

## 3. International Best Practices in E-Government

An increasing number of countries have initiated e-government programs. While most are developed countries, emerging and transitional nations are increasingly embracing e-government as a way of enhancing public services and improving government. E-government programs differ from one country to another depending on factors such as computer literacy, purchasing power, government service priorities, and political and business trends.

This chapter presents some critical lessons learned from the experience of six countries - Australia, United Arab Emirates (Dubai), Portugal, Singapore, the United Kingdom, and the United States - that have implemented e-government programs. The experiences of these countries reveal some valuable lessons for Jordan.

### 3.1 Objectives of E-Government Programs

The **overall objectives** of e-government in the cases studied were the same. These are to:

- Improve the **quality of government service** delivery as measured by such indicators as lessening processing time and improving the ease of interaction
- Increase **transparency of government** by increasing availability of information
- Improve the **responsiveness of government** by providing more information and services to the public, and creating a new mode of contact between government and the public
- Save time, money, and other resources for both government and process users by **improving efficiency** in government processing
- Create a **positive spin-off effect** on the society through the promotion of information technology skill development in firms and individuals

Different governments ranked these goals in different orders, but all achieved results in each of these objective areas as a result of efforts to shift to e-government.

However, in addition to the objectives noted above, some countries have other priorities in launching e-government initiatives. After emerging from decades of military rule **Portugal**, for example, had a goal of using e-government as a tool to further **democratize society** by bringing government closer to the people through new technology. **Singapore** wanted to aggressively move forward with its e-government campaign in order to spur the rest of society to become more **technologically literate** and boost the country's image as an e-commerce hub. **Australia** viewed

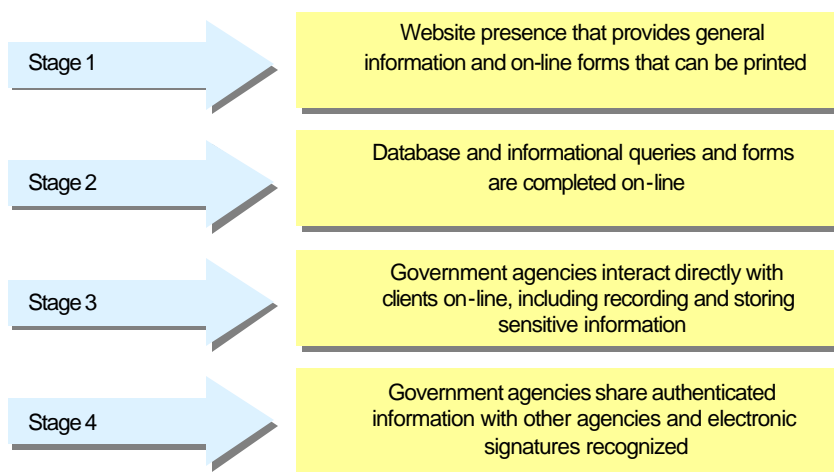
*E-government programs vary from country to country, reflecting differing national priorities, cultures, administrative structures, resources, and technical capabilities.*

*After emerging from military rule, Portugal used e-government as a tool to further democratize society.*

e-government as a tool to stimulate economic growth and contribute to **national competitiveness**.

Another commonality among best practice countries is that their e-government programs were phased over a period of years as their human resources, management, and technological capacity improved and expanded. Figure 3.1 below represents this phased implementation of e-government, adapted from the Australian National Audit Office's e-government implementation strategy. The phases represented in the model indicate the general types of activities that e-government can accomplish over a certain time horizon.

**Figure 3.1: Phased E-Government Implementation Model**



*One commonality is the phasing of e-services in line with human resource, management and technological capacities.*

### 3.2 Implementation Characteristics

Table 3.2 below summarizes the major implementation characteristics of selected e-government programs throughout the world.

