E-Government in the Philippines: Benchmarking Against Global Best Practices*

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International ICT benchmarks verify the Philippine government's overall capacity to enhance citizen's access to government service and increase bureaucratic productivity. The Network Readiness Index (NRI) measures a country's potential to engage in the networked world. A similar undertaking, the ASEAN e-readiness survey, compartmentalizes ASEAN nations into four levels of e-development: emerging, evolving, embedding and extending. The Philippines is currently in the evolving stage in terms of e-government readiness. The World Market Research Center and Brown University Survey discovered that e-government practices around the globe are falling short of their real potential. The Internet's interactive capacities are not maximized due to incoherent economic, social and political infrastructures among nations. Overall, e-government in the Philippines can be enhanced by the presence of ICT champions, technological empowerment of the people, provision of adequate IT resources to local governments, reinvigoration of crucial frontline government services and continuous information education for the public.

Many Filipinos do not look forward to dealing with government. Many are frustrated with the bureaucracy and its myriad agencies handling different functions. A recent survey of business executives rated the Philippines "as having a pattern of worsening bureaucracy."[1] The bureaucracy is seen not only as ineffective, but also wasteful. According to a United Nations study on public administration in the Philippines, public opinion generally regards bureaucrats as not honest, not transparent and not neutral.[2] Mahar Mangahas of Social Weather Stations reports that "in the past decade and a half, corruption has been the second-most common subject of public dissatisfaction with government, after government failure to control inflation."[3]

While many efforts have been initiated to make government services more user-friendly and more effective and efficient, many of these initiatives have been less than successful.

In other countries, Information and Communication Technology (ICT) is being deployed to make government more effective, efficient, and transparent. ICT is not only helping make better governments but also providing citizens more information on their governments. Leaders in the e-government movement are demonstrating that by combining technology with new ways of operating, government can be much more effective and responsive to citizens.

What is e-Government?

E-Government refers to the use by government agencies of information and communication technologies (ICT) that have the ability to transform relations with citizens, businesses, government employees, and other arms of government in the delivery of services. For the World Bank, it is the use of ICT to improve the efficiency, effectiveness, transparency, and accountability of government.[4]

E-Government is the use of electronic media in the facilitation of government processes. It covers a wide range of applications making use of multi-media broadcasting, radio networks, computer networks, mobile phone communication technologies, and other similar electronic devices.

Internal information systems of government agencies, information kiosks, automated telephone information services, short messaging systems (SMS) services and other systems all comprise e-Government services. All of these are Information and Communications Technologies (ICTs) applications to improve the services of the government towards its primary clients: the citizens.

Singapore's Government Electronic Business Centre (GeBiz), set up in June 2000 to simplify government procurement and tender activities, exemplifies e-Government. With this integrated, web-based e-procurement system, suppliers and tender bidders enjoy a broader access to government tenders and quotations. Public sector agencies also enjoy the benefits of making electronic purchases of commonly-used items from shared period contracts. Singapore is currently developing one-stop services which make it easier for businesses to deal with government, whether it is registration of businesses, application of building plans in the construction industry, or even getting public entertainment licenses from the relevant authorities from a single website. These e-services will result in significant time

savings: the time taken for incorporating a company will be reduced from four days to one day, while the time taken for processing a public entertainment license will be cut from eight weeks to 14 days.[5]

In examining e-Government, it will be useful to distinguish between an Internal ICT application and a Front-line ICT application for e-Government. Thus, e-Government may be classified according to where the ICT solution is applied. With respect to any government agency, there are *Internal ICT applications* and *Front-line ICT applications* for e-Government.

Internal ICT applications for e-Government are solutions for streamlining in-house processes. Processes such as data encoding, file retrieval, document processing, data transfer, and other administrative tasks all exist in a government agency. These tasks may be accomplished more efficiently through the introduction of ICT solutions.

Internal ICT applications may further be categorized as Government-to-Employee (G2E), or Government-to-Government (G2G).

G2E includes services such as internal information on demand, reports via laptop or Palm, information systems for timing-in and checking of attendance, on-field data-logging and remote data uploads and downloads.[6] Examples of G2G are inter-office teleconferencing, Wide Area Networks (WAN) for geographically displaced offices, centralized clearance, licensing or accreditation from various offices.

Front-line ICT applications for e-Government act as interface between the Government and Citizens or Businesses. Front-line ICT applications interact or transact with the Citizen via electronic media.

Front-line ICT applications may also be categorized as either Government-to-Citizen (G2C), or Government-to-Business (G2B).

G2C services are all services wherein the citizens interact with the government through ICT. These include information or transactions accessible via websites, processing of applications via kiosks, agency hotlines or call centers, online voting or council meetings, government payments with commercial banks, application status updates via landline or mobile phone, and the like.

Through Singapore's e-citizen portal (www.ecitizen.gov.sg), Singaporeans are able to access about 540 government services pertaining to business, health, education, recreation, employment, and family. The e-citizen portal is divided into categories based on the real-life needs of every individual, with every single ministry and statutory board providing e-services through the same portal. Singaporeans now have a one-stop access to government services without having to navigate through the bureaucratic jungle. A few of the popular e-services offered are: submitting application forms for purchase of apartments, searching for school information, employment search, career development, and voter registration.

CVISNET – Central Visayas Information Sharing Network (www.cvis.net.ph) "aims to promote and enhance the development of information and communications technology in the Region 7 through the establishment of a common exchange hub that will interconnect all government and non-government agencies through the Internet." Established in 1998, CVISNET assembles different services and information relevant to Region 7. There are online services such as news, relevant information about the region, and an e-mail service for the CVISNET community. It has an Information Center that provides links to government sites, non-government organization (NGO) websites, regional reports, statistics, business guides, investment and industry info, directories, schools, municipalities and barangays in the region. It brings together various government services, too. Local price watch, business application forms, investor's guide, as well as forms required by government are available through the web. The e-Procurement link connects to the Procurement Service. There are health statistics and news provided by the Region 7 DOH office. The National Economic and Development Authority (NEDA) Region 7 office posts its project monitoring reports on the CVISNET website. CVISNET is also connected to BARANGAY.NET – a community-based project that aims to develop and implement a flexible, local approach to community development using information and communications technology (ICT) to promote connectivity, access, capacity building, and content creation. It also serves as a gateway for a number of NGO sites in the region.

G2B, on the other hand, refers to ICT-enabled trade or services between government and business. An example is the Philippines' Electronic Procurement System (EPS), also known as e-Procurement (http://www.procurementservice.net). EPS currently serves as the official system

for public bidding opportunities by the Philippine government. Eventually, the system will be extended to support other aspects of the procurement process including direct purchases, bid submissions, central accreditation, and payments.

The key difference between Internal and Front-line ICT applications is whether the application is directly accessible to the public. Front-line ICT applications are interfaces between the government, its citizens and other relevant publics. These applications should be readily accessible and easy to use. Internal ICT applications are mechanisms within the agency that make their internal processes more efficient. It is possible for an agency to have a state-of-the-art Internal ICT infrastructure but very poorly implemented Front-line ICT interface. On the other hand, a good Front-line ICT interface is an indication of a fairly sophisticated back-end infrastructure able to deliver good quality Front-line services.

