



NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF MANAGEMENT SCIENCES

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Course Title: E-Governance in the Public Sector

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Introduction

This course, MPA843: E-governance in the Public Sector/Electronic Governance and Administration is a three credit unit compulsory for students studying public administration and related programmes in the Faculty of Management Sciences.

The course has been arranged for you in twenty distinct but related units of study activities. In this course guide, you will find out what you need to know about the aims and objectives of the course, components of the course material, arrangement of the study units, assignments, and examinations.

The Course Aim

The course is aimed at acquainting you with the knowledge in the world of electronic governance (e-governance) in the public sector. The course is premised on the knowledge that technology and service levels are intimately interwoven factors in the emerging e-Government services. The course is therefore designed to update your knowledge on the shifting role of how services are delivered through the use of Information and Communication Technology (ICT). To ensure that this aim is achieved, some important background information will be provided and discussed. These include: Conceptualizations of e-governance, e-government, e-democracy and e-participation

The role of Information and Communication TechnologyE-

service in the public sector

Approach of E-service in the public sector Online

tools of engagement and policy process E-service

Benefits

E-Health and E-Learning

E-government in developing countries

Challenges of E-governance

Measurable Outcomes

At the end of the course you should be able to:

Discuss the principles of e-governance and its objectives

Examine and discuss types of service delivery in e-governance

Examine the objectives of e-government

Examine the role of ICTs in e-government

Discuss some of the reasons why governments use ICT in its operation

Examine the models of e-democracy and their characteristics

Examine the various forms which e-participation can take;

Discuss how technology-enabled information can improve policy process.

Discuss the outcomes of e-participation

Discuss public network project;

Discuss the various models of e-service development

Examine E-service benefits

Discuss the trends in the world of e-government across the globe

Course Material

The course material package is composed of:

The Course Guide

The Study Units

Self-Assessment Exercises Tutor-

Marked Assignments Further

Reading Sources

The Study Units

The study units are as listed below:

MODULE 1

- Unit 1: Introduction to E-Governance
- Unit 2: E-government in Administration
- Unit 3: Information and Communication Technology
- Unit 4: E-Democracy
- Unit 5: E-Participation

MODULE 2

- Unit 1: Evolution of ICT
- Unit 2: Concept of Information and Communication Technology (ICT)
- Unit 3: ICT and Policy-Making
- Unit 4: Digital Initiatives
- Unit 5: ICT and Public Network

MODULE 3

- Unit 1: e-Service in Public Sector
- Unit 2: Models of E-Service
- Unit 3: Approach of e-services in the Public Sector
- Unit 4: E-Government Development around the World
- Unit 5: E-Governments in Africa

MODULE 4

- Unit 1: E-Government in Europe
- Unit 2: E-Government in Americas
- Unit 3: E-Government in Asia
- Unit 4: Nigeria's E-Governance Initiative: the role of National Information Technology Development Agency (NITDA)
- UNIT 5: NITDA Information Technology's Regulations

Unit 1: E-GOVERNANCE

Unit Structure

- 1.1 Introduction
- 1.2 Learning Outcomes
- 1.3 Government and E-Governance
 - 1.3.1 What is E-Governance?
 - 1.3.2 Principles of e-governance and Objectives
- 1.4 Major Administrative and Democratic Improvements of E-governance
- 1.5 Types of Service Delivery in e-governance

- 1.5.1 Domains of e-governance
- 1.5.2 E-administration
- 1.5.3 E-service
- 1.5.4 E-society
- 1.6 Summary
- 1.7 References/Further Readings/Web Resources
- 1.8 Possible Answers to Self-Assessment Exercise(s) within the content



1.1 Introduction

Good day everyone, I wish to welcome each and every one of you to this interactive class, in today's class, we will be discussing the Government and e-governance, E-governance is all about, Principles of E-governance and Objectives and Major Administrative and Democratic improvements offered by e-governance. Having understood that, today we will be discussing the types of e-governance in Service delivery. As you all know, technological advances have changed the way people go about their daily activities. Whether we are checking our e-mails or texting or sending messages with our phones, mobile communication is growing, and our ability to navigate the World Wide Web is improving dramatically. We use the internet to shop on-line, do banking transactions, book for our flight tickets and make payment on-line, check the weather, do research on any subject and connect with network. You may wonder what this has to do with public administration. As Internet usage grows, and the use of technology in general grows, so too does the use of technology and Internet by government. E-governance is the general term used to describe the government's use of technology in performing its multiple responsibilities (Holzer and Schwester, 2011). This unit is meant to develop student's knowledge and understanding on how government services are performed through the modern technology.



1.2 Learning Outcomes

By the end of this unit, you will be able to:

1. Examine the term e-governance;
2. Discuss the principles of e-governance and its objectives;
3. Examine and discuss types of service delivery in e-governance
4. Discuss the major administrative and democratic improvements of e-governance



1.3 Government and e-Governance

Government's foremost job is to focus society on achieving the public interest. Governance is a way of describing the links between government and its broader environment - political, social, and administrative.” - Thomas B Riley Government,

governance and democracy have been with us for a long while. Government and governance are both about getting the consent and cooperation of the IT in Action governed. Government is the formal apparatus for this objective, governance is the outcome as experienced by those on the receiving end. Governance in the public context is closely related to government and democracy, but has a different focus. These three concepts can be considered as different views or political entities. Government is the Institutional view. Democracy is the legitimacy view and Governance is the regulatory view.

The role of information in all areas of the private sector and in government is now paramount for continued growth and stability in our societies. Information has become the lynchpin in the way we think, act and operate as a society. The significance of the growth of ICTs, new technologies, the Internet and the rapid deployment of information and creation of information is the “potential” for change these phenomena are creating. These are pressing issues for modern governments as the new technologies are contributing to the creation of faster communications, the sharing of information and knowledge, and the emergence of new forms of our respective cultures.

Networked communities are quickly evolving through the Internet, and citizens are increasingly using the new technologies to organize themselves so their voices can be heard, and to develop tools to attempt to influence government policy and programs at the political and public administration level. It is important to put the whole question of how ICTs will be used to further engage the citizenry into a wider context of democracy as we practice it. The current trend of attaching ‘e’ to just about every topic (like E-Commerce, E-Learning, E-Health, E-Governance) is nothing more than a simple way to create a name for the use of information and communications technology to support the tasks within the topic. More importantly, the use of terms such as e-government, e-governance and e-democracy, leads to the creation of an identifiable discipline. This then widens the development of the subject beyond the parameters of simply government boundaries to the larger spheres of civil society, associations, unions, the business community, international organizations and the academic world. Governance is not a synonym for government

The e-Governance has become an accepted methodology involving the use of Information Technology in improving transparency, providing information speedily to all citizens, improving administration efficiency, improving public services such as transportation, power, health, water, security and municipal services.

Governance has always been dependent upon technology, in the broadest sense of knowledge, skills, techniques and epistemological strategies, as well as devices, hardware, software and power circuits. As the reach of governance has spread into new areas of the globe as well as new aspects of hitherto personal relationships, it has come to rely upon more complex assemblages of technically stored and disseminated knowledge (Coleman, 2008).

Self-Assessment Exercises 1

- | |
|--|
| 1. Government's foremost job is to focus society on achieving the public interest. |
|--|

Governance is a way of describing the links between government and its broader environment - political, social, and administrative. Discuss

2. Explain the process of e-Governance as an accepted methodology involving the use of Information Technology

1.3.1 What is E-governance?

E-governance is the public sector's use of information and communication technologies with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective. E-governance involves new styles of leadership, new ways of debating and deciding policy and investment, new ways of accessing education, new ways of listening to citizens and new ways of organizing and delivering information and services. E-governance is generally considered as a wider concept than e-government, since it can bring about a change in the way citizens relate to governments and to each other. E-governance can bring forth new concepts of citizenship, both in terms of citizen needs and responsibilities. Its objective is to engage, enable and empower the citizen (UNESCO)(www.unesco.org).

E-governance entails the digitized coding, processing, storage and distribution of data relating to three key aspects of governing societies: the representation and regulation of social actors; the delivery of public services; and the generation and circulation of official information (Coleman, 2008).

E-governance is more than just a government website on the Internet. The strategic objective of e-governance is to support and simplify governance for all parties; government, citizens and businesses. The use of ICTs can connect all three parties and support processes and activities. In other words, in e-governance electronic means support and stimulate good governance.

E-governance is beyond the scope of e-government. While e-government is defined as a mere delivery of government services and information to the public using electronic means, e-governance allows direct participation of constituents in government activities. Blake Harris summarizes the e-governance as the following; E-governance is not just about government web site and e-mail. It is not just about service delivery over the Internet. It is not just about digital access to government information or electronic payments. It will change how citizens relate to governments as much as it changes how citizens relate to each other. It will bring forth new concepts of citizenship, both in terms of needs and responsibilities.

E-governance will allow citizens to communicate with government, participate in the governments' policy-making and citizens to communicate each other. The e- governance will truly allow citizens to participate in the government decision-making process, reflect their true needs and welfare by utilizing e-government as a tool. Governments are specialized institutions that contribute to governance. Representative governments seek and receive citizen support, but they also need the active cooperation of their public servants. Governance is the outcome of politics, policies, and programs (Ignou People University, 2019).

1.3.2 Principles of E-governance and Objectives

The principles of e-governance are to:

Build services with citizen choices in mind; Increase government accessibility;

Foster social inclusion;

Disseminate information in a responsible fashion; and

Use taxpayers resources effectively and efficiently (Holzer and Schwester, 2011).

Let us consider some of the objectives of e-governance.

According to Ojo cited in Maduabum (2008:670), objective of e-governance include the following: To ensure transparency in the workings of government;

To ensure greater efficiency, objectivity, accountability and speed in providing services and information to the public;

To provide qualitative and cost-effective services;

To provide a single window for all government services;

To evolve responsive administration;

To provide a friendly, speedier and efficient interface; and

To eliminate the middlemen

The strategic objective of e-governance is to support and simplify governance for all parties - government, citizens and businesses. The use of ICTs can connect all three parties and support processes and activities. In other words, in e-governance uses electronic means to support and stimulate good governance. Therefore the objectives of e-governance are similar to the objectives of good governance. Good governance can be seen as an exercise of economic, political, and administrative authority to better manage affairs of a country at all levels, national and local.