**Table 3.2: Comparative Implementation Characteristics**

Characteristic	Australia	Dubai	Portugal	Singapore	United Kingdom	United States
Centralized Model			✓	✓	✓	
Decentralized Model	✓	✓				✓
E-Services	G2C G2B G2G	G2C G2B G2G	G2C G2B G2G	G2C G2B G2G	G2C G2B G2G	G2C G2B G2G
Single Portal			✓	✓	✓	
Public Kiosks			✓			
Government Intranet	✓		✓	✓	✓	
Use of Fast-Track Projects	✓	✓	✓	✓	✓	✓
Civil Service Reform Launched Before E-Government			✓	✓	✓	✓
Use of feedback mechanisms	✓	✓	✓	✓	✓	✓

*The implementation arrangements utilized share several commonalities, but exhibit a number of important differences.*

### *Institutional Arrangements*

The countries featured in this chapter adopted one of two paths toward implementing e-government. The first option, typified by Singapore, is a highly centralized and hierarchical mode of introducing e-government to the country's bureaucracy. The second approach, adopted by the United States, relied on a decentralized approach based on some broader common themes. These two approaches are compared in Table 3.3 below.

**Table 3.3: Characteristics of Centralized and Decentralized E-Government Implementation Models<sup>1</sup>**

Characteristics	Centralized	Decentralized
<b>Decision-making</b>	Top down; president and cabinet make binding decisions and agencies implement master plan	Agencies implement their own plans with commonalities
<b>Government structure</b>	Small number of agencies; one layer of government	Many agencies and Federal structure with four tiers of government
<b>Country/ Bureaucracy size</b>	Small at 3.8 million/60,000	Large at 275,550,680/ 1,804,591*
<b>Strategy</b>	Developed by Cabinet with lead e-Government agency as implementer	Broad themes from President, public-private panels and intra-agency working groups as implementers
<b>Standards</b>	Set by lead e-government planning and coordination agency	Federal compatibility standards set by 2 government agencies; content and functionality set by individual agencies
<b>Innovation</b>	Comes from lead e-government planning and coordination agency	Comes from individual agencies across the country

**Centralized model**--In the centralized model as represented by Singapore, decisions to implement an e-government initiative were made at the senior levels of government with the details gradually delegated to a technologically focused agency, the Infocom Development Authority (IDA), which was created through merging the National Computing Board and the Telecommunications Authority of Singapore. Within the IDA, the Government Chief Information Office directs the formulation of Singapore's information technology initiatives as well as providing technical advising and resources to other government institutions. The IDA was granted the mandate to explore how information technology could improve and redesign the services of other government institutions. It produced a comprehensive "IT2000 Master Plan" that called for making 130 public services available on-line. Currently, 132 public services are on-line, including tax filing, college registration, civil service examination results, and on-line employment services.<sup>2</sup>

Even prior to the creation of the IDA, government mandates regarding technology were quickly implemented. According to a report issued by the National Computer Board, when the Singapore government website was first launched in April 1995, most government agencies in Singapore had not heard of the internet. By July 1995, all 36 government ministries had been connected, and the internet became available to the entire civil

*In April 1995, most government bodies in Singapore had not even heard of the internet. Three months later, all 36 government ministries had been connected to it.*

<sup>1</sup> Source: U.S. Office of Personnel. This figure is based on most recent published calculation and includes Department of Defense and army, navy, and air force administrators and excludes employees of the legislative and judicial branch

<sup>2</sup> *Information Age Government: Benchmarking Electronic Service Delivery*, pg. 61. U.K. Information Technology Unit, July 2000.

service. The ease with which the Singapore government was able to introduce e-government services reflects the acceptance of government with a centralized, top-down decision-making system. Issues of bureaucratic territoriality or resistance to change did not derail the attempts to reengineer government functions through the use of information technology.

**Decentralized model**--Although it has a government structure more like Singapore, Dubai's evolution toward e-government represents an example of decentralization. The Port Authority of Dubai spearheaded early e-government initiatives in order to better satisfy the needs of an important business sector and increase its competitive advantage as a transshipment destination. Although commitment to e-government has spread since the Port Authority's initiatives in the early 1990s, the most rapid progress in implementing electronically interactive systems has been made by government institutions related to shipping, clearing goods, transportation, and logistics.