E-Government is a tool by which limitations of time, distance, and cost are reduced, thereby enhancing citizens' access to government services. Citizens will no longer have to wait in line to claim birth certificates, licenses or visas. Citizens will have better access to public government information such as application requirements, study and employment opportunities, policies and regulations. The availability of these services will be extended outside the brick-and-mortar office and beyond the eight-hour workday of the government agency.

E-Government initiatives also contribute to citizen empowerment by making information about government processes and decisions easily available, and allowing information-sharing among people and organizations, and between citizens and the civil service.[7] Well-informed citizens are better able to hold their governments accountable. Thus, governments are compelled to improve the quality of services, expand accessibility of these services, and increase responsiveness to their constituents.

Many Government services rely on information passed among different offices within a department or across departments. The large amount of information and paperwork required results in an environment ripe for red tape, an inefficient bureaucratic workforce, and ineffective delivery of services. With ICT, both the government bureaucracy and citizens are winners in the battle against the paper trail. E-Government, through the integrated operations of government agencies, allows the wealth of

knowledge and data exchange to be more easily accessed (whether public or secure) by the appropriate offices or individuals, thereby reducing redundancies of information flows, and resulting in overall increased productivity.

Integrating the operations of government agencies also improves transparency in government. E-Government minimizes redundancies in information flow, eliminates duplications of functions, and improves adherence to proper government procedures, thereby reducing opportunities for corruption. This, matched with a well-informed citizenry, will help reduce the bureaucracy's dalliances with corruption and will help lead to a higher sense of accountability among government officials.

ICT and the Philippine Government

Computerization in the Philippine government dates back to 1971 when the National Computer Center (NCC) was established by Executive Order (EO) 322.[8] In 1978, NCC was designated the primary agency in the government with the responsibility of directing IT use for national development and rationalizing computerization in the country. Its functions include technical and professional IT assistance to national and local government agencies, the IT industry, SMEs, and civil society.

In 1994, the National Information Technology Council (NITC) was created and designated as the central policy body on ICT matters in the country (through E.O. 190). NITC was later reorganized on February 23, 1998 (E.O. 469) as the highest planning and policy advisory body on IT matters. In 1999, the NCC was tasked to provide NITC with professional and technical support.

In 1998 the government launched IT21 which outlines the country's action agenda for the 21st century. The plan promotes e-governance and encourages the outsourcing of government ICT projects to stimulate industry growth. That same year, the Electronic Commerce Promotion Council (ECPC) was created in recognition of the country's need for a coordinating body to enhance public-private partnerships to promote and develop e-commerce in the Philippines.

An important milestone for ICT development in the Philippines and for e-Government in particular is the enactment of the e-Commerce Act

(Republic Act 8792) in June 2000. This law defines the Philippine government's policies on electronic transactions and provides the legal framework for enabling the country to engage in e-commerce. It also mandates government online by June 2002. While the e-Commerce law also gives NCC a role in policy planning and implementing the e-Commerce policies, it was the Department of Trade and Industry that was designated as the lead government agency in promoting and developing e-commerce in the country.

In July 2000, a Government Information Systems Plan (GISP) was approved and adopted as a framework and guide for all computerization efforts in government (EO 265). The GISP aims to create a system of governance that will lead to:

• Faster and better delivery of public goods and services;

• Greater transparency in government operations;

• Increased capacities of public sector organizations, and

• Proactive participation of citizens in governance.

The GISP was to be implemented in three phases: Phase 1 - Setting Up the Enabling Environment; Phase 2 - Building the GISP Information Infrastructure; and, Phase 3 - Sustaining GISP. Phase 1 was envisioned to be completed within 5 years of the plan's adoption (or 2005).

Also in July 2000, the Information Technology and Electronic Commerce Council (ITECC) was created out of the merger of the NITC and ECPC. ITECC was placed under the Office of the President, with the Department of Trade and Industry Secretary as Chairman. The creation of ITECC recognized the need to ensure a more streamlined and focused formulation and implementation of ICT policy. ITECC was also designated as the central policymaking and coordination body for the implementation of the GISP. In 2001, ITECC was reorganized with the President replacing the DTI Secretary as ITECC chair. The DTI Secretary and a private sector representative were both designated as co-chair.

ITECC has an e-Government committee that is looking into developing Online Government Frontline Services, e-Commerce Act Compliance, and the Development of a Government Portal. The committee is also reviewing the charter of the NCC.

Among the policy changes that the ITECC is promoting is the establishment of a Department of Information and Communications Technology (DITC). The creation of a DICT is seen as crucial in developing and promoting a policy and legal environment, as well as an effective and efficient regulatory regime that will help shepherd the Philippines to the forefront of the global information economy.

Despite the Philippines's early start in computerization, its foresight to identify the crucial role ICT will play in the country's development, and the accompanying progress made in various government ICT policies and initiatives, many of our neighboring countries have overtaken the Philippines in the use of ICT in government.

In the following section, this paper will discuss the relative position of the Philippines against the world's and the region's best in e-Government.

Table 1. **Philippine ICT Agencies**

Philippine ICT Bodies	
1971	NCC established by E.O. 322
1978	NCC as primary agency to direct IT use in gov't & computerization by P.D. 1480
1994	NITC created by E.O. 190
1998	ECPC created by E.O. 468
1998	NITC given additional functions via E.O. 469
1999	NCC designated technical arm of NITC via E.O. 125
Mar 2000	NCC moved to DoST via E.O. 222
July 2000	ITECC created by merging NITC and ECPC
May 2001	ITECC re-organized, President as Chair

Are We Ready for the Networked World?

The Networked Readiness Index (NRI) was developed by the Center for International Development (CID) of Harvard University as a global framework to map out the factors and dimensions that contribute to the capacity of countries to exploit the opportunities offered by information and communications technologies.[9] The NRI is a summary measure that focuses on the overall level of ICT development in countries (Figure 1). It is a measure of a country's preparedness and potential to participate in the networked world. The NRI distinguishes between the factors that determine the usability of the Network and the variables that reflect the extent of Network use. This study evaluated 75 countries, representing 80 percent of the world population and more than 90 percent of the world's economic output.

The NRI's top ranking countries are the United States in 1st place, Iceland ranking 2nd, Finland and Sweden slightly further behind, followed by Norway and the Netherlands (Table 1). Another Northern European country, Denmark, ranks 7th, followed by Singapore in 8th, Austria in 9th and the United Kingdom in 10th place.

In the NRI, Singapore is the best-ranked Asian country (ahead of HK at 13th, Taiwan at 15th, Korea at 20th, and Japan at 21st place). Malaysia, ranked 36th overall, is the second highest ASEAN ranked country. Thailand is 43rd, Philippines is 58th, Indonesia is 59th, and Vietnam is at 74th. India is in the bottom third of the overall NRI with its global ranking of 54th.