E-Democracy:

The two main objectives of e-democracy are:

To provide citizens access to information and knowledge about the political process, about services and about choices available

To make possible the transition from passive information access to active citizen participation by:

Informing the citizen

Representing the citizen

Encouraging the citizen to vote

Consulting the citizen

Involving the citizen

E-Government ((Ignou People University, 2019).

Regarding e-government, the distinction is made between the objectives for internally focused processes (operations) and objectives for externally focused services.

External strategic objectives: The external objective of e-government is to satisfactorily fulfill the public's needs and expectations on the front-office side, by simplifying their interaction with various online services. The use of ICTs in government operations facilitates speedy, transparent, accountable, efficient and effective interaction with the public, citizens, business and other agencies.

Internal strategic objectives: In the back-office, the objective of e-government in government operations is to facilitate a speedy, transparent, accountable, efficient and effective process for performing government administration activities. Significant cost savings (per transaction) in government operations can be the result. It can be concluded that e-governance is more than just a Government website on the Internet. Political, social, economic and technological aspects determine e-governance (Ignou People University, 2019).

1.4 Major Administrative and Democratic improvements offered by e-governance

What is Major Administrative and Democratic improvements offered by e-governance, cheaper and more effective management and processing of information; a freer flow of information between departments, agencies and layers within government; more professional administrators, supported by standardized, electronically-embedded decision-making systems; the routine provision of services according to impersonal rules, as opposed to clientelist arrangements; transparency, particularly in relation to the procurement of government services; opportunities to work in partnership with the private sector in modernising governmental processes; a freer flow of information between government and citizens; the strengthening of intermediary democratic institutions, such as parliaments, local government, civil-society organisations (CSOs) and independent media; opportunities for citizens to participate more directly in policy development; opportunities to combine traditional and modern methods of accountability.

Self-Assessment Exercises 2

1. What is E-governance?
2. State the Principles of E-governance and Objectives



1.5 Summary

“This unit discussed how e-governance are defined. As we can see, e-governance is more than just a government on the website. The strategies of e-governance can enable government and citizens to engage and partner with each other and other stakeholders. We also discussed the objectives of e-governance as well as the types of service delivery in e-governance. Subsequent units will discuss some other aspects of e-governance.



1.7 References/Further Readings/Web Resources

Arjan de Jager (2008) E-governance in the Developing World in Action: the Case of the DistricNet in Uganda. The Journal of Community Informatics. Vol. 4, No 2.

Coleman, S. (2008) “Foundation of Digital Government in Chen, H., Brandt, L., Gregg, V. et al (eds) Digital Government: E-Government Research, Case Studies, and Implementation. New York. Springer Science+ Business Media.

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Morin, T. L. (2003) E-Government,

James SL Y. (2005). E-Government in Asia: Enabling Public Service Innovation in the 21st Century,

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1.8 Possible Answers to SAEs

These are the answers to the SAEs within the content. Arrange the answers in accordance with the way the SAEs appear in the content. For example

Answers to SAEs 1

1. Government's foremost job is to focus society on achieving the public interest. Governance is a way of describing the links between government and its broader environment - political, social, and administrative.” - Thomas B Riley Government, governance and democracy have been with us for a long while. Government and governance are both about getting the consent and cooperation of the IT in Action governed. Government is the formal apparatus for this objective, governance is the outcome as experienced by those on the receiving end. Governance in the public context is closely related to government and democracy, but has a different focus. These three concepts can be considered as different views or political entities. Government is the Institutional view. Democracy is the legitimacy view and Governance is the regulatory view
2. The e-Governance has become an accepted methodology involving the use of Information Technology in improving transparency, providing information speedily to all citizens, improving administration efficiency, improving public services such as transportation, power, health, water, security and municipal services. Governance has

always been dependent upon technology, in the broadest sense of knowledge, skills, techniques and epistemological strategies, as well as devices, hardware, software and power circuits

Answers to SAEs 2

1. E-governance is the public sector's use of information and communication technologies with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective.
2. The principles of e-governance are to:
 - i. To ensure greater efficiency, objectivity, accountability and speed in providing services and information to the public;
 - ii. To provide qualitative and cost-effective services;
 - iii. To provide a single window for all government services;
 - iv. To evolve responsive administration;
 - v. To provide a friendly, speedier and efficient interface;

Unit 2 Types of E-Governance in Service Delivery

Unit Structure

- 2.1 Introduction
- 2.2 Learning Outcomes
- 2.3 Types of E-Governance
- 2.4 Domains of e-governance
- 2.5 Summary
- 2.6 References/Further Readings/Web Resources
- 2.7 Possible Answers to Self-Assessment Exercise(s) within the content

2.1 Introduction

Good day everyone. I hope you have appreciated our discussion in last unit which explain the Government and e-governance, what E-governance is all about, Principles of E-governance, Objectives and Major Administrative and Democratic improvements offered by e-governance. Having understood that, today we will be discussing the types of e-governance in Service delivery.



2.2 Learning Outcomes

By the end of this unit, you will be able to:

1. Explain the types of e-governance
2. Discuss the Domains of e-governance



2.3 Types of e-governance Service Delivery

The quest to improve service delivery through the use of ICTs in governments typically focuses on four main dimensions. These are:

2.3.1 G2C (Government-to-Citizens): This focuses primarily on developing user-friendly one-stop centers of service for easy access to high quality government services and information.

2.3.2 G2B (Government-to-Business): This aims to facilitate and enhance the capability of business transactions between the government and the private sector by improving communications and connectivity between the two parties.

2.3.3 G2G (Government-to-Government): This is an inter-governmental effort that aims to improve communication and effectiveness of services between federal, state and local governments in the running of day-to-day administration. It generally aimed at improving the efficiency and effectiveness of overall government operations.

2.3.4 Intra-government: This aims to leverage ICT to reduce costs and improve the quality of administration and management within government organization (Islam and Ahmed, 2007).

Self-Assessment Exercise 1

- | |
|--|
| <ol style="list-style-type: none">1. Briefly explain the G2C (Government-to-Citizens)2. Briefly explain the G2B (Government-to-Business)3. Briefly explain the G2G (Government-to-Government): |
|--|

2.4 Domains of e-governance

The interpretation of e-Government is quite broad and divergent. General definition describes e-government as the use of information and communication technologies (ICT) to transform government by making it more accessible, effective and accountable³. Usually we identify four or five stages of e-government development described as:

- a. information available on-line
- b. one way interaction
- c. two - way interaction
- d. full online transaction, including delivery and payment

In more detailed view, realization of ICT projects may refer to narrow and broad areas of **e-Government**. In first case, “e-Government in small” is associated with implementation of administrative processes, within domain of e-Administration. Broadly defined, electronic government can include all information and communication technology (ICT) to support government operations, engage citizens, and provide government services. Thereby, broader approach embrace the whole range of governance and administrative projects including e-services, e- democracy, e-voting, e-justice and in some way even e-

education or e-healthcare. Clearly, e-government is much more than gathering them information, downloading files or making online transaction (Sakowicz, 2003)..

Furthermore, the set of concepts related to the use of ICT has been enriched with the notion of e-governance as a result of new approach of public problem solving⁴. We are witnessing the transition from a consolidated model of ‘big government’ – centralized, hierarchical and operating in close networks to new model of governance based in self-organizing inter-organizational networks exchanging local and global knowledge in the digital economy. In today’s world neither politicians nor civil servants and administration staff are exclusively responsible for shaping strategies and policies of a given country or local community. Narrow approach to e-government may lead to technocratic government or transforming bureaucracy into infocracy. On contrary, e- governance assumes online engagement of many stakeholders in the process of shaping, debating and implementing public policies (Sakowicz, 2003).

Within this broad definition we can identify four dimensions of e-governance:

E-services – This term describes the use of electronic delivery for government information, programs, strategies and services. These are available on-line “24h/7days”. It also refers to Electronic Service Delivery (ESD) and such expression as ‘one-stop service centers’. The latter describes situation in which citizen needs are met through a single contact with the government. In many cases it assumes a modernized front-office but not necessarily redesigned back office capacity. At the same time, e-services emphasize innovative forms of citizen involvement and offer services that demonstrate serious valuation of citizens as customer of administration. The strategic challenge is to deliver services to members of public along with dimensions such as quality, convenience and cost.

E-management – While e-Services focus on extra-organizational relations, e-management (e-administration) refers to the behind-the-scene information systems supporting the management and administrative functions of public institutions, including data and information management, electronic records maintenance and cross-departmental flow of information. E-governance initiatives within this domain deal particularly with improving management of government, from streamlining business processes to improving cross-departmental flow of information. Effective usage of ICT requires a new organizational culture in addition to new staff teams focused on performance, customer services and response to citizen input. The solutions to problem of e-management lie in the implementation of services designed around possible life events or life- episode” approach and the adaptation and integration of back-office processes (Sakowicz, 2003).

E-democracy - This is the most difficult to generate and sustain feature of e-Governance. In framework of e-democracy ICT is used as an instrument to help set agendas, establish priorities, make important policies and participate in their implementation in a deliberative way. It refers to activities that increase citizen involvement including virtual town meeting, open meeting, cyber campaigns, feedback polls, public surveys and community forums (such as through e-consultation, e-voting) In short, if e-governance is successfully implemented new empowered citizens may emerge. They are able to form

the Internet biased alliance to respond to various issues and achieve economic and social objectives (Sakowicz, 2003).

E-commerce – This concept is linked to business side of government interaction. In e-commerce the exchange of money for goods and services is conducted over the Internet. For example, citizens paying taxes and utility bills, renewing vehicle registrations, and paying for recreation programs, or government buying offices supplies, and auctioning surplus equipment (through on-line purchasing, e-procurement) (Sakowicz, 2003).

Self-Assessment Exercise 2

1. Briefly explain the E-administration
2. Briefly explain the E-service
3. Briefly explain the E-society



2.6 Summary

This unit discussed main domains of e-governance:

E-administration: improving government processes

E-services: connecting individual citizens with their government

E-society: building interactions with and within civil society.