The decentralized model is typified by the United States, where the impetus for and development of e-government arose in a more organic manner. One thrust, which became a significant political issue during the late 1980s and early 1990s, was related to a broader effort to improve service delivery at the Federal level and shrink the size of the national government. Another impetus for U.S. e-government initiatives has been a series of congressional laws and executive orders, including the Government Paperwork Elimination Act and the Financial Management Improvement Act, that specify goals and targets for improving service through information technology. A third and important source of motivation was seen in the attempts of individual agencies to improve service and experiment with using information technology to expand service delivery options.

While some e-government initiatives are funded at the federal level in the United States, in general, state, county, and city agencies pay for information technology through their own operating and capital budgets. **The Federal role has been to provide high-level political support, set targets and deadlines, offer limited financial and intellectual resources, and invest in common infrastructure.** Several groups, each with a different area of emphasis, handle interagency coordination. These include:

- Government Information Technology Service Board, which funds innovative information technology projects
- Chief Information Officers Council, which focuses on training individual agency information officers and sharing information on improvements in the design, applications, and shared potential of information technology
- National Partnership for Reinventing Government, an interagency task force established to spearhead civil service reform and increase

*The Port Authority spearheaded early e-government initiatives in Dubai to meet the needs of the business sector.*

*In the U.S., states and local governments have taken the lead in designing and implementing e-government programs. The federal role has been to set the legal base, provide political support, and invest in common infrastructure.*

the efficiency, transparency, and responsiveness of government agencies

- General Services Administration, which is responsible for overseeing government procurement and, through its Office of Government-wide Policy, identifying ways that federal agencies can share costs, systems, funding, and information through better use of information technology.

The reasons for adopting a decentralized model of e-government implementation are philosophical as well as practical and structural. **A decentralized approach emphasizes local control and soliciting good ideas from the widest possible talent pool.** The decentralized approach is also related to a political ethos that suggests that local officials are more sensitive to local concerns. This belief, widely held in the United States and Australia, suggests that the specific e-government services demanded at the state and municipal levels should be left to local decision makers. Decentralized e-government implementation is most appropriate for large countries with complex and multi-layered governments.

#### *E-Services and Applications Provided*

In general, most countries with e-government have aimed to provide a full range of G2C, G2B and G2G e-services and applications. However, differences exist in terms of the relative emphases within those categories, reflecting the start date for e-government initiatives, national priorities, feedback from users, and resource and technology limitations. Many countries such as the United Kingdom and Dubai, have just launched their programs, and are emphasizing fast-track projects.

In **Portugal**, for example, the overall emphasis is on providing a **full range of e-services to citizens**, reflecting the “birth-to-death” life cycle philosophy described in Chapter 2 of this report. There has also been an emphasis on improving government-to-government transactions. In most of the **U.S. states**, a similar emphasis on citizen services is evident, although **G2B has been emphasized**. This is a reflection of the thinking that benefits from these transactions are easier to document and more quickly realizable.

In the **United Kingdom, most e-Services are directed to G2B and G2C**. The overall goal is to have 100 percent of government services on-line by 2008. **Singapore has one of the most broad-based and integrated approaches**. Citizen services are provided through an innovative “eCitizen Center.” Additionally, a major emphasis has been placed on G2B (especially e-procurement). Unlike other countries, however, G2G transactions have also been a major strategic thrust of Singapore’s program.

**Dubai is at the very early stages of e-Government**, and only a limited set of government services are delivered electronically, although an

*Decentralized approaches to e-government is most appropriate for large countries with multi-layered governments such as the U.S. and Australia.*

*The emphases of e-services vary. Portugal, Singapore and UK have prioritized citizen services. In Dubai and the US, G2B has been emphasized in part because benefits can be realized quickly.*

ambitious G2G, G2C and G2B strategy has been announced. In Australia, on the other hand, a wide range of e-service programs exist that are aimed at all three groups.

#### *Relationship With Public Sector Reform Efforts*

International experience has shown that information technology cannot solve poor administrative practices. In the context of e-government, this implies that developing new IT systems must take into account procedural and administrative reforms. Merely putting inefficient or processes on-line does not generally improve the quality of government services.

In the countries studied for this report, public sector reforms were either already largely complete when e-government initiatives were launched, or e-government initiatives were carefully designed to act as a catalyst for creating changes. Additionally, the governments spent a considerable amount of time and effort on reorienting the attitudes of civil servants toward a facilitative, customer service-oriented mentality.