As indicated in Figure 1, NRI is composed of two component indexes— the Network Use Component Index and the Enabling Factors Component Index. The Network Use Component Index is a straightforward measure of the extent of ICT proliferation in a country. It consists of five variables: internet users per one hundred inhabitants; cellular subscribers per one hundred inhabitants; internet users per host; percentage of computers connected to the Internet, and availability of public access to the Internet. In Network Use Component Index, the top seven ranked countries are: Iceland, the United States, Finland, Norway, Sweden, the Netherlands, and Denmark. Table 2 shows Singapore leading the ASEAN pack, with the Philippines second to last.
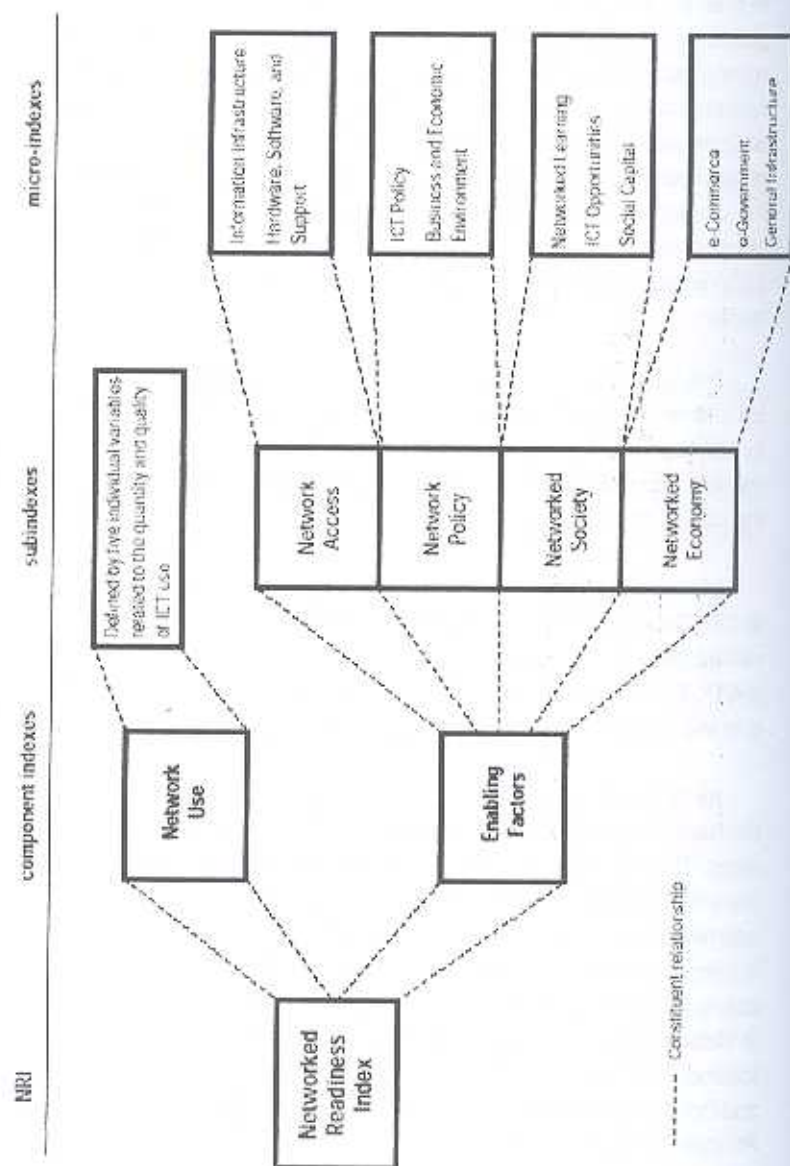
Figure 1. Network Readiness Index

Table 2: **Networked Readiness Index**

Top Ten Countries	Networked Readiness Index	Rank
US	6.05	1
Iceland	6.03	2
Finland	5.91	3
Sweden	5.76	4
Norway	5.68	5
Netherlands	5.68	6
Denmark	5.56	7
Singapore	5.47	8
Austria	5.32	9
United Kingdom	5.31	10
ASEAN Countries		
Malaysia	3.82	36
Thailand	3.58	43
Philippines	3.27	58
Indonesia	3.24	59
Vietnam	2.42	74

The Enabling Factors Component Index reflects the preconditions for high quality Network Use, as well as the potential for future Network proliferation and use in a given country. There are four sub-indexes that make up Enabling Factors: *Network Access* (i.e., extent and quality of information infrastructure and hardware, software and support); *Network Policy* (i.e., ICT policy and business and economic environment); *Networked Society* (i.e., networked learning, ICT opportunities and social capital); and *Networked Economy* (i.e., e-Commerce, e-Government and general complementary infrastructure).

In the NRI ranking of Enabling Factors, the top five ranked countries are: Finland, the United States, Sweden, the Netherlands, and Iceland. Singapore again leads among ASEAN countries, with the Philippines in fourth place — behind Malaysia and Thailand, and ahead of Indonesia and Vietnam. India does better in Enabling Factors Component Index (49th overall) than in the Network Use Component Index (60th place).

The NRI looks at e-Government as part of the Networked Economy Sub-index. In this study, e-Government is measured in terms of: 1) government effectiveness in promoting the use of ICTs; 2) availability of online government services; 3) extent of Government websites; and, 4) business Internet-based transactions with government. Singapore is the global leader in e-Government with Estonia in fifth place (see Table 4).

Table 3. NRI Component Indexes

Network Use	Rank	Enabling Factors	Rank
Top Five Countries			
Iceland	1	Finland	1
United States	2	United States	2
Finland	3	Sweden	3
Norway	4	Netherlands	4
Sweden	5	Iceland	5
ASEAN Countries			
Singapore	8	Singapore	11
Malaysia	35	Malaysia	38
Thailand	54	Thailand	40
Indonesia	61	*Philippines*	53
Philippines	63	Indonesia	57
Vietnam	74	Vietnam	72

Hong Kong and Taiwan are tied at seventh place and the US is tied with Denmark at ninth overall. India is at 33rd, ahead of five other ASEAN countries in the study. Among ASEAN countries, the Philippines is ranked 57th behind Thailand (41st) and Malaysia (45th), and ahead of Indonesia (62nd) and Vietnam (65th).

It is important to note that while the NRI provides important evidence for relative levels of Networked Readiness, there are inherent limitations that stem from using the nation-state as the basic unit of measure. The NRI will not capture the wide internal variation in a huge country. The NRI effectively penalizes huge countries like India for its size, scope and scale of its many social and economic development challenges, and the smaller degree of IT penetration.[10] Smaller countries like Ireland and Singapore tend to rate better.

The NRI is an indicative measure aimed at helping business leaders and policymakers understand the myriad of factors contributing to ICT advancement. The various dimensions of the NRI can be extracted by these leaders to address the many concerns and issues that hinder ICT development, and, for that matter, overall economic growth.

Table 4: e-Government

	Rank
Top Five Countries	
Singapore	1
Finland	2
Iceland	3
Sweden	4
Estonia	5
ASEAN Countries	
Thailand	41
Malaysia	45
Philippines	57
Indonesia	62
Vietnam	65

Global e-Government Survey

In 2001, the World Markets Research Centre and Brown University conducted a survey of government websites worldwide. This is the first of an envisioned annual survey of government websites by the said institutions.