E-administration – the main purpose of e-administration is to improve the internal working of the public sector by cutting process costs, managing process performance, creating strategic connections within government bodies, and creating empowerment. Shortening the lead time for passport application from two weeks to one day is an example of e-administration

E-service initiative focus mainly on improving the relationship between the government and its citizens by increasing the information flow between them – which notably, involves two- way communication – and improving the service levels of government towards its citizens. Public service institutes offering citizens the opportunity to apply example of e-services

E-society initiatives for business licenses through a government websites is one extend e-service domain by focusing on institutional stakeholders, such as private sector service providers, other public agencies, and not- for-profit and community organizations. E-society focuses on building long lasting partnerships and social/economical communities: for example through the creation of a business community portal.



2.7 References/Further Readings/Web Resources

Arjan de Jager (2008) E-governance in the Developing World in Action: the Case of the

DistrictNet in Uganda. The Journal of Community Informatics. Vol. 4, No 2.

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Islam, M. M. and Ahmed, A. M. (2007) Understanding E-Governance: A Theoretical Approach. Asian Affairs, Vol. 29, No. 4.

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1.8 Possible Answers to SAEs

Answers to SAEs 3

1. The quest to improve service delivery through the use of ICTs in governments are:
G2C (Government-to-Citizens): This focuses primarily on developing user-friendly one-stop centers of service for easy access to high quality government services and information.

G2B (Government-to-Business): This aims to facilitate and enhance the capability of business transactions between the government and the private sector by improving communications and connectivity between the two parties.

G2G (Government-to-Government): This is an inter-governmental effort that aims to improve communication and effectiveness of services between federal, state and local governments in the running of day-to-day administration. It generally aimed at improving the efficiency and effectiveness of overall government operations

2. Domains of e-governance

There are three main domains of e-governance:

E-administration – the main purpose of e-administration is to improve the internal working of the public sector by cutting process costs, managing process performance, creating strategic connections within government bodies, and creating empowerment. Shortening the lead time for passport application from two weeks to one day is an example of e-administration

E-service initiative focus mainly on improving the relationship between the government and its citizens by increasing the information flow between them – which notably, involves two- way communication – and improving the service levels of government

towards its citizens. Public service institutes offering citizens the opportunity to apply example of e-services

E-society initiatives for business licenses through a government websites is one extend e-service domain by focusing on institutional stakeholders, such as private sector service providers,

Unit 3: e-Government

Unit Structure

- 3.1 Introduction
- 3.2 Learning Outcomes
- 3.3 What is e-Government
 - 1.3.1 Principles of E-governance
- 3.4 Objectives of e-government
 - 1.4.1 External strategic objectives
 - 1.4.2 Internal strategic objectives
- 3.5 Summary
- 3.6 References/Further Readings/Web Resources
- 3.7 Possible Answers to Self-Assessment Exercise(s) within the content



3.1 Introduction

In the last unit, we learnt a lot about e-governance. In this unit we are focusing on the term 'e-government' 'confusion still reigns concerning the difference between the two

terms ‘ e-governance’ and ‘e-government’. E-governance denotes a “wider concept that defines and assesses the impacts technologies are having on the practice and administration of governments and the relationships between public servants and the wider society, such as dealings with the elected bodies or outside groups such as not for profits organizations, NGOs or private sector corporate entities” and e-government as “a narrower discipline dealing with the development of online services to the citizen, more the e of any particular government service – such as e-tax, e-transportation or e-health Sheridan and Riley cited in Palvia and Sharma (2007). This unit therefore will enhance student’s knowledge on the concept of ‘e-government’



3.2 Learning Outcomes

At the end of this unit, you should be able to:

1. Discuss the term ‘e-government’;
2. Examine the objectives of e-government.



3.3 What is e-government?

There are many definitions of E-government. Let us consider some of these definitions. E-government is the use of information technology to free movement of information to overcome the physical bounds of traditional paper and physical based systems. It is the use of technology to enhance the access to and delivery of government services to benefit citizens, business partners and employees. The aim of e-government therefore is to provide efficient government management of information to the citizen; better service delivery to citizens; and empowerment of the people through access to information and participation in public policy decision-making (Basu 2004). E-government is the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions (World Bank, 2011) (www.worldbank.org). E-government is the use of new information and communication technologies (ICTs) by governments as applied to the full range of government functions. In particular, the networking potential offered by the Internet and related technologies has the potential to transform the structures and operation of government (OECD, 2009).

E-government involves using information technology, and especially the Internet, to improve the delivery of government services to citizens, businesses, and other government agencies. . The common theme behind these definitions is that e-government involves the automation or computerization of existing paper-based procedures that will

prompt new styles of leadership, new ways of debating and deciding strategies, new ways of transacting business, new ways of listening to citizens and communities, and new ways of organizing and delivering information. Ultimately, e-government aims to enhance access to and delivery of government services to benefit citizens. More important, it aims to help strengthen government's drive toward effective governance and increased transparency to better manage a country's social and economic resources for development (Basu, 2004).

3.3.1 Principles of E-governance

The principles of e-governance are to:

Build services with citizen choices in mind; Increase government accessibility;
Foster social inclusion;
Disseminate information in a responsible fashion; and
Use taxpayers' resources effectively and efficiently (Holzer and Schwester, 2011).

Self-Assessment Exercises 1

- | |
|---|
| <ol style="list-style-type: none">1. What is the different between e-governance and 'e-government'?2. Explain the aim of e-government in government establishment. |
|---|

3.4 Objectives of e-government

Objectives of e-government as provided by Ajayi in Maduabum (2008:670) are:

- a. To replace traditional governance with electronic governance;
- b. To create knowledge-based governance;
- c. To enhance Simple Moral Accountable;
- d. To enhance Responsive and Transparent (SMART) governance;
- e. To reduce bureaucracy;
- f. To maximize productivity and quality;
- g. To eliminate waste;
- h. To increase efficiency;
- i. To create an easy and free access to government information; and
- j. To reduce the cost of service delivery.

Beyond these general objectives, we can also consider two distinct objectives of e-government. As regards the objectives of e-government a distinction should be made between the objectives for internally focused processes (operations) and objectives for externally focused services.

Let us consider other objectives of e-governance.

According to Ojo cited in Maduabum (2008:670), objective of e-governance include the following: To ensure transparency in the workings of government;

- a. To ensure greater efficiency, objectivity, accountability
- b. To enhance speedy provision of services and information to the public;
- c. To provide qualitative and cost-effective services;
- d. To provide a single window for all government services;
- e. To evolve responsive administration;
- f. To provide a friendly, speedier and efficient interface; and

g. To eliminate the middlemen

Beyond these general objectives, we can also consider two distinct objectives of e-government. As regards the objectives of e-government a distinction should be made between the objectives for internally focused processes (operations) and objectives for externally focused services

3.4.1 External strategic objectives.

The external objective of e-government is to satisfactorily fulfill the public's needs and expectations on the front-office side, by simplifying their interaction with various online services. The use of ICTs in government operations facilitates speedy, transparent, accountable, efficient and effective interaction with the public, citizens, business and other agencies.

3.4.2 Internal strategic objectives.

In the back-office, the objective of e-government in government operations is to facilitate a speedy, transparent, accountable, efficient and effective process for performing government administration activities. Significant cost savings (per transaction) in government operations can be the result.

Self-Assessment Exercises 2

1. Itemize the Objectives of e-government as provided by Ajayi in Maduabum (2008:670)
2. Briefly explain the External strategic objectives
3. Briefly explain the Internal strategic objectives



1.5 Summary

We have learnt in this unit that e-government is the use of new information and communication technologies (ICTs) by governments as applied to the full range of government functions. It is the use of information technology to enhance government activities, for example document processing, database, payroll, employee records amongst 12 others. We have also learnt the main objectives of e-government. We have also distinguished between externally focused and internally focused objectives.



1.6 References/Further Readings/Web Resources

- Backus, M. (2001) E-Governance and Developing Countries Introduction and Examples. Research Report, No 3.
- Basu, S. (2004) E-Government and Developing Countries: An Overview. International Review of Law Computers and Technology, Vol. 18, No.1, pp 109-132.
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- Onyancha, O. B. (2010)E-governance and E-governments in Africa: a Webometrician's Perception of the Challenges, Trends and Issues. Unisa PressISSN 0027- 2639 Mouisaion 28 (2). pp 32-63.
- Palvia, S. C. and Sharma, S.S. (2007). E-Government and E-Governance: Definitions/Domain Framework and Status around the World.www.iceg.net/2007/books/1/1_369.pdf.
- World Bank (2011), "Definition of E-Government", available at: <http://go.worldbank.org/M1JHE0Z280>



1.7 Possible Answers to SAEs

These are the answers to the SAEs within the content. Arrange the answers in accordance with the way the SAEs appear in the content. For example

Answers to SAEs 1

1. E-government involves using information technology, and especially the Internet, to improve the delivery of government services to citizens, businesses, and other government agencies while

E-governance denotes a "wider concept that defines and assesses the impacts technologies are having on the practice and administration of governments and the relationships between public servants and the wider society, such as dealings with the elected bodies or outside groups such as not for profits organizations, NGOs or private sector corporate entities" and e-government as "a narrower discipline dealing with the development of online services to the citizen.

2. e-government come about to replace traditional governance with electronic governance; To create knowledge-based governance; To enhance Simple Moral Accountable Responsive and Transparent (SMART) governance; To reduce bureaucracy; To maximize productivity and quality; To eliminate waste; To increase efficiency; To create an easy and free access to government information; and to reduce the cost of service delivery. Beyond these general objectives, we can also consider two distinct objectives of e-government.

Answers to SAEs 2

1. Objectives of e-government as provided by Ajayi in Maduabum (2008:670) are:
 - a. To replace traditional governance with electronic governance;
 - b. To create knowledge-based governance;
 - c. To enhance Simple Moral Accountable;
 - d. To enhance Responsive and Transparent (SMART) governance;
 - e. To reduce bureaucracy;

2. External strategic objectives.

The external objective of e-government is to satisfactorily fulfill the public's needs and expectations on the front-office side, by simplifying their interaction with various online services. The use of ICTs in government operations facilitates speedy, transparent,

accountable, efficient and effective interaction with the public, citizens, business and other agencies.

Internal strategic objectives.