#### *Infrastructure and Technologies*

Another area where there are differences among countries is in terms of access and delivery technologies and infrastructure. While the overall goal of most e-government initiatives is to have a totally integrated network to provide e-services via multiple access devices and channels, this can only be achieved gradually over time.

In terms of “front-end” access devices and channels, Singapore, UK and Portugal have each created **single portals** that serve as a gateway to link users to individual government institutions and other related websites. Many of these portals target specific user populations and link government services related to a particular user need. For example, the United States, while pursuing the development of a single portal within the coming years, presently maintains three portals designed for students, senior citizens, and business.

Portugal has gone further by creating publicly available **kiosks** linked to its INFOCID portal, so that those without their own computers and Internet connections can also take advantage of the government’s on-line informational and processing services. The application of other access devices is limited; e-government services tend to predominantly web-based and accessible via the PC. In several countries, agencies are shifting from EDI-based systems to web-based systems, which are cheaper, more accessible and efficient.<sup>3</sup>

<sup>3</sup> A good example of this is the e-Mirsal customs documentation system being applied by the Dubai Ports Authority, which was previously EDI-based.

*In the countries studied, public sector reforms were either already largely complete when e-government initiatives were launched, or e-government initiatives were designed to act as a catalyst for creating changes.*

*Singapore, the U.K., and Portugal have created single, web-based portals to access e-services. Efforts are underway to do so in the U.S., Australia, and Dubai.*

Progress on integration of “back-end” technologies including government intranets, extranets, and integration of databases, also varies significantly from country to country. **Singapore** and **Portugal** are good examples of countries where integration has been most advanced, with significant cost savings and other efficiencies achieved. Many state governments in the United States—especially Washington, Kansas and Georgia—have made significant progress in network integration. But in most other countries, progress is uneven.

*Key success factors for e-government include high-level leadership, coherent vision, and strategies and ambitious, but attainable, targets.*

### 3.3 Lessons Learned and Implications for Jordan

#### *Lessons Learned*

The international experience documented above clearly shows that various approaches have been taken in the design and provision of e-government services. The lessons learned from other countries can guide Jordan in the development of its own e-government program. The most important of these are the following.

**High-level leadership must be visible and sustained.** Because e-government requires that both the government and the citizenry fundamentally change the way they interact with one another, a country’s top leaders must visibly articulate a vision and demonstrate support for the program. Leaders that state the need, goals, and benefits of e-government can help build a critical commitment to change. This has been demonstrated in the United Kingdom, United States, Singapore, and Australia, where top leaders made compelling economic arguments aimed at citizens and government workers to support the changes that e-government requires.

**A coherent vision with clear and attainable goals must be articulated.** Successful e-government initiatives have started with the definition of a coherent vision, clear goals and an action-oriented strategy. In Portugal and the U.S., for example, the vision included themes relating to information technology’s power to help **democratize society** and reclaim the instrument of government on behalf of the people. In Australia, the U.K., and the U.S. e-government was framed as a vehicle to **close the gap between rich and poor** and prepare future generations for more prosperous futures in a global economy.

All of the countries examined for this report announced clear and broad targets for implementing e-government. Singapore, for example, announced its Public Service On-line Initiative in 1998, stating, “Where feasible, all counter services will be available electronically by 2001.”<sup>4</sup> In the United States, the electronic service delivery target calls for public access to government documents and the option to submit all forms electronically by 2003. Such targets allow the public and civil servants a practical sense of the government’s expectations and timeline for e-

*Implementation must be coordinated with public sector reform efforts. E-government does not replace public sector reform efforts, but it can catalyze and facilitate those programs.*

<sup>4</sup> *Information Age Government: Benchmarking Electronic Service Delivery*, pg. 59. U.K. Information Technology Unit, July 2000.

government implementation. By setting broad targets and deadlines--such as promising that a certain percentage of services will be available on-line by a given date, the government has some flexibility in prioritizing and postponing more complicated electronic transformations.