A total of 2,288 government websites in 196 nations were reviewed to determine common features, as well as those features that stood out among the rest. Ultimately, the websites were evaluated for the presence of 28 distinct features in relation to information availability, service delivery, and public access. Some of these features include:

- Phone contact information, addresses;

- Publications;

- Databases, links to other sites;

- Audio clips, video clips;

- Not having advertisements, not having user fees;

- Having privacy policies, security policies;

- Having online services, having a portal connection;

- Allowing digital signature on transactions;

- Options to pay via credit cards, and

- Search capabilities, areas to post comments, broadcasts of events.

The study's general conclusion is that "e-government is falling short of its true potential." This study emphasizes that while countries have embraced e-Government, most of the countries surveyed have not taken advantage of the interactive features of the Internet, which would facilitate communication between citizens and government agencies. As a result, these websites have been found to lack dynamism and robustness, failing to capture the potential of ICT to enhance democracy.

The top ten countries in the survey are the United States, Taiwan, Australia, Canada, UK, Ireland, Israel, Singapore, Germany, and Finland (Table 5). In the top twenty countries, there are eight European countries and three Asian countries. The Philippines is ranked 52nd in the survey, behind Malaysia and ahead of Vietnam, Brunei, and Thailand. India, the Philippines's deemed competitor for ICT services outsourcing, is ranked 69th.

The Global e-Government Survey also looked at Online Services. In this study online service is narrowly defined as those services which were fully executable in the website. In other words, if a service required that an application form be sent via traditional mail, then it was not counted as an online service.

Of the 196 countries analyzed, Taiwan came out on top as the country with the most number of government websites which offered services that could be fully executed online (Table 6). Taiwan is followed by Germany with 59 percent of its government services fully executable online. The other Asian country to rank in the top ten is Singapore at 47 percent. The United States comes in ninth place at 36 percent.

Aside from the assessment of government websites, the study also documents other factors, such us the presence of publications and databases, privacy and security policies, as well as disability access.

Table 7 shows Individual Country Profiles ranked according to the presence or absence of the features mentioned above.

Table 5. **Top e-Government Countries**

	Percentage Score	Rank
Top Ten e-Government Countries		
US	57.2	1
Taiwan	52.5	2
Australia	50.7	3
Canada	49.6	4
UK	47.1	5
Ireland	46.9	6
Israel	46.2	7
Singapore	44.0	8
Germany	40.6	9
Finland	40.2	10
ASEAN Countries		
Malaysia	39.0	16
Philippines	32.8	52
Vietnam	32.8	53
Brunei	32.7	56
Thailand	30.8	71
Indonesia	30.0	88

Table 6. **Individual Country Profiles for Online Services**

Country	Publications	Databases	Privacy Policy	Security Policy	Handicap Accessibility
Top Five Countries					
US	98	90	81	56	37
Taiwan	100	87	17	22	0
Australia	100	85	96	54	23
Canada	100	72	79	14	7
UK	100	67	7	0	7
ASEAN Countries					
Singapore	95	53	5	0	0
Malaysia	84	48	0	0	0
Japan	94	72	6	6	0
Philippines	100	56	0	0	0
Vietnam	100	20	0	0	0
Brunei	100	100	0	0	0
Indonesia	87	52	0	0	0
Thailand	100	41	6	0	0

Table 7. **Individual Country Profiles for Selected Features**
(as a percentage of the country's visited websites containing the feature)

Country	Publications	Databases	Privacy Policy	Security Policy	Handicap Accessibility
Top Five Countries					
US	98	90	81	56	37
Taiwan	100	87	17	22	0
Australia	100	85	96	54	23
Canada	100	72	79	14	7
UK	100	67	7	0	7
ASEAN Countries					
Singapore	95	53	5	0	0
Malaysia	84	48	0	0	0
Japan	94	72	6	6	0
Philippines	*100*	*56*	*0*	*0*	*0*
Vietnam	100	20	0	0	0
Brunei	100	100	0	0	0
Indonesia	87	52	0	0	0
Thailand	100	41	6	0	0

Among the recommendations of the global e-Government study are:

• Central government needs to undertake more work to upgrade e-Government;

• Countries should create government portals that serve as the gateway to a particular country's website and offer a 'one-stop' web address for online services;

• A feedback mechanism should be included in government websites to further enhance public accountability; and

• Government should undertake steps that allow for digital signatures so that online transactions can be made through the use of a credit card.

ASEAN's e-Readiness

As part of its efforts to prepare the states of Southeast Asia for the information age and competitively position them in the global new economy, the ten-member Association of Southeast Asian Nations (ASEAN) launched the ASEAN e-Readiness Survey. The ASEAN Secretariat and IBM

Global Services conducted the study with the aim of determining each member-state's preparedness for the information age.

Each member-state was measured for e-Readiness based on the five main components of the e-ASEAN Framework Agreement: e-Society (i.e., home and business users, education, workforce, localization and public access points); e-Commerce (i.e., current environment, taxation, legal framework, payments and physical distribution); e-Government (i.e., penetration, use type, organization and promotion); ICT Infrastructure (i.e., communications infrastructure, Internet access services, end user devices and affordability); and Liberalizing Trade in ICT Goods and Services.

The methodology defined four stages in the development of an information economy – Emerging, Evolving, Embedding, and Extending (see Table 8). This classification was used to determine e-Readiness levels among the ASEAN members.

As expected, Singapore led in all aspects of e-Readiness, followed closely by Malaysia (Figure 2). ASEAN's economies in transition were classified in the "emerging" stage of ICT readiness. Under the "emerging" and "evolving" stages, the study clustered those countries with similar readiness levels in order "to identify their common challenges and potential focus areas".

Table 8. **Stages of the Information Economy**

Key Characteristics of 4 Stages of the Information Economy	
Extending	• Very high penetration of communication infrastructure (power, fixed line, cable TV, cellular)
	• Broadband Internet access services gaining popularity
	• Very high penetration of terminal devices (PC / cellular phone)
	• Liberalized market condition for communication and ISP sector
	• Key Indicators: Teledensity > 40%, PC penetration > 20%
Embedding	• High penetration of communication infrastructure (power, fixed line, cable TV, cellular)
	• High penetration of terminal devices (PC / cellular phone)
	• Mostly liberalized market condition for communication and ISP sector
	• Key Indicators: Teledensity 20-40%, PC penetration 5-10%
Evolving	• Moderate to low penetration of communication infrastructure (power, fixed line, cable TV, cellular)
	• Moderate to low penetration of terminal devices (PC / cellular phone)
	• Mostly liberalized market condition for communication and ISP sector
	• Key Indicators: Teledensity 5-10%, PC penetration 2-5%
Emerging	• Low penetration of communication infrastructure (power, fixed line, cable TV, cellular)
	• Low penetration of terminal devices (PC / cellular phone)
	• Generally closed market condition for communication and ISP sector
	• Key Indicators: Teledensity < 5%, PC penetration < 1%