In the back-office, the objective of e-government in government operations is to facilitate a speedy, transparent, accountable, efficient and effective process for performing government administration activities. Significant cost savings (per transaction) in government operations can be the result

Unit 4: e-DEMOCRACY

Unit Structure

- 4.1 Introduction
- 4.2 Learning Outcomes
- 4.3 e-Democracy
 - 1.3.1 e-Democratic Actors
- 4.4 Models of e-democracy
 - 1.4.1 Partisan Democracy
 - 1.4.2 Deliberative Democracy
 - 1.4.3 Direct Democracy
- 4.5 Summary
- 4.6 References/Further Readings/Web Resources
- 4.7 Possible Answers to Self-Assessment Exercise(s) within the content



4.1 Introduction

In this unit, student will be introduced to the concept of ‘e-democracy’. There is increasing recognition of the need to consider the innovative application of ICTs for participation that enables a wider audience to contribute to democratic debate. This unit will discuss this issue in detail.



4.2 Learning Outcomes

At the end of this unit, you should be able to:

1. Discuss the concept of “e-democracy”
2. Examine the models of e-democracy and their characteristics.



4.3 E-democracy

What does it mean by E-democracy? E-democracy is concerned with the use of information and communication technologies to engage citizens, support the democratic decision making processes and strengthen representative democracy (Macintosh, 2004).. The concept of E-democracy refers to the use of information and communication technology (ICT) in political debates and decision-making processes, complementing or

contrasting traditional means of communication, such as face-to-face interaction or one-way mass media (Paivarinta and Saebo, 2006). E-democracy is the use of information and communication technologies and strategies by “democratic sectors” within the political processes of local communities, states/regions, nations and on the global stage.

4.3.1 e-Democratic Actors

The “democratic sectors” include the following democratic actors:

- a. Government,
- b. Elected officials,
- c. Media (and major online Portals)
- d. Political parties and
- e. interest groups Civil society organizations,
- f. International governmental organizations, Citizens/voters (Clift, 2003)

Self-Assessment Exercises 1

<ol style="list-style-type: none"> 1. What is e-Democracy? 2. State Five (5) democratic actors
--

4.4 Models of E-democracy

E-Democracy, E-Governance and Public Net-work

This model illustrates e-democracy activities as a whole. Governments provide extensive access to information and interact electronically with citizens, political groups run online advocacy campaigns and political parties campaign online, and the media and portal/search sites play a crucial role in providing news and online navigation. In this model, the ‘Private Sector’ represents commercially driven connectivity, software and technology:

Citizens set the agenda	Partisan Democracy	Direct Democracy
Government (politicians and officers) set the agenda	Liberal Democracy	Deliberative Democracy
	Citizens mainly implicitly included in decision making processes	Citizens have an explicitly defined role in decision making processes

Source: **Clift (2003)**

Let us consider some of the characteristics of these models of e-democracy as analyzed by Paivarinta and Saebo (2006):

4.4.1 Partisan Democracy

Partisan democracy initiatives are characterized by citizen-initiated participation and implicit citizen intervention in the decision-making process. Active citizens participate in the political debate, but not through traditional channels or solely through representatives. Information technology seeks to obtain visibility for alternative political expressions and criticism without interruptions from the political elite. Unrestricted discussions set the agenda. Examples include use of independent online communities discussing politics, chat room discussions, Usenet discussions, and blogging (2006). Liberal Democracy

Liberal democracy in general is characterized by a representative government, where citizens form the electorate, giving mandates to representatives at the local level but also participating in the public debate. Online communication becomes part of the issues here as citizens may be asked to submit suggestions to the public authorities, citizens can be given opportunities to communicate with representatives and government officials.

4.4.2 Deliberative Democracy

The ideal of Deliberative Democracy connects citizens more explicitly and directly to decision making processes and emphasizes the role of open discussions in a well-functioning public sphere. Politicians and citizens share an interest in dialogue and discourse leading to the formation of political opinion. Deliberative E-Democracy implementations, with explicitly defined relationships to the actual decision-making processes, may increase the level of citizen participation, if compared to traditional means of political discussion between citizens and decision-makers.

4.4.3 Direct Democracy

Direct Democracy focuses on how traditional institutions lose power in favour of network based groups or individuals. In Direct Democracy, network-based groups and individuals take over the role of traditional institutions. A direct E-Democracy initiative requires communication technology to support coordination among a great number of decision-makers, i.e. citizens, possibly geographically scattered, with diverse interests and backgrounds (Paivarinta and Saebo, 2006: 823-827). By looking at the main purposes of discussion forums for different democracy models Paivarinta and Saebo illustrate how the framework can be used to identify differences in how a particular technology may work under different conditions (democracy models)

Self-Assessment Exercises 2

Briefly Explain the following terms:

1. Partisan democracy,
2. Direct democracy and
3. Deliberative democracy.



1.5 Summary

This unit has enhanced our knowledge on e-democracy. We have also gained an insight into the idea of the models of e-democracy and how they impact on the nature of democratic process.



1.6 References/Further Readings/Web Resources

Caldow, J. (2004)e-Democracy: Putting Down Global Roots. Institute for Electronic Government 1 IBM. Macintosh, A. (2004) Characterising E-Participation in Policy-

Making.Proceedings of the 37th Hawaii International Conference on System Sciences. Paivarinta, T. and Saebo, O. (2006) “Models of E-Democracy” Communications of the Association for Information Systems: Vol.17, Article 37.



1.7 Possible Answers to SAEs

These are the answers to the SAEs within the content. Arrange the answers in accordance with the way the SAEs appear in the content. For example

Answers to SAEs 1

1. The concept of E-democracy refers to the use of information and communication technology (ICT) in political debates and decision-making processes, complementing or contrasting traditional means of communication, such as face-to-face interaction or one-way mass media.
2. The “democratic sectors” include the following democratic actors:
 - a. Government,
 - b. Elected officials,
 - c. Media (and major online Portals)
 - d. Political parties and
 - e. interest groups Civil society organizations,
 - f. International governmental organizations, Citizens/voters (Clift, 2003)

Answers to SAEs 2

Partisan Democracy

Partisan democracy initiatives are characterized by citizen-initiated participation and implicit citizen intervention in the decision-making process. Active citizens participate in the political debate, but not through traditional channels or solely through representatives. Information technology seeks to obtain visibility for alternative political expressions and criticism without interruptions from the political elite. Unrestricted discussions set the agenda. Examples include use of independent online communities discussing politics, chat room discussions, Usenet discussions, and blogging (2006). Liberal Democracy Liberal democracy in general is characterized by a representative government, where citizens form the electorate, giving mandates to representatives at the local level but also participating in the public debate. Online communication becomes part of the issues here as citizens may be asked to submit suggestions to the public authorities, citizens can be given opportunities to communicate with representatives and government officials.

Deliberative Democracy

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processes, may increase the level of citizen participation, if compared to traditional means of political discussion between citizens and decision-makers.

Direct Democracy

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Unit 5: e- participation

Unit Structure

- 5.1 Introduction
- 5.2 Learning Outcomes
- 5.3 Meaning of E- participation
 - 1.3.1 Objectives of e-participation
- 5.4 Six forms of participation offerings
- 5.5 E-participation outcomes

- 5.6 Summary
- 5.7 References/Further Readings/Web Resources
- 5.8 Possible Answers to Self-Assessment Exercise(s) within the content



5.1 Introduction

In the last unit we discussed the term ‘e-democracy’ in detail. In this unit we are still discussing an issue that is related to democracy. Democracy is about popular participation – getting people to be involved in the process of decision-making. Democratic political participation must involve the means to be informed, the mechanisms to take part in the decision-making and the ability to contribute and influence the policy agenda. Using ICT in the course of democratic participation is particularly attractive to a number of target users, including citizens living abroad, younger generations, and companies and organizations which would otherwise not be able to participate.



5.2 Learning Outcomes

At the end of this unit, you should be able to:

1. Discuss the term “e-participation;
2. Explain the Objectives of e-participation
3. Examine the various forms which e-participation can take;
4. Discuss the outcomes of e-participation.



5.3 Meaning of E- participation

E-participation involves the extension and transformation of participation in societal democratic (ICT), primarily the Internet. It aims to support active citizenship with the latest technology developments, increasing access to and availability of participation in order to promote fair and efficient society and government and consultative processes mediated by information and communication technologies (Saebo, Rose and Flak, 2008). E-participation is a relationship based on partnership with government in which citizens actively engage in defining the process and content of policy-making. It acknowledges equal standing for citizens in setting the agenda, proposing policy options and shaping the policy dialogue – although the responsibility for the final decision or policy formulation rests with government (OECD, 2001). Many forms of ICT with the potential to support participation include chat technologies, discussion forums, electronic voting systems, group decision support systems, and Web logs (blogs). Let us consider some of the objectives of e-participation.

5.3.1 Objectives of e-participation are given as:

1. Reach a wider audience to enable broader participation.
2. Support participation through a range of technologies to cater for the diverse technical and communicative skills of citizens.

3. Provide relevant information in a format that is both more accessible and more understandable to the target audience to enable more informed contributions.
4. Engage with a wider audience to enable deeper contributions and support deliberative debate (Macintosh, 2004).

Self-Assessment Exercises 1

- | |
|---|
| <ol style="list-style-type: none">1. Discuss the term “e-participation2. Explain the Objectives of e-participation |
|---|

5.4 Six forms of participation offerings

Three levels of participation that can be used to characterize e-democracy initiatives.

The first level is the use of technology to enable participation:

E-enabling is about supporting those who would not typically access the internet and take advantage of the large amount of information available. The objectives include how technology can be used to reach the wider audience by providing a range of technologies to cater for the diverse technical and communicative skills of citizens. The technology also needs to provide relevant information in a format that is both more accessible and more understandable. These two aspects of accessibility and understandability of information are addressed by e-enabling. The second level is the use of technology to engage with citizens:

E-engaging with citizens is concerned with consulting a wider audience to enable deeper contributions and support deliberative debate on policy issues. The use of the term ‘to engage’ in this context refers to the top-down consultation of citizens by government or parliament. The third level is the use of technology to empower citizens:

E-empowering citizen is concerned with supporting active participation and facilitating bottom-up ideas to influence the political agenda. The previous top-down perspectives of democracy are characterized in terms of user access to information and reaction to government led initiatives. From the bottom-up perspective, citizens are emerging as producers rather than just consumers of policy. Here there is recognition that there is a need to allow citizens to influence and participate in policy formulation (Macintosh, 2004).