**Implementation must be coordinated with public sector reform.** As mentioned previously, there is an inextricable link between public sector reform and implementation of e-government. E-government is not a replacement for systematic improvements of administrative capacities and procedures. Rather, it is a tool to facilitate those changes. International experience also suggests that carefully focused e-government efforts can catalyze broader reforms. For example, the Income Tax Department in Singapore, which was completely restructured following full implementation of on-line tax filings.

**E-government needs to be integrated with other social and economic policies—particularly to bridge the “digital divide.”** Most countries employing “best practices” have coordinated their e-government strategies with efforts to improve computer literacy among school age and disadvantaged populations such as the poor, disabled, and dependent elderly. The U.S. and U.K. governments have launched programs to lessen the digital divide between rich and poor by committing computer and internet resources to schools in poor areas. In Singapore, the government has paid for internet classes, e-mail addresses, and computer ownership for targeted groups so that no one would be left out of the country’s digital transformation.

**Use well-chosen fast-track or pilot projects to test and define the implementation strategy.** All of the countries studied for this report used fast-track or pilot projects to test their strategies for redesigning government services. Fast-track projects allow for a broad range of experimentation and, due to their limited scope, can be quickly launched. Fast-track projects also help convince skeptics of increased reliance on information technology, and demonstrate the demand for electronic delivery of government services. Singapore determined that fast-track projects should be focused on key stages of life of the average citizen. As a result, the country’s early initiatives focused on digitizing procedures related to:

- Obtaining a birth certificate
- Choosing schools
- Performing national service
- Seeking employment
- Establishing a business
- Retiring
- Traveling abroad

Some countries made the demonstrated cost savings a criterion for selecting fast-track projects. For example, Singapore conducted a fast-track project related to electronic filing of income taxes, based on estimates that significant cost savings could be realized. The theory

*E-government needs to be integrated with other development programs. Bridging the ‘digital divide’ is an especially important priority.*

*The use of fast-track projects to test and prove e-government concepts is critical to the development of a nationwide strategy.*

proved sound, and the government has reported cost savings of US\$ 30 million per year.

**Ensure that the e-government strategy caters to customer needs, without compromising traditional services.** Various governments have all employed strategies of soliciting both private and public sector input through formal and informal mechanisms. In cases where services are specialized, such as customs clearance in Australia and Dubai, a group of stakeholders, including freight forwarders, clearing agents, customs officials, importers, and exporters, were convened to work through the technical details of converting the clearance regime into an electronic system.

The need for traditional service provision must remain even as personnel and other resources are reorganized to support an increased reliance on information technology. In the United States, for example, the majority of the population does not have home access to a computer and some studies suggest that elderly and poor populations tend to become alienated or intimidated by relying on unfamiliar technology to obtain government services. In Australia and the U.S., many states have effectively introduced both electronic and traditional options for filing tax returns. To shift users from the traditional mode of filing tax returns, the governments publicize the fact that the electronic method offers quicker service.

**Develop a firm legal framework.** The long-term acceptance and success of e-government initiatives—especially in a developing country—depends on the credibility of the underlying legal and regulatory framework. Throughout the world, there exist concerns about the safety of electronic information transfer and storage. Governments must take strong measures to ensure that e-government is preceded by changes in legal systems to protect information and privacy in a digital age. Similarly, criminal codes need to be adapted to deter cyber-crime and extend definitions of theft to include stealing electronic data. Additionally, an appropriate balance must be struck between privacy and national security concerns.

**Sell the benefits of e-government to stakeholders.** The experience of other countries suggests that merely creating electronic government services is not always enough to encourage the public to use the new systems. E-government systems must be marketed to potential users, and institutions launching an electronic service should budget time and money for publicizing the new offering. Some countries have provided incentives for the use of electronic systems. In Australia and the United States, for example, taxpayers that opt for electronic processing get tax refunds more quickly than those who file taxes in the traditional manner. The United Kingdom offered a US \$14 tax break to encourage electronic filing, and Singapore has offered various incentives and subsidies to encourage individuals to purchase computers and obtain internet service.