Figure 2. Overall e-Readiness
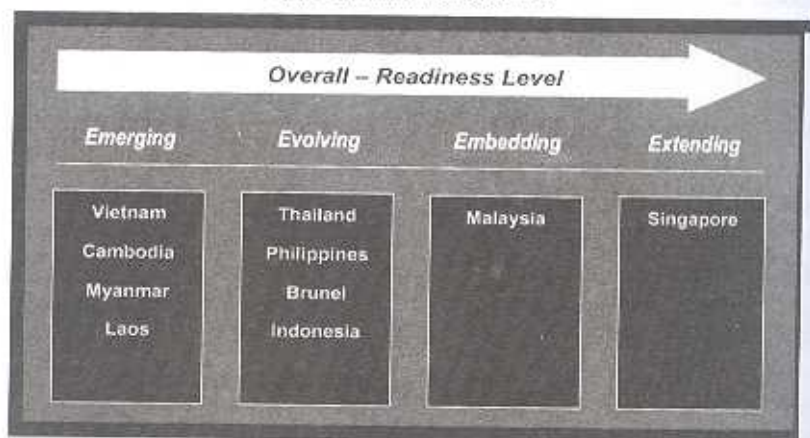
The ASEAN e-Readiness study emphasizes the key role that ICT can play as an engine of growth for the region. To improve the overall readiness of the region as a whole, and of individual ASEAN member-states, five recommendations are put forth by the study:

* Improve connectivity by building a robust common regional architecture in order to increase access and lower costs and strengthen one's legal and regulatory framework;

* Enhance human capacity development by focusing on education and knowledge sharing, and promoting local content and applications;

* Encourage a pro-competitive policy and regulatory environment with a view to generating self-sustaining growth in order to achieve development goals;

* Regularly share progress with the region towards the goals of e-ASEAN using the ASEAN e-Readiness assessment, and

* Exhibit leadership in promoting and using ICT for the attainment of government objectives in efficient service delivery.

The study also evaluated the ASEAN countries according to e-Government readiness. Using the e-ASEAN Framework Agreement, e-Government readiness of each country was measured in terms of penetration, use type, and organization.

The e-Government Characteristics and Readiness Levels are presented in Table 9.

Once again, Singapore was recognized as the region's leader in e-Government, with Malaysia and Thailand under the "embedding" stage (Figure 3). The Philippines was identified as belonging to the "evolving" stage. Specifically, the Philippines was found to be in the following stages in each of the e-Government Categories:

Figure 3. e-Government
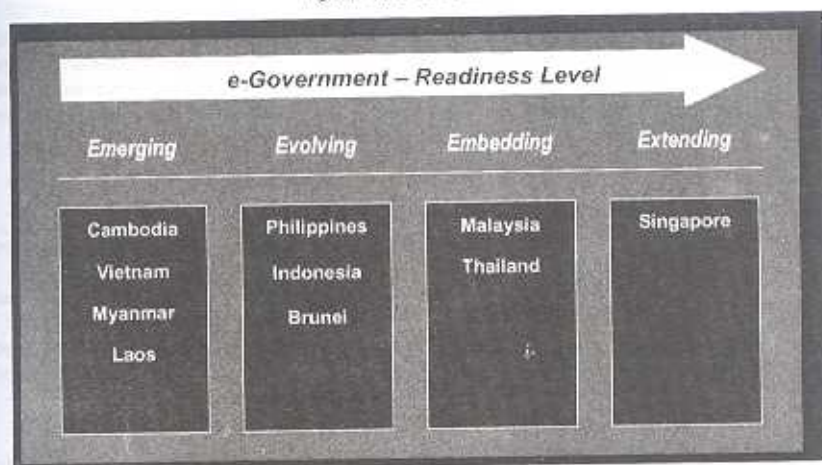
- In e-Government Penetration, the Philippines was classified as "Emerging due to very low PC and Internet penetration in government".

- In e-Government Use Type, the Philippines was classified as "Evolving" as characterized by the government's use of the Internet mainly for e-mail and the moderate proportion of government departments that have websites. Of those websites, only a moderate proportion of services are provided online.

- In e-Government Organization, the Philippines was classified by the study as "Embedding" particularly because of the existence of a separate ICT ministry

The ASEAN e-Readiness study further asserts that infrastructure development (including PC and internet penetration) in government is a

Table 9. **Key Characteristics and Challenges of e-Government**

Key Characteristics		Key Challenges
Extending	• Very high PC and Internet penetration in government • Government uses Internet for providing citizen services, internal work processing and e-commerce • Very high proportion of government departments have websites, with high proportion of services online • Separate ICT ministry	• Reduce complexity for the citizen / business client • Improve quality of online services • Improve use of ICT for government transformation
Embedding	• Moderate / high PC and Internet penetration in government • Government uses Internet for providing citizen services and internal work processing • High proportion of government departments have websites, with moderate proportion of services online • Separate ICT ministry / department	• Develop roadmap to describe transformation strategies • Gain executive buy-in and management of transformation • Increase government web presence and utilization in service delivery
Evolving	• Moderate / low PC and Internet penetration in government • Government uses Internet mainly for e-mail • Moderate proportion of government departments have websites, with moderate proportion of services online • Separate ICT department	• Develop roadmap to describe transformation strategies • Gain executive buy-in and management transformation • Increase government web presence and utilization in service delivery

prerequisite for the advancement of the e-Government agenda. Although infrastructure development will require a substantial budgetary allocation, eventually, this will translate to reduced operational costs and increased over-all productivity.

Finally, the formation of an ICT Department or Ministry has been identified by the study as pivotal not only for the effective implementation of e-Government, but to lead the country in harnessing the potential of ICT towards economic growth.

It is noteworthy that Thailand and the Philippines are ranked closely in the Networked Readiness Index, Global e-Government Survey, and the ASEAN e-Readiness study.

In the NRI study, Thailand rates ahead of the Philippines. Even with such similar physical and legal and regulatory infrastructure in ICT, the difference appears to lie in the Enabling Factors Component Index. As the other half of the measurement of Networked Readiness, Thailand can be inferred to have scored better than the Philippines with regard to the sub-index *Networked Society*, which relates particularly to the presence of networked learning, social capital, and ICT opportunities.

The Philippines is rated ahead of Thailand in the Global e-Government Study. Given that this study focuses only on government websites, the ranking of the Philippines ahead of Thailand can be mainly attributed to the fact that the Philippines's websites are in English. According to the Brown University study, English is the language of e-Government, with 72 percent of national government websites evaluated having an English version, and only 28 percent without. On the other hand, the Brown University rating of e-Government is based solely on information and features found in websites. Other aspects of e-Government such as internal Information Infrastructure of agencies, services via telephone or mobile phone, Information Kiosks and other ICT-enabled government facilities are not taken into account to determine e-Government progress.

In the ASEAN study, Thailand and the Philippines are ranked similarly given their similar levels in PC and Internet penetration in government, the use of Internet for providing citizen services, internal work processing and e-commerce development.

These alternating rankings of Thailand and the Philippines can be explained by the differences in coverage, methodology and measuring instruments of the three studies, as summarized in Table 10.