5.5 E-participation outcomes

For project owners:

1. Cost reduction, resource rationalization
2. Greater productivity and efficiency
3. Staff who are more competent and skilled in their jobs and thus achieve greater output, etc.

For intended users:

1. Successful access to and use of e-Participation tools and services by intended users
2. Changed e-Participation use patterns, e.g. more and better use
3. Increased user satisfaction
4. Greater empowerment of citizens, businesses, communities

For all stakeholders:

1. Time savings and more convenience
2. Simplified procedures
3. Increased security
4. Less bureaucracy and administration
5. More transparency, accountability, etc.
6. Better policy development
7. Better policy-making
8. Better decision-making
9. Improved legislation.

Self-Assessment Exercises 2

1. List six forms of participation offerings
2. Explain three levels of participation that can be used to characterize e-democracy initiatives?



5.6 Summary

In this unit, we have examined the concept of ‘e-participation’ as it relates to citizens involvement in decision-making. We discussed the main objectives of e-participation and the major types of e-participation offerings. We also discussed the levels of participation that can be used to characterize e-democracy initiatives, as well as the outcomes of e-participation.



1.7 References/Further Readings/Web Resources

- Albrecht, S et al. (2008) "e-Participation –Electronic Participation of Citizens and the Business Community in Government". Study on Behalf of the Federal Ministry of the Interior, Division IT 1 Bremen.
- Macintosh, A. (2004). Characterizing E-Participation in Policy-Making. Proceedings of the 37th Hawaii International Conference on System Sciences.
- Saebo, O. Rose, J. and Flak, L.S. (2008). The shape of e-Participation: Characterizing an Emerging Research Area. Government Information Quarterly 25, 400–428.



5.8 Possible Answers to SAEs

These are the answers to the SAEs within the content. Arrange the answers in accordance with the way the SAEs appear in the content. For example

Answers to SAEs 1

1. E-participation involves the extension and transformation of participation in societal democratic (ICT), primarily the Internet. It aims to support active citizenship with the

latest technology developments, increasing access to and availability of participation in order to promote fair and efficient society and government and consultative processes mediated by information and communication technologies (Saebo, Rose and Flak, 2008).

2. E-participation is a relationship based on partnership with government in which citizens actively engage in defining the process and content of policy-making. It acknowledges equal standing for citizens in setting the agenda, proposing policy options and shaping the policy dialogue – although the responsibility for the final decision or policy formulation rests with government (OECD, 2001). Many forms of ICT with the potential to support participation include chat technologies, discussion forums, electronic voting systems, group decision support systems, and Web logs (blogs). Let us consider some of the objectives of e-participation.

Answers to SAEs 2

1. (1) Information
- (2) Transparency through third parties
- (3) Consultation
- (4) Applications / complaints / petitions
- (5) Cooperation
- (6) Activism / campaigns/ lobbying

2. E-enabling is about supporting those who would not typically access the internet and take advantage of the large amount of information available. The objectives include how technology can be used to reach the wider audience by providing a range of technologies to cater for the diverse technical and communicative skills of citizens. The technology also needs to provide relevant information in a format that is both more accessible and more understandable. These two aspects of accessibility and understandability of information are addressed by e-enabling. The second level is the use of technology to engage with citizens:

E-engaging with citizens is concerned with consulting a wider audience to enable deeper contributions and support deliberative debate on policy issues. The use of the term ‘to engage’ in this context refers to the top-down consultation of citizens by government or parliament. The third level is the use of technology to empower citizens:

E-empowering citizen is concerned with supporting active participation and facilitating bottom-up ideas to influence the political agenda. The previous top-down perspectives of democracy are characterized in terms of user access to information and reaction to government led initiatives. From the bottom-up perspective, citizens are emerging as producers rather than just consumers of policy. Here there is recognition that there is a need to allow citizens to influence and participate in policy formulation (Macintosh, 2004).

MODULE 2

Unit 1 Evolution of ICT

Unit Structure

- 1.1 Introduction
- 1.2 Learning Outcomes
- 1.3 Evolution of Information and Communication Technology (ICT)
 - 1.3.1 Evolution of ICT

- 1.4 Traditional technologies based on computer systems
- 1.5 Application of ICT in Cyberspace
- 1.6 Summary
- 1.7 References/Further Readings/Web Resources
- 1.8 Possible Answers to Self-Assessment Exercise(s) within the content



1.1 Introduction

ICT is concerned with the manner in which digital information is transmitted from one device to another. The Internet is the most well-known example; it is a global network of computers that are connected to one another through telephone lines. There are, however, other examples, such as interactive televisions, personal organizers, and mobile phones. Because both the European Commission and the United Kingdom Government have acknowledged that advancements in information and communication technology have the potential to have a significant effect on the economic well-being of Merseyside, this subject has been integrated into the overall goal of the program. When applied to business, information and communications technology has the potential to reduce costs, increase productivity, and strengthen relationships with both customers and suppliers. When it comes to education, ICT both expands participation and boosts achievement. The use of information and communications technology makes people's interactions with public services more efficient. Additionally, the use of ICT in communities connects individuals to economic opportunities and brings together individuals who share goals (Ignou self-learning material, 2019).



1.2 Learning Outcomes

At the end of this unit, you should be able to;

1. Explain the evolution of ICT
2. Examine the Traditional technologies based on computer systems
3. Identify the Application of ICT in Cyberspace



1.3 Evolution of Information and Communication Technology (ICT)

1.3.1 Evolution of ICT

It is possible to say that the first significant application of information technology (IT) began with the development of the very first mainframe computers, which were designed to meet the requirements of scientific research and the collection and processing of statistical data by the government.

After some time, these strategies were adapted for use in the commercial sector, where they were integrated into the automation of business procedures and the performance of number crunching functions using mainframe computers and robotics. Following the

automation of business processes, information technology was then applied to higher value-adding functions such as design, resource planning, sophisticated manufacturing, and mission critical functions.

The developments and applications of information technology have stretched beyond anyone's imagination. This change, in conjunction with the rapid development and innovation in telecommunication technology and the Internet, has brought in a great deal of new business models and applications. The power of information and communications technology (ICT) lies in the fact that it can be utilized in a wide variety of settings; nevertheless, the capabilities of the human mind are the only thing that can truly unlock its full potential. ICT allows for the dissolution of physical borders by allowing information to flow unrestrictedly through a digital medium that is, in comparison to traditional forms of existing mass media, subject to less restriction. It is believed that globalization will accelerate, and that ICT will make this possible. This will result in larger markets that are easier to enter for companies that have strong financial, management, and technological capabilities. It is now possible to do business or engage in e-commerce online, and transactions can take place at any location and at any time with just the click of a mouse. The scientific community is able to publish their findings more quickly and make more recent discoveries and inventions thanks to advances in information and communication technology (ICT). The technology that was first developed to expedite the processing of data and the computation of statistics has evolved to become ingrained in virtually every aspect of our lives today. Consequently, information and communication technology (ICT) has evolved into the central pillar of the tech-savvy society of today due to the convergence of information technology and communication in the digital environment.

Self-Assessment Exercise 1

1. Explain the evolution of ICT
2. The developments and applications of information technology have stretched beyond anyone's imagination. Discuss

1.4 Traditional technologies based on computer systems

The following are examples of types of ICT:

Use of the Application- Applications that are standard in the office; some examples are as follows:

Word processing software, such as Microsoft Word, for writing letters, reports, and other documents; Calculating tools like Microsoft Excel's spread sheets Perform many types of financial analysis, including calculations, creating forecasting models, etc.

Software for managing databases, such as Oracle, Microsoft SQL Server, or Access, Managing information in a variety of formats, from simple lists (e.g. customer contacts to complex material like catalogue). Software for presentations, such as Microsoft PowerPoint, allows users to create slideshows, which may then be displayed on a computer screen or data projector, and published, in digital format via email or on the internet.

Desktop publishing software such as Adobe InDesign, Quark Express, and Microsoft Publisher are used to create publications such as newsletters, periodicals, and other complicated texts; and For use in desktop publishing, websites, or other publications, graphics tools such as Adobe PhotoShop and Illustrator, Macromedia Freehand, and Fireworks can be used to generate and edit images such as logos, drawings, and photos. Accounting software such as Sage and Oracle, which are examples of specialized applications, are used to manage an organization's finances, including its revenues and sales, purchases, and bank accounts, among other things. There is a vast selection of systems available, ranging from simple bundles that are suited for use by smaller organizations to complex options that are designed for use by international corporations.

1.5 Application of ICT in Cyberspace

The use of computers to aid in the design process is referred to as computer-aided design, or CAD for short. There are numerous different kinds of design, including architectural, engineering, electronic, and highway, that each have their own specialized CAD systems. Customer Relationship Management (CRM) software is a tool that helps companies get a deeper understanding of their clientele by the collection and evaluation of data concerning their clients' product preferences, purchasing patterns, and other such details. Frequently associated with software applications, such as those used to operate call centers and loyalty cards, for instance, classic computer-based technology.

The "C" in ICT stands for "communication," which refers to the transfer of data by electronic methods, typically across some distance. This is typically accomplished through the use of interconnected systems of sending and receiving apparatus, wires, and satellite links. Complexity is typically associated with the technology used in the process of communication. Your ICT class will not require you to have any prior knowledge or familiarity with them. You do, however, need to be aware of some features of digital communications, and those aspects are listed below. These are largely concerned with the many kinds of networks and the various ways that users can connect to the internet. Let's take a quick look at these two things (further revision notes provide the details to support your study).