**Build on the country's competitive advantages.** Increasingly, countries are launching e-government initiatives to enhance and develop

*An e-government strategy must reflect customer needs. But it should not compromise traditional delivery channels of government services.*

*An e-government strategy must establish a close partnership with the private sector, and build upon a country's competitive advantages.*

competitive advantages. For example, Singapore has built upon its strategic location as a logistics hub to become a regional center for IT. Dubai is doing much the same, emphasizing G2B e-commerce activities.

**Establish a close partnership with the private sector** A partnership between the private and public sector facilitates the delivery of e-government services. Reliance on the private sector for the design and delivery of e-services leverages and optimizes scarce government resources and fills skill and technology gaps. This approach has been an integral part of the U.S. e-government initiative—the National Partnership for Reinventing Government is a good example. In the United Kingdom and Australia, the private sector has had an equal role in developing strategies and delivering services.

### *Implications for Jordan*

This section summarizes the steps that Jordan must take to organize and launch its e-government initiative according to international best practices as discussed in this chapter.

The diverse and senior level composition of Jordan's e-government task force has set the tone required for leadership in Jordan. This leadership must remain sustained and consistent so that government can make the many changes required in order to improve services through increased use of information technology. Further, as the best practice models suggest **leadership must come from both the public and private sectors**. Jordan has the unique opportunity to closely tie its e-government initiative with the IT strategy set out in the REACH initiative, and **rely on the local IT sector for the design and delivery of e-services**.

Jordan's e-government strategy must be developed to **enhance Jordan's underlying comparative and competitive advantages**. In this context, the initial emphasis should be in e-commerce, e-procurement and other G2B activities, which can be implemented much more rapidly than G2C services, and for which there is a strong local business constituency.

As suggested in this report, a strong and well-coordinated **institutional and organizational structure needs to be established** to implement e-government in Jordan. This structure must embody a private-public partnership approach, with strong linkages to the government to implement change. At the same time, coordinating Jordan's e-government vision, goals, and activities will require the effective functioning of a variety of consultative bodies, including the National E-Government Task Force, Steering Groups, and Service/Produce Development Teams. These multi-agency and public-private consultative and technical bodies will be responsible for ensuring that **e-government initiatives complement other policy initiatives**.

Jordan's e-government initiative should be **well coordinated with its public sector reform program**. As both e-government and public sector reform efforts continue, it might be desirable to form process reform and

*The main implication for Jordan is that top-level leadership and a well-designed organizational framework are required to plan and launch e-government in the Kingdom.*

*Jordan's e-government strategy should be developed in partnership with the private sector, build upon the Kingdom's competitive advantages, and be coordinated with other development initiatives.*

information technology teams that can **simultaneously coordinate the streamlining of government procedures and designing management information systems** and user interfaces.

Given Jordan's presently low level of internet connectivity, **traditional service delivery options should remain available** and may also need improvement. As stated previously, an e-government initiative cannot replace civil service reform efforts, nor should it distract nor unduly draw away resources from improving regular services.

Jordan must rely on **carefully chosen fast-track projects** to test the implementation of e-government. These fast-track projects must clearly offer tangible benefits to both government service providers and business and citizen users. Participating government ministries and institutions should be selected for their readiness to introduced management and technical changes. Also, **e-government must be rolled out on a phased basis**.

The selection of the initial set of fast-track projects, and the eventual formulation of a comprehensive e-government strategy for Jordan, should incorporate **customer feedback mechanisms** that will assess the interest in on-line services and the level of satisfaction with service delivery.

Jordan has not fully examined the issues of technical and legal security. Various security-related technical and legal studies have been completed, but a comprehensive assessment of what needs to be done to ensure government and public comfort in e-government needs to be completed. Thus, Jordan should **commission a comprehensive study of legal and technical security measures** to advance e-government.

Finally, **much more needs to be done to explain the meaning of e-government to Jordanian citizens and civil servants**. Particularly because Jordan has adapted the "life cycle" model for e-government service provision, there are many different avenues to access potential users of new electronic services. The National E-Government Task Force should consider what messages need to be sent and through what avenues to communicate the "big picture" vision of e-government as well as the practical benefits that will be afforded to ordinary citizens.

*The choice of e-service applications should be guided by fast-track projects. E-government must be carefully phased. Traditional service delivery should remain available.*