Upon closer inspection of the rankings of Thailand and the Philippines in the various studies, it can be inferred that Thailand's internal ICT e-government infrastructure is better evolved. But the Philippines has implemented more frontline e-Government websites.

e-Government in the Philippines

In order to deepen our understanding of the country's level of e-Government readiness, the Digital Philippines Foundation (Digital Philippines) has been examining Philippine government websites since September

Table 10. **Comparing the Studies**

	Coverage	Strength of Study
Networked Readiness Index	• 75 countries	• Use of Enabling Factors Component Index to measure potential in Networked Readiness, and not only actual Network Use
Global e-Government Survey	• 196 countries • 2,288 government websites	• Global comparison of government services available on the Web
ASEAN e-Readiness Report	• 10 ASEAN Countries • Both internal and front-line ICT applications	• Evaluation of Internal ICT applications/ infrastructure • Evaluation of Policy & Regulatory aspects

2001. To complement this desk study, Digital Philippines also held a members-only seminar on November 29, 2001 entitled "Facilitating e-Government - Case Studies on Private-Public Partnerships." This seminar discussed private sector-led endeavors in e-government services and discussed the various issues, problems and barriers related to facilitating and implementing e-government in the Philippines.

From September to November 2001, in February 2002, and then in April 2002 national government websites were evaluated by Digital Philippines using the "Five Stages of e-Government" - developed by the United Nations and the American Society of Public Administration (UN-ASPA). These five categories measured a country's e-government progress.

Digital Philippines examined 140 national government websites. The initial list of government websites was compiled using various Internet directories and search engines. The list was later expanded by referring to the Philippine portal www.gov.ph, under the "Government Links" page. Digital Philippines examined these websites using specific indicators based on the UN-ASPA categories of e-government to assess the selected websites. (See Table 11).

Digital Philippines chose to evaluate government websites to gain an understanding of the prevalence of e-government in the country. While

Table 11. **UN-ASPA Five Stages of E-Government**

STAGE	UN-ASPA Stage Description	Specific Characteristics / Features to look for
One	**Emerging Web Presence** • Sites serve as a public information source • Static information on the government is provided • FAQs may be found • Contact information is provided	☐ Telephone Numbers ☐ Postal Address ☐ Email Address ☐ Services Offered ☐ Mandate, Org Structure, FAQs, Related RAs
Two	**Enhanced Web Presence** • Access to specific information that is regularly updated • A central government homepage may act as a portal to other departmental sites • Useful documents may be downloaded or ordered online • Search features, e-mail and areas for comments are accessible	☐ Updated in the past 1.5 months ☐ Forms are available (html, word; sometimes zip, pdf) ☐ Search function / Site Map ☐ Message Board / Feedback Form ☐ Newsletters or Publications / Purchase Information
Three	**Interactive Web Presence** • A national government website frequently acts as a portal • Users can search specialized databases • Forms can be downloaded and/or submitted online • Secure sites and passwords begin to emerge	☐ Downloadable Forms (pdf, zip) ☐ Specialized Databases ☐ On-line Forms Submission ☐ Interactive Elements e.g. Chatroom / Forum / Discussion Board ☐ User Log-in and Password (internal use or public)
Four	**Transactional Web Presence** • Users will be able to conduct complete and secure transactions online • The government website will allow users to customize a portal in order to directly access services based on specific needs and priorities • Sites will be ultimately secure	☐ Public User Log-in and password (NOT exclusive for internal use) ☐ Secure[1] ☐ On-Line Payment ☐ Confirmation of request (e-mail confirmation / acknowledgement receipt) ☐ Display of Security and Privacy Policy
Five	**Fully Integrated Web Presence** • Country provides all services and links through a single central portal • No defined demarcation between various agencies and departments • All transactional services offered by government will be available online	☐ All Department Information and Services may be accessed through the Department Portal ☐ Cohesive interface covering all attached agencies, concerned agencies and all services ☐ Frontline Services are fully-transactional online ☐ User may Customize his Department Portal page ☐ Search Engine Encompasses attached websites

[1] Secure = padlock or solid key security icon appears at the bottom of browser; URL starts with https instead of http

Reference: Secure Sockets Layer http://www.webopedia.com/TERMS/SSL.html

websites are easier to study than other types of e-government implementations, it also the easiest to implement and has an enormous impact. Government websites are a new mechanism for delivering basic services to the public. In addition, government websites are the first interface between the Philippines and a number of relevant publics. The quality and sophistication of these government websites leave an indelible impression and perception of credibility for the Philippines as a tourist destination, investments hub and an ICT services and manufacturing center.

It is also important to note that the presence of a sophisticated or useful website does not imply the presence of a good back office. A number of government agencies that have developed good internal ICT applications for e-Government may not have a good Front-line ICT application. But a good back office makes the website more useful to the public.

In sum, Digital Philippines discovered the following:

* There is no "transactional" government website;

* About 14 percent of the agency websites were unreachable;

* About a quarter (24 percent) of these websites can be considered rudimentary;

* A significant number (42 percent) of the government websites are at stage 2, "enhanced web presence"

* Only 19 percent of the Philippine government websites studied can be considered "Interactive"

It also noteworthy that these Philippine government websites do not have a common 'look and feel'. Equally notable is that there are no common features in these websites and they do not explain their privacy and security policies. The lack of commonality is probably due to the fact these websites were created upon the initiatives of the respective agencies without guidelines from the relevant government agency.

The detailed results of the study are presented as follows:

Stage 1 - Emerging

Stage 1 websites have static information such as contact telephone numbers, office addresses, agency mandate, related laws, memos and orders. Some of these websites are amateur and some are extremely out of date.

Stage 1 websites are likely to be developed by employees of the agency. The quality of the website does not reflect the skills of a professional web developer.

For a Stage 1 website to develop into a higher stage, web developers and the agency should evaluate the existing processes and services of the brick and mortar office.

Some of the questions to consider:

1. What information is often sought at the Agency's Information Desk? This information must be made available on the Website.

2. What are the existing publications of the Agency? These may published online, converted into downloadable format or be made available for online purchase.

3. What are the developments in the Agency in the past month? These developments may be posted on the website as news. What are the activities of the Agency in the coming month? Absence of news article on an agency website reflects the lack of activities or accomplishments of the agency.

4. What forms does the agency use? These may be application forms, inquiry forms, certifications, clearances and the like. Forms such as these should be put online, either for online submission or for download.

5. What are the existing databases in the internal information systems of the agency? The web developer may consider putting this information on the website.

24 percent or 34 of the 140 websites visited fall in Stage 1

Lead Agencies
- Office of the Press Secretary
- Department of Justice
- Department of Public Works and Highways

Attached Agencies
- Agricultural Training Institute
- Air Transportation Office
- Armed Forces of the Philippines
- Bureau of Animal Industry
- Bureau of Fisheries and Aquatic Resources
- Bureau of Import Services
- Bureau of International Trade Relations
- Bureau of Local Employment
- Bureau of Nonformal Education
- Bureau of Plant Industry
- Bureau of Postharvest Research and Extension
- Bureau of Product Standards
- Bureau of Rural Workers
- Bureau of Small and Medium Business Development
- Civil Aeronautics Board
- Commission on Population
- Fertilizer and Pesticide Authority
- Information and Publication Service
- Local Water Utilities Administration
- National Labor Relations Commission
- Philippine Army
- Philippine Economic Zone Authority
- Philippine Institute of Volcanology and Seismology
- Philippine National Railways
- Philippine Navy
- Philippine News Agency
- Philippine Nuclear Research Institute
- Philippine Tourism Authority
- Radio Television Malacañang

GOCCs
- National Power Corporation

Constitutional Office
- Commission on Elections

Stage2-Enhanced

Close to half of the Philippine government websites in this study are regularly updated, have search features or site maps and areas for comments or feedback.