Self-Assessment Exercise 2

- | |
|--|
| <ol style="list-style-type: none">1. Examine the Traditional technologies based on computer systems2. Identify the Application of ICT in Cyberspace |
|--|



1.6 Summary

The unit discussed the evolution of ICT which stated that, First significant application of information technology (IT) began with the development of the very first mainframe computers, which were designed to meet the requirements of scientific research and the collection and processing of statistical data by the government The developments and applications of information technology have stretched beyond anyone's imagination. This

change, in conjunction with the rapid development and innovation in telecommunication technology and the Internet, has brought in a great deal of new business models and applications

Traditional technologies based on computer systems. The following are examples of types of ICT:

Use of the Application- Applications that are standard in the office; some examples are as follows: Word processing software, such as Microsoft Word, for writing letters, reports, and other documents; Calculating tools like Microsoft Excel's spread sheets Perform many types of financial analysis, including calculations, creating forecasting models, etc.

The use of computers to aid in the design process is referred to as computer-aided design, or CAD for short. There are numerous different kinds of design, including architectural, engineering, electronic, and highway, that each have their own specialized CAD systems. Customer Relationship Management (CRM)



1.7 References/Further Readings/Web Resources

Ignou Self-Learning Material (2019). Information and Communication Technology. <https://egyankosh.ac.in/handle/123456789/1>



1.8 Possible Answers to SAEs

Answers to SAEs 1

1. First significant application of information technology (IT) began with the development of the very first mainframe computers, which were designed to meet the requirements of scientific research and the collection and processing of statistical data by the government
2. The developments and applications of information technology have stretched beyond anyone's imagination. This change, in conjunction with the rapid development and innovation in telecommunication technology and the Internet, has brought in a great deal of new business models and applications

Answers to SAEs 2

1. Traditional technologies based on computer systems

The following are examples of types of ICT:

Use of the Application- Applications that are standard in the office; some examples are as follows:

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2. Application of ICT in Cyberspace

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Customer Relationship Management (CRM)

I Networks inside the organization

A network that facilitates the exchange of information between a particular population or populations inside an entity. A private network is another name for an organization's internal network. In the business world, the term "internal network" refers to a network in which all of an organization's employees are required to log in to a single shared domain that is not associated with Microsoft's operating system in order to access an enterprise-wide application such as payroll, health insurance, emergency services, or business development services. Applications of this kind are considered to be the sole property of the respective organization. It is necessary for the organization to have its own network, often known as a private network or an internal network, in order to facilitate the sharing of information among its personnel and the various groups that make up the company.

The process of connecting a number of pieces of hardware (input and output devices in addition to computer processing) together within of a single office or building is what is commonly referred to as a local area network, or LAN for short. Sharing resources on a local area network (LAN), whether they be pieces of hardware (such printers or scanners), pieces of software, or pieces of data, is one of the primary goals of a LAN. When working in an office setting where coworkers need access to the same data or programs, having this kind of network is really helpful.

ii) Networks from the outside

As was previously mentioned, the internal network is considered to be a private network that is shielded from the outside world. The term "public network" refers to the external network as well. A business entity or the corporate provide the information and business solutions on the www form or web page to the public on the external network of the company. As a result, all individuals are able to go to the external network and retrieve the information from anywhere, based on their specific requirements. The service provider, who is sometimes also referred to as the backbone carrier, is the organization responsible for providing the external network. For instance, AT&T, commonly known as "the mother bell," is frequently referred to as the backbone carrier or service provider all over the world. It indicates that when two remote corporate entities wish to share confidential information with one another, they are free to use any service provider network, often known as a "external network," in order to finish the communication path between them.

You will frequently have the need to speak with someone who is not a member of your local area network; in these instances, you will be need to be connected to a wide area

network (WAN). The Internet is the largest wide area network (WAN) there is; it is essentially a big network made up of other networks.

Unit 2: Concept of Information and Communication Technology (ICT)

Unit Structure

- 2.1 Introduction
- 2.2 Learning Outcomes
- 2.3 Meaning of Information and Communication Technology (ICT)
 - 1.3.1 Objectives of ICT policy

- 2.4 Roles of ICTs in E-Government Supporting Economy of Implementation
- 2.5 Use of ICT in Government
- 2.6 Summary
- 2.7 References/Further Readings/Web Resources
- 2.8 Possible Answers to Self-Assessment Exercise(s) within the content



2.1 Introduction

We mentioned in the last unit that the use of ICT in government operations facilitates speedy, transparent, accountable, efficient and effective interaction with the public, citizens, business and other agencies. There is a growing recognition worldwide that effective public sector governance requires the use of ICT to achieve more efficiency in the functioning of government and to improve the delivery of government services for organizations and individuals



2.2 Learning Outcomes

At the end of this unit, you should be able to;

1. Discuss what ICT means;
2. Discuss the objectives of ICTs policy;
3. Examine the role of ICTs in e-government;
4. Discuss some of the reasons why governments use ICT in its operation.



2.3 Meaning of Information and Communication Technology (ICT)

Information and communication technologies (ICT) is defined as a diverse set of technological tools and resources used to transmit, store, create, share or exchange information. These technological tools and resources include computers, the Internet (websites, blogs and emails), live broadcasting technologies (radio, television and webcasting), recorded broadcasting technologies (podcasting, audio and video players, and storage devices) and telephony (fixed or mobile, satellite, visio/video-conferencing, etc.) (<https://learningportal.iiep.unesco.org/en/glossary/information-and-communication-technologies-ict>).

Most of the developing countries understand the enormous potential of ICT, not only as a tool for improving governance and creating more jobs, but also more significantly as a means to enhance the standard of living of the people. The ICT policy aims at increased application of IT in all occupations, enhancing the IT industry base, creating a robust state information infrastructure and creating human resources for IT (Basu, 2004). Although the policy statements differ from country to country however there are some fundamental similarities in the objectives, which can be summarized as following:

2.3.1 Objectives of ICT policy

1. Upgrading of the standard of living of the people of the state through use of IT in all sectors as a tool to enhance productivity, efficiency and optimum utilization of resources, and through full exploitation of the employment potential of the IT sector.
2. Establishment of an information infrastructure comprising a high-speed broadband communication backbone, nodes, access network, distributed data warehouses and service locations to cater to the needs of trade, commerce, industry and tourism and also to enhance the delivery of government services to the people.
3. Facilitating the flow of direct investments.

Development of human resources for ICT through increased use of ICT in educational institutions and through academic and training programmers that improve the employability of educated youths in the ICT sector.

Facilitation of decentralized administration and empowerment of people through the application of ICT (Basu, 2004:118)

Self-Assessment Exercises 1

1. What is ICT?
2. State the Objective of ICT

2.4 Roles of ICTs in E-Government Supporting Economy of Implementation – ICTs increases the efficiency of government administration (this is a direct result of the replacement of street level bureaucrats by electronic information devices). Management is further enabled to more strictly control administrative activities of the workforce through the use of ICT application (Snellen, 2005). Supporting Public Service Provision – both private and public sectors now apply ICT to integrate and improve their service delivery. Through e-Business, the expectations of people with respect to the service level of public administration are rising. Supporting Democracy – representative democracy relies on the belief that best way to make a decision is wider participation for all citizens having access to relevant information. ICT promises direct democracy in the form of continuous opinion polling, instant referenda, tele-conferencing, digital cities, and discussion groups. ICT can enhance interactive policy-making for effective democratic governance. The Internet-related ICT facilities which are used in this respect are e-mail, use nets and newsgroups, Internet relay chat, and the World Wide Web (Snellen, 2005).

Issues Opportunities and challenges Decision and policy making initiated by government: -ICT can exploit the vast reserves of data the public sector has available to develop, model, visualise and simulate decisions and policies. Also by involving constituents through political representatives or directly through processes of information, consultation, active participation and elections.

Empowerment from the bottom :- ICT can help to leverage the voices and expertise of huge numbers of individuals and groups, setting their own agendas and developing their own policies in new forms of „crowdsourcing“, mass collaboration and mass creativity. This can also result in short term single issue politics, and sometimes in instant street politics and forms of mob-rule, but can potentially also build to more permanent countervailing power bases possibly at odds with governments.

Empowering communities and localities:-ICT can support the extension of participation beyond formal politics and the ballot box, by promoting subsidiarity at local and neighborhood level. This leverages local resources, know-how and skills for developing new forms of advocacy, support and social capital, which can both strengthen diverse cultures and interests as well as bridge between them.

Transparency and openness Can be supported by ICT through freedom of information and consultation, to reveal the purposes, processes and outcomes of government, also through real-time tracking and tracing. This will help place responsibility, reduce corruption and make decisions more responsive, although legitimate privacy and the space for risk taking should be safeguarded.

Accountability, rights and responsibilities: -ICT contributes to these becoming blurred as decision and policy-making are opened up and government shares the stage with other actors. Important questions are raised about whose voices are heard and who do they represent, with the ever-present danger of trivialization and short-termism unless the right to participate in policy making is balanced with some responsibility for policy impacts.

Reasons why Government use ICT in its Operations:

1. Priority development needs that require government involvement. E-government applications are best embedded in areas that are perceived as closely related to the priority development needs of the society. This approach creates broad supports, making it easier to overcome inherent difficulties and to sustain attention, commitment and funding.
2. Efficiency and effectiveness as key success criteria of government involvement. It is best if the role that government plays in such area is judged partly or predominant by factors that ICT can bring.

2.5 Use of ICT in Government

However, whether government will make use of ICT in its operation, and the ability of government to do so will depend on the following factors provided by Arjan de Jager (2008).

1. Availability of (initial) funding. The initial pilot e-government operation should start with a good understanding of the cost involved and with assured funding that follows careful analysis of opportunity costs.
2. Skills and culture of the civil service. Civil servants must be able (through ICT, change and programme management and partnership building skills) and willing to support e-government, or at a minimum must be eager to learn and change.
3. Co-ordination. This involves the necessary 'backroom' co-ordination and effort – within and between government agencies, and this must take place before any e-government application goes on-line in order to avoid duplication, assure interoperability and meet the expectations of users.
4. Legal Framework. Legal requirements should be dealt with at the initial stage of the ICT operation by the government.

