Refine the vision into goals.**

Goals are long-term (3 to 5 year) directions or targets based on the vision.

**Step 4: Determine strategies to address the findings of the SWOT analysis and achieve specified goals.**

Strategies can include specific managerial tasks and measures to achieve a specific goal established in the e-government roadmap. For example, a strategy is the construction of a comprehensive master plan stating how the Government will achieve its objectives. Strategy implementation is the process by which strategies and policies are put into action through the development of programmes, budgets and procedures.

**Step 5: Formulate concrete and measurable objectives from strategies.**

Objectives are the end results of a planned activity. These should be specific and measurable statements of what is to be accomplished at specific moments. In contrast to an objective, a goal is an open-ended statement of what one wants to accomplish with no quantification of what is to be achieved and no time criterion for completion.

To conclude:

1. e-Government is not a single event in a short period of time but a long-term evolutionary process of transforming government to focus on citizen and business services.
2. The more services that are available online and the more widespread the use of these services are, the greater the impact of e-government will be.
3. e-Government will only be successful if there is strong demand and support for it from the majority of the population. Therefore it is important to know what types of services citizens and businesses need.
4. Develop a multi-channel single window common service delivery infrastructure, including ‘physical’ citizen service centres and other public access points such as telecentres, call centres, Web portals and mobile portals.
5. Encourage the development of relevant, compelling, user-friendly online and mobile content.
6. Critical and risk factors should be fully studied to avoid mistakes or failure in e-government implementation.

ESCAP

ESCAP is the regional development arm of the United Nations and serves as the main economic and social development centre for the United Nations in Asia and the Pacific. Its mandate is to foster cooperation between its 53 members and 9 associate members. ESCAP supports Governments of countries in the region in consolidating regional positions and advocating regional approaches to meeting the region’s unique socio-economic challenges in a globalizing world. The ESCAP office is located at Bangkok, Thailand.

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