Important documents like application guidelines, procedures, application forms and requirements are also made available on some Stage 2 websites. These documents are presented in a variety of file types such as MS Excel, MS Word, Image Files, Zip, PDF or HTML.

Some Stage 2 websites have downloadable forms. These forms are posted online to be printed by citizens. Instructions or guidelines for use usually accompany these forms. Through the availability of this type of information on the website, the citizen is able to prepare all of his/her requirements and complete the forms beforehand. This removes a step in the bureaucratic filing process wherein citizens would usually go to the agency to pick up forms and requirements first, only to return later to file their applications.

A distinct difference between Stage 2 and Stage 3 websites is how information is presented online.

Stage 2 websites present their data in either MS Excel or Word formats – formats that can be easily tampered or modified. Thus, it is important for agencies which allow citizens to download application forms or resource materials online to use the PDF format. The PDF format preserves the layout and prevents the modification of these forms.

On the other hand, Stage 3 websites are database-driven. Thus, the goal of Stage 2 websites is to transfer their raw data and create an online database. Database-driven websites allow for greater flexibility in the presentation of data and are tamper-proof.

Stage3-Interactive

The 27 Interactive government websites covered in this study feature searchable databases, up-to-date information, and downloadable forms. Some of these websites have forms that could be submitted on-line. They contain specialized databases that present an array of data. The effective use of databases often results in a searchable and user-friendly presentation of data.

42 percent or 59 websites fall in Stage 2

Lead Agencies:
- Department of Agriculture
- Department of Education
- Department of Environment and Natural Resources
- Department of Finance
- Department of Foreign Affairs
- Department of Interior and Local Government
- Department of Social Welfare and Development
- Department of Tourism
- Department of Transportation and Communications
- Office of the President

Attached Agencies:
- Advanced Science and Technology Institute
- Board of Investments
- Bureau of Agricultural Statistics
- Bureau of Customs
- Bureau of Domestic Trade and Promotion
- Bureau of Food and Drugs
- Bureau of Immigration
- Bureau of Labor and Employment Statistics
- Bureau of Labor Relations
- Bureau of Soils & Water Management
- Commission on Higher Education
- Environmental Management Bureau
- Intellectual Property Office
- Metro Manila Development Authority
- Mines and Geosciences Bureau
- National Commission on the Role of Filipino Women
- National Computer Center
- National Conciliation and Mediation Board
- National Food Authority
- National Telecommunications Commission
- National Wages And Productivity Commission
- Occupational Safety and Health Center
- Overseas Workers Welfare Administration
- PAGASA
- Phil Council for Agriculture, Forestry & Natural Resources Research and Development
- Phil Council for Aquatic and Marine R&D
- Philippine Air Force
- Philippine Convention and Visitors Corporation

42 percent or 59 websites fall in Stage 2

- Philippine Council for Industry and Energy Research and Development
- Philippine Information Agency
- Philippine Ports Authority
- Philippine Overseas Employment Administration
- Philippine Rice Research Institute
- Presidential Commission on Educational Reform
- Protected Areas and Wildlife Bureau
- Public Estates Authority
- Science Education Institute
- Securities and Exchange Commission
- Statistical Research and Training Center
- Technical Education and Skills Development Authority
- Technology and Livelihood Resource Center

GOCCs
- Bases Conversion Development Authority
- Employees' Compensation Commission
- Philippine Health Insurance Corporation
- Social Security System
- Subic Bay Metropolitan Authority

Legislature
- Senate

Judiciary
- Supreme Court

Constitutional Offices
- Civil Service Commission

There are seven Executive Departments and three Constitutional Offices whose websites are ranked in this stage. The House of Representatives website also made it to this highest ranked group.

At the time of the study, the Philippine Government Portal <www.gov.ph> was classified as a Stage 3 website. The site focuses on interactive and multi-media elements. It has video clips of events, a wide news archive, forums, and feedback forms. There are also features for mobile services. Furthermore, the site is host to the State of the Nation Address (SONA) Management Information System. Compared with the CVISNET portal (as discussed in page 4), the Philippine Government portal seems to lean towards news and multi-media applications. While the Philippine Government Portal links to most Government Head Offices, only a few of the existing Agency e-Services are being promoted through the

19 percent or 27 websites fall in Stage 3

Lead Agencies:
- Department of Budget and Management
- Department of Energy
- Department of Health
- Department of Labor and Employment
- Department of Science and Technology
- Department of Trade and Industry
- National Economic and Development Authority

Attached Agencies:
- Bureau of Agricultural Research
- Bureau of Export Trade Promotion
- Bureau of Internal Review
- Bureau of Trade Regulations and Consumer Protection
- Information Technology and E-Commerce Council
- MARINA
- National Commission on Culture and Arts
- National Council for the Welfare of Disabled Persons
- National Mapping and Resource Information Authority
- National Statistical Coordination Board
- National Statistics Office
- Philippine Council for Health Research and Development
- Philippine Institute for Development Studies
- Procurement Service - DBM
- Tariff Commission

GOCCs
- Government Service Insurance System

Constitutional Offices
- Bangko Sentral ng Pilipinas
- Career Executive Service Board
- Commission on Audit

Legislature
- House of Representatives

portal. The CVISNet Portal, on the other hand, has made more effective use of resources and services of the agencies within their network.

Website Not Available

Fourteen percent of the government websites studied cannot be reached. The addresses of these agencies have been listed in various

Internet directories but their pages cannot be accessed at the time of study.
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It is unfortunate that in this list are a number of critical frontline agencies (DAR, LTO, LTFRB, Office of the Solicitor General), national security agencies (DND, NSC, NBI and Army) as well as those serving the youth (National Youth Commission).

Distribution of Government Websites

Of the 140 government websites ranked on the basis of the UN-ASPA five stages of e-Government, 125 were from the Executive branch of government (23 lead agencies and 102 bureaus/attached agencies). Of the 125 websites from the Executive, 20 (16 percent) were not available at the time of study. The mean ranking of the Executive branch websites is 1.90. For the lead agencies the mean ranking is 2.20, while the mean ranking for its bureaus/attached agencies is 1.84.

Seven GOCC sites were also visited for this study with 5 (71 percent) at Stage 2. The mean ranking of the GOCC websites is 2.0.

In the legislature, the Senate's website is rated Stage 2, while the House of Representatives is at Stage 3.

The Supreme Court site was rated as a Stage 2 site.

The Bangko Sentral ng Pilipinas, the Career Executive Service Board and the Commission on Audit are all Stage 3 sites. On the other hand, the Civil Service Commission and the COMELEC are at Stage 2 and Stage 1, respectively.

Hastening e-Government in the Philippines

E-Government in the Philippines is in an early stage. While it may be ambitious to have as a target the same level of e-Government as in Singapore — which is among, if not the world's best — approximating the level of e-Government in Thailand and Malaysia should be "do-able." And in trying to ensure that we are abreast with our neighbors and competitors, the GISP remains an important touchstone for e-Government in the Philippines.