5. ICT Infrastructure. Infrastructure needs should be assessed against the background of requirements and desired results of e-government development plans.
6. Political leadership and long-term political commitment. The chief executive officer of the public sector must be committed to e-government; he must lead and build broad support for it, and must be eager to learn.
7. Public engagement. The public should have a personal stake in e-government development. Their engagement should be reinforced by actively, genuinely and continuously soliciting people to participate in the development of e-government applications so that there are custom-crafted to the way people live and work.
8. Plans for development of human capital and technical infrastructure. There should be a vision and plans for closing the existing gaps in ICT skills and access, otherwise, neither the public administration nor the citizenry can hope to become ICT literate and capable, which are important ingredients for e-government success.
9. Partnership. The government should involve business firms and civil society organization (CSOs) as its partners in securing access and adequate capacity to service the ICT network.
10. Monitoring and evaluation. Setting clear responsibilities and realistic benchmarks for e-government, as well as for its transparent monitoring, is an important ingredient for eventual transparency and accountability framework in the public sector (Arjan de Jager, 2008).

Self-Assessment Exercises 2

1. Examine in detail factors that will determine whether government will make use of ICT in its operation
2. Examine in detail factors that will determine whether government will make use of ICT in its operation.
3. Outline the reason of ICT in e-government supporting Economy of Implementation



2.6 Summary

In this unit, we have examined the importance of ICT in government operations. We discussed the objectives of ICT, roles of ICT in e-government and the reasons why Government use ICT in its Operations. We also discussed those factors that will determine whether government will make use of ICT in its operations.



2.7 References And Further Reading

- Arjan de Jager (2008) E-governance in the Developing World in Action: the Case of the District Net in Uganda. *The Journal of Community Informatics*. Vol. 4, No 2.
- Basu, S. (2004) E-Government and Developing Countries: An Overview. *International Review of Law Computers and Technology*, Vol. 18, No.1, pp 109-132.

- Maduabum, C. (2008) *The Mechanics of Public Administration in Nigeria*. Lagos. Concept Publications limited.
- Snellen, I. (2005) *E-GOVERNMENT: A Challenge for Public Management* in Ferlie, E. Lynn, L. E. and Pollitt, C. (eds) *The Oxford Handbook of Public Management* pp. 399 – 420
- Ignou Self-Learning Material (2019). *Information and Communication Technology*. <https://egyankosh.ac.in/handle/123456789/1>



1.8 Possible Answers to SAEs

Answers to SAEs 1

1. Information and communication technologies (ICT) is defined as a diverse set of technological tools and resources used to transmit, store, create, share or exchange information. These technological tools and resources include computers, the Internet (websites, blogs and emails), live broadcasting technologies (radio, television and webcasting), recorded broadcasting technologies (podcasting, audio and video players, and storage devices) and telephony (fixed or mobile, satellite, visio/video-conferencing)
2. Upgrading of the standard of living of the people of the state through use of IT in all sectors as a tool to enhance productivity, efficiency and optimum utilization of resources, and through full exploitation of the employment potential of the IT sector. Establishment of an information infrastructure comprising a high-speed broadband communication backbone, nodes, access network, distributed data warehouses and service locations to cater to the needs of trade, commerce, industry and tourism and also to enhance the delivery of government services to the people

Answers to SAEs 2

1. Government operations facilitate speedy, transparent, accountable, efficient and effective interaction with the public, citizens, business and other agencies. There is a growing recognition worldwide that effective public sector governance requires the use of ICT to achieve more efficiency in the functioning of government and to improve the delivery of government services for organizations and individuals. both private and public sectors now apply ICT to integrate and improve their service delivery. Through e-Business, the expectations of people with respect to the service level of public administration are rising. Supporting Democracy – representative democracy relies on the belief that best way to make a decision is wider participation for all citizens having access to relevant information. ICT promises direct democracy in the form of continuous opinion polling, instant referenda, tele-conferencing, digital cities, and discussion groups

2. Empowerment from the bottom :- ICT can help to leverage the voices and expertise of huge numbers of individuals and groups, setting their own agendas and developing their own policies in new forms of „crowdsourcing“, mass collaboration and mass creativity. This can also result in short-term single-issue politics, and sometimes in instant street politics and forms of mob-rule, but can potentially also build to more permanent countervailing power bases possibly at odds with governments.
3. Accountability, rights and responsibilities: -ICT contributes to these becoming blurred as decision and policy-making are opened up and government shares the stage with other actors. Important questions are raised about whose voices are heard and who do they represent, with the ever-present danger of trivialization and short-termism unless the right to participate in policy making is balanced with some responsibility for policy impacts.
4. Transparency and openness Can be supported by ICT through freedom of information and consultation, to reveal the purposes, processes and outcomes of government, also through real-time tracking and tracing. This will help place responsibility, reduce corruption and make decisions more responsive, although legitimate privacy and the space for risk taking should be safeguarded.

1. Priority development needs that require government involvement. E-government applications are best embedded in areas that are perceived as closely related to the priority development needs of the society. This approach creates broad supports, making it easier to overcome inherent difficulties and to sustain attention, commitment and funding.

2. Efficiency and effectiveness as key success criteria of government involvement. It is best if the role that government plays in such area is judged partly or predominant by factors that ICT can bring.

Unit 3: ICT and Policy-Making

Unit Structure

- 3.3 Introduction
- 3.2 Learning Outcomes
- 3.3 ICT and Policy-Making
- 3.4 The objective of technology-enabled information

- 3.5 Key Dimensions for Effective Engagement
- 3.6 Summary
- 3.7 References/Further Readings/Web Resources
- 3.8 Possible Answers to Self-Assessment Exercise(s) within the content



3.3 Introduction

In this Unit student will be introduced to key dimensions that are needed to characterize e-participation initiatives. Democratic policymaking involves effective participation of citizens in the deliberations of issues in the political arena.



3.2 Learning Outcomes

At the end of this unit, you should be able to:

1. Explain the ICT and Policy-Making
2. Discuss key dimension needed to enhance citizens participation in policy process
3. Discuss how technology-enabled information can improve policy process.



3.3 ICT and Policy-Making

ICT provides the potential to allow policy-makers to go directly to users of services and those at whom the policy is aimed to seek their input. Citizens may be able to have greater influence on policy content through consultation earlier in the policy making process rather than later. It can be argued that consultation at the stage of a draft policy document (stage 3) requires citizens to have the communication skills to interpret the typical legalistic terminology of the document before commenting appropriately. Whereas if the wider audience of citizens are given the opportunity to comment before this stage in policymaking, they will still need to be well-informed on issues, but the information could be made more readable and understandable (Macintosh, 2004).

3.4 The objective of technology-enabled information dissemination, consultation and participation

The objective of technology-enabled information dissemination, consultation and participation is to improve the policy-making process through a range of devices designed to enable:

1. Reaching and engaging with a wider audience through a range of consultation and participation technologies adapted to cater for the diverse technical and communicative skills of citizens thereby enabling broader participation.
2. Providing relevant information in a format that is both more accessible and more understandable to the target audience to enable more informed participation.
3. Enabling more in-depth consultation and supporting deliberative debate online.

4. Facilitating the analysis of contributions to support policy-makers and to improve policy.
5. Providing relevant and appropriate feedback to citizens to ensure openness and transparency in the policy-making process. Monitoring and evaluating the process to ensure continuous improvement.

Self-Assessment Exercises 3

- | |
|--|
| <ol style="list-style-type: none">1. What is e-participation and policy-making?2. The objective of technology-enabled information dissemination, consultation and participation |
|--|

3.4 Key Dimensions for Effective Engagement

When we talk of policy-making process, there are certain key dimensions that need to be considered before citizens can engage effectively in the process.

This key dimension considers to what level, or how far, citizens are engaged. Democratic political participation must involve the means to be informed, the mechanisms to take part in the decision-making and the ability to contribute and influence the policy agenda.

Dimension considers when to engage citizens are:

1. Actors

This key dimension considers who should be engaged and by whom. It should specifically identify the stakeholders and their respective roles and the target audience.

2. Technologies used

This key dimension considers how and with what to engage citizens and support participation. The main characteristics here are the application of the technology, e.g. e-consultation or e-referenda and the underlying technology.

3. Rules of engagement

This key dimension considers what personal information will be needed/collected, how it be used by the system, and also what citizens can and cannot do during the e-participation. As such, the amount of personal information requested should be described along with any privacy statement on how it will be used.

4. Duration and sustainability

This key dimension considers for what period of time the initiative lasted.

5. Accessibility

This key dimension considers how many citizens participated and from where. It identifies both the channel and the locality of participation for example whether it is from a cyber café, public library, town hall or other location.

6. Resources and Promotion

This identifies financial implications of using ICTs to support participation

7. Evaluation and Outcomes

This key dimension is concerned with how the initiative was evaluated (presuming that it was), the results of the evaluation and also the overall results from the initiative.

8. Critical factors for success

This dimension provides a place for some background information as to why the initiative achieved what it did.

Self-Assessment Exercises 2

1. What are the key dimensions that need to be considered before citizens can engage effectively in the process.
2. Explain the Rules of engagement in citizen engagement



3.6 Summary

We have learnt in this unit that online engagement of citizens requires tools for effective participation. We discussed the necessary tools required. We also discussed various key dimensions that need to be considered for effective citizens' engagement.



3.7 References/Further Readings/Web Resources

Macintosh, A. (2004). Characterizing E-Participation in Policy-Making. Proceedings of the 37th Hawaii International Conference on System Sciences.

OECD (2003) Promise and Problems of E-Democracy: Challenges of Online Citizen Engagement



3.8 Possible Answers to SAEs

These are the answers to the SAEs within the content. Arrange the answers in accordance with the way the SAEs appear in the content. For example

Answers to SAEs 3

1. E-participation involves the extension and transformation of participation in societal democratic (ICT), primarily the Internet. It aims to support active citizenship with the latest technology developments, increasing access to and availability of participation in order to promote fair and efficient society and government and consultative processes

mediated by information and communication technologies (Saebo, Rose and Flak, 2008). While policy making is what government chooses to do or not to do

2. The objective of technology-enabled information dissemination, consultation and participation

The objective of technology-enabled information dissemination, consultation and participation is to improve the policy-making process through a range of devices designed to enable:

1. Reaching and engaging with a wider audience through a range of consultation and participation technologies adapted to cater for the diverse technical and communicative skills of citizens thereby enabling broader participation.
2. Providing relevant information in a format that is both more accessible and more understandable to the target audience to enable more informed participation.
3. Enabling more in-depth consultation and supporting deliberative debate online.
4. Facilitating the analysis of contributions to support policy-makers and to improve policy.
5. Providing relevant and appropriate feedback to citizens to ensure openness and transparency in the policy-making process. Monitoring and evaluating the process to ensure continuous improvement

Answers to SAEs 2

1. Actors

This key dimension considers who should be engaged and by whom. It should specifically identify the stakeholders and their respective roles and the target audience.