The GISP not only provides vision and a development framework, but also includes strategies and solutions for the realization of Philippine government online.[11] The latter includes the establishment of "Priority Information Systems" that are organized by function and not just agencies. These "Priority Information Systems" to be developed include:

* Mission Critical Frontline Database and Information Systems

* Public Service Information System (PSIS)

* Justice, Public Order and Safety Database and Information System (Expanded National Crime and Information System)

* Oversight and Common Application Systems

* Office of the President Executive Information System (www.malacanang.gov.ph)

* Government Procurement System (Electronic Procurement System)

* Government Human Resource Management Database and Information System

* Government Physical Assets Management Database and Information System

* Government Integrated Financial Management Database and Information System

* Statistical Database and Information System

* Government Integrated Records Management Database and Information System

* Sectoral Information System

* Agricultural and Agrarian Reform Database and Information System

* Education and Manpower Development Database and Information System

- Trade, Industry, and Tourism Information System

- Land and Environment Database and Information System

- Health Care Database and Information System

- Welfare, Security, Employment, Housing and Community Services Information System

- Local Government Information Systems

- LGU Revenue Management System

- LGU Business Regulation System

GISP identified the information systems gaps in government and provides corresponding solutions, which includes the use of "VPN technology in the RPWeb as the nationwide WAN of government" and the use of "Open Systems standards government-wide."

GISP also includes an Institutional and Policy Framework as well as a Financing and Implementation Strategy.

Under the Institutional and Policy Framework, the GISP underscores the need for "High-Level Policy Advocacy and Championship" for Philippine government online. It calls for the alignment of Department and Agency Information Systems Strategic Plans (ISSPs) with the GISP and Performance and Results-based management. GISP also identifies the following areas for further study and policy formulation:

- Computer Security

- Privacy

- Electronic Commerce

- Government Reengineering

- Government Performance and Review, including the implementation of an Information Resource Management (IRM) Program

* Standards and Technology

* Included in the GISP is an Implementation Strategy with clear objectives and deadlines.   Among the targets by the end of the first year of GISP implementation (or 1 July 2001) are:

* Inclusion of the GISP in the key results areas and performance reviews of the Department service;

* Development of prototypes for the Priority Information Systems (enumerated above);

* Connection of all government agencies to the Internet and the Web;

* Setting up of Web homepages by all executive departments to allow electronic publishing;

* Conversion of official documents into electronic forms initiated in all government agencies for the implementations of electronic document management, and

* Intensive use of GIS applications by the DOTC, DOH, DENR, DA, DAR, etc.

By the end of July 2002 or end of year 2 of GISP implementation, the following are envisioned:

* Office of the President Executive Information System operational at the Executive Secretary's Office;

* Final rollout/operationalization of the Government Electronic Procurement System;

* All Central Offices of the executive departments connected via Intranet, and

* Homepages set up by all other government entities/agencies and highly urbanized LGUs.

The political crisis in the last quarter of 2000 — resulting in the change of leadership in 2001, as well as the government's dire financial situation, prevented government from implementing GISP. But as government kicks its ICT development strategy into gear, it is important that it revisit the GISP to update it, where needed, and to implement it aggressively.

In the immediate term, particularly in light of the looming deadline imposed by the e-Commerce law, there is need for a web strategy. All government agencies should have at least an interactive website by June 2002. In order to facilitate efforts at creating/upgrading websites, the government should consider adopting the UN-ASPA 5 Stages of e-Government as a standard. Furthermore, all government websites should have a common "look and feel," and adopt common security standards as well as a policy on privacy. Government should aim to transform the Philippine government portal into a Stage 4 (Transactional) site by the end of this year, and Stage 5 (Fully Integrated Portal) by June 2003. Government should also seriously consider transforming department websites into portals to enable easy access to all information and services being offered by that department and its attached agencies by June 2003.

In the medium- to long term, government should focus on implementing, and if needed, updating the GISP.

To help achieve the goal of e-Government, government may wish to consider the following lessons gleaned by Digital Philippines from the e-Government implementation experience of its members in the country:

1. The importance of champions. Champions within the various agencies of government make e-Government projects happen. These champions will have to set goals and targets for their respective agencies, determine the types of applications they feel their constituents need (within the GISP framework) and find creative means to deploy resources behind the initiative.

The World Bank cites the work of former Customs Commissioner Guillermo L. Parayno, Jr. as one of the best case studies of the use of IT in government. Under his leadership, the Bureau developed an online system to process clearance of imports, payment of duty, and delivery of release orders for shipments to leave the docks. The online system has lessened the cost of trade for businesses, reduced opportunities for fraud,

and helped the Bureau maximize revenue collection. However, when Commissioner Parayno was replaced in 1998, the online system was halted and not until the appointment of its present leadership were the BOC's ICT efforts brought back into high gear.

2. People, not technology, are critical. One of the key barriers to e-Government is the bureaucratic culture that is averse to risk and unwilling to change. Thus, for e-Government to become successful, it must have the full support of the civil service – the implementers in the delivery of public goods and services. This requires creating an environment and an incentive structure where the civil service will support e-Government implementation rather than oppose it.

Aside from change management, re-tooling of the civil service is important. The bureaucracy must be competent in using the ICT systems that are going to be put in place. Government workers must be transformed into knowledge workers.

Technology alone will not make e-Government happen. Indeed, technology will be no match to a hostile bureaucracy.

3. Adequate resources must be made available. While e-Government projects lead to cost reductions, they will take money to implement, particularly in their initial stages.

Outsourcing can minimize costs. A number of projects will be attractive to the private sector that will assume full commercial risk for them. But, there will also be projects where the BOT scheme may not work. In these instances, government must be creative in securing funding for these projects.

4. Start with key government frontline services. Because change is difficult to implement and government resources are limited, it is important that e-government initiatives start with a few key government agencies. The agencies to be prioritized should be those that: a) are critical in the delivery of public services; b) help increase investments, and c) improve revenue streams.

It is also important that the agencies prioritized for e-Government implementation be able to demonstrate quickly the benefits of ICT in terms

of reducing cost, enhancing service and improving transparency. Thus, it is important that clear targets are set and deadlines for e-Government implementation strictly observed. For instance, government must decree by a specific date, say, end of 2002, that 80 percent of all BOC transactions be done through its computerized system.

5. Make the public aware of available e-Government services. Raising popular awareness of existing e-Government projects would increase the public's use of these new services, and also increase demand for them and other similar services. Promoting existing e-Government projects would also serve as a public recognition of the good work done by the agencies. ●

Endnotes

1 "RP Listed among worsening Bureaucracies," Philippine Daily Inquirer 25 February 2002, p. 1.

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9 World Economic Forum and Center for International Development at Harvard University, "The Global Information Technology Report 2001-2002: Readiness for the Networked World (GITR)," (Oxford University Press, 2002), p. 10.

10 Ibid, p. 13.

11 When the websites were not available, the study team made efforts to look for alternative URLs of the agencies. Using the search engine Google <www.google.com>, the name of the agency was used to search for an agency website. The 15 agencies listed above did not turn up any official agency websites.

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