Technologies used

This key dimension considers how and with what to engage citizens and support participation. The main characteristics here are the application of the technology, e.g. e-consultation or e-referenda and the underlying technology.

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Resources and Promotion

This identifies financial implications of using ICTs to support participation

Evaluation and Outcomes

This key dimension is concerned with how the initiative was evaluated (presuming that it was), the results of the evaluation and also the overall results from the initiative.

Critical factors for success

This dimension provides a place for some background information as to why the initiative achieved what it did.

2. This key dimension considers what personal information will be needed/collected, how it be used by the system, and also what citizens can and cannot do during the e-participation. As such, the amount of personal information requested should be described along with any privacy statement on how it will be used.

Unit 4: Digital Initiatives

Unit Structure

4.4 Introduction

4.2 Learning Outcomes

4.3 Digital Government Initiatives

4.3.4 Policy and Management Considerations in Digital Initiatives

4.4 Government Digital Strategy

- 4.5 Skills in Government Digital Initiative
 - 4.5.4 Data Challenges
 - 4.5.2 Cost Factors
- 4.6 Technology
- 4.4 Summary
- 4.5 References/Further Readings/Web Resources
- 4.6 Possible Answers to Self-Assessment Exercise(s) within the content



4.4 Introduction

In this unit student will come across a set of management and policy concerns that must be understood in an integrated way in order to avoid the challenges that government managers may come across in the world of digital government. This unit is structured to examine this issue in detail.



4.2 Learning Outcomes

At the end of this unit, you should be able to: Discuss the main public policy and management concerns for digital government.



4.3 Digital Government Initiatives

Digital government research can be valuable to government leaders and managers who are responsible for IT adoption and deployment. It can help them appreciate the strategic possibilities that technology presents for creating, improving, or streamlining government processes, functions, and programs (Dawes, 2008). Government managers may however be confronted with challenges in their effort to operate in the world of modern technology.

4.3.4 Policy and Management Considerations in Digital Initiatives

- a. Strategy
- b. Policies
- c. Skills
- d. Data Challenges
- e. Costs
- f. Technology

4.4 Government Digital Strategy

In both business and government, strategic thinking is concerned with mission-critical objectives, with an emphasis on customers and stakeholders. Strategies place a high value on human, organizational, and technological resources and seek maximum return on those investments, rather than minimized costs. The first element of strategy is a clear and agreed upon description of the business, policy, or program need that is the reason for the effort

Strategy also addresses existing reality. Every new information system goes into some preexisting situation. The situation may include other, older information systems, business processes that channel work and information flow, and standard operating practices that have grown up over time to accommodate past problems and changing needs. A strategy should have a reasonably long life so that it can guide action into the foreseeable future.

Technology is the one component of information-based strategies that is likely to change quickly. Consequently, technologies that can be integrated in to or readily replace existing infrastructure create the fewest undesirable dependencies, conflicts, and costs. At the strategic level, communication needs to be clear, consistent, focused on the essentials, and delivered in plain language. Policies Information policies in the form of laws, regulations, executive orders, and other official statements guide actions and decisions about why, how, when, and who uses information. Information policies are also instruments of public management. In this case, policies generally fall into two main categories: policies that promote information stewardship and policies that promote information use. Stewardship is a conservative principle that recognizes government information is a public 'good' like clean air and safe streets. It is concerned with accuracy, integrity, preservation, and protection of information. Policies that promote stewardship address such topics as data definitions, data and system security, records management, personal privacy, confidential treatment of sensitive information, and long term preservation of information with enduring social, legal, or historical value. The usefulness principle recognizes that government information is a valuable governmentwide or public asset that can generate real benefits through active use and innovation. These policies promote the use of information to improve the quality or lower the cost of services. They encourage agencies to use information to create new services or to devise better ways of doing business.

1. Explain the Digital government Businesses
2. Policy and Management Considerations in Digital Initiatives

4.5 Skills in Government Digital Initiative

Every information-intensive government project needs a variety of skills. Analysis and interpretation skills are necessary at every stage of an information project. They start with problem definition, the process by which an organization describes current symptoms and uncovers the processes, policies, and practices that are contributing factors. At this stage, process analysis, system audits, stakeholder analysis, customer satisfaction surveys, performance reviews, statistical trending, or similar activities are needed. In later stages, analysis of user needs, business process alternatives, work flow, and information flow become more important.

4.5.4 Data Challenges

Public managers must bridge the gap between business needs (i.e. program initiatives and work practices) and the relevant data available to support them. Data is the raw material for decision making and planning- the foundation for actions taken by the agency.

Turning data into usable information requires an understanding of what work must be accomplished as well as the data available to help.

4.5.2 Cost Factors

Three kinds of relationships must be considered in estimating the relationship costs in a project. The first is managing the relationships inside the day-to-day working environment of the project. The second has to do with maintaining relationships with immediate project sponsors, who may be in different parts of the government. The third is managing relationships in the larger environment. Identifying external stakeholders, securing strategic partnership with them, and maintaining those relationships all require more time and money than most organization recognize.

4.6 Technology

Technology choices have powerful immediate and long-term implications. These choices influence many aspects of an organization, including skills and staffing patterns, work processes, and the choice and operation of other technologies. New technology usually comes with new business rules, practices, and processes that become resistant to change after implementation. Thus, once implemented, a particular technology becomes embedded in the way people work and influences the way they perceive and understand what they do.

The status of the existing technology infrastructure is another critical factor in decision about which technology to choose and how to deploy it. Changes in the type and number of users, responsiveness, capacity, level of security, types of connection, and interfaces with legacy systems will all need to be considered in both acquisition and implementation (Dawes, 2008).

Self-Assessment Exercises 2

1. Explain the Skills in Government Digital Initiative
2. Outline the Data Challenges
3. Briefly explain Cost Factors



4.6 Summary

In this unit the main discussion has focused on the examination of those policy and management considerations in digital initiatives.



4.7 References/Further Readings/Web Resources

Dawes, S. S (2008) "Introduction to Digital Government research in Public Policy and Management" in Chen, H., Brandt, L., Gregg, V. et al (eds) Digital Government: EGovernment Research, Case Studies, and Implementation. New York. Springer Science+Business Media.



4.8 Possible Answers to SAEs

These are the answers to the SAEs within the content. Arrange the answers in accordance with the way the SAEs appear in the content. For example

Answers to SAEs 4

4. Strategy

In both business and government, strategic thinking is concerned with mission-critical objectives, with an emphasis on customers and stakeholders. Strategies place a high value on human, organizational, and technological resources and seek maximum return on those investments, rather than minimized costs. The first element of strategy is a clear and agreed upon description of the business, policy, or program need that is the reason for the effort

Strategy also addresses existing reality. Every new information system goes into some preexisting situation. The situation may include other, older information systems, business processes that channel work and information flow, and standard operating practices that have grown up over time to accommodate past problems and changing needs. A strategy should have a reasonably long life so that it can guide action into the foreseeable future. Technology is the one component of information-based strategies that is likely to change quickly. Consequently, technologies that can be integrated in to or readily replace existing infrastructure create the fewest undesirable dependencies, conflicts, and costs. At the strategic level, communication needs to be clear, consistent, focused on the essentials, and delivered in plain language. Policies Information policies in the form of laws, regulations, executive orders, and other official statements guide actions and decisions about why, how, when, and who uses information. Information policies are also instruments of public management. In this case, policies generally fall into two main categories: policies that promote information stewardship and policies that promote information use. Stewardship is a conservative principle that recognizes government information is a public 'good' like clean air and safe streets. It is concerned with accuracy, integrity, preservation, and protection of information. Policies that promote stewardship address such topics as data definitions, data and system security, records management, personal privacy, confidential treatment of sensitive information, and long term preservation of information with enduring social, legal, or historical value. The usefulness principle recognizes that government information is a valuable governmentwide or public asset that can generate real benefits through active use and innovation. These policies promote the use of information to improve the quality or lower the cost of services. They encourage agencies to use information to create new services or to devise better ways of doing business.

Skills

Every information-intensive government project needs a variety of skills. Analysis and interpretation skills are necessary at every stage of an information project. They start with

problem definition, the process by which an organization describes current symptoms and uncovers the processes, policies, and practices that are contributing factors. At this stage, process analysis, system audits, stakeholder analysis, customer satisfaction surveys, performance reviews, statistical trending, or similar activities are needed. In later stages, analysis of user needs, business process alternatives, work flow, and information flow become more important.

Data Challenges

Public managers must bridge the gap between business needs (i.e. program initiatives and work practices) and the relevant data available to support them. Data is the raw material for decision making and planning- the foundation for actions taken by the agency. Turning data into usable information requires an understanding of what work must be accomplished as well as the data available to help.

Cost Factors

Three kinds of relationships must be considered in estimating the relationship costs in a project. The first is managing the relationships inside the day-to-day working environment of the project. The second has to do with maintaining relationships with immediate project sponsors, who may be in different parts of the government. The third is managing relationships in the larger environment. Identifying external stakeholders, securing strategic partnership with them, and maintaining those relationships all require more time and money than most organization recognize.

Technology

Technology choices have powerful immediate and long-term implications. These choices influence many aspects of an organization, including skills and staffing patterns, work processes, and the choice and operation of other technologies. New technology usually comes with new business rules, practices, and processes that become resistant to change after implementation. Thus, once implemented, a particular technology becomes embedded in the way people work and influences the way they perceive and understand what they do.

The status of the existing technology infrastructure is another critical factor in decision about which technology to choose and how to deploy it. Changes in the type and number of users, responsiveness, capacity, level of security, types of connection, and interfaces with legacy systems will all need to be considered in both acquisition and implementation (Dawes, 2008:404-424).

Answers to SAEs 2

4. Skills in Government Digital Initiative

Every information-intensive government project needs a variety of skills. Analysis and interpretation skills are necessary at every stage of an information project. They start with problem definition, the process by which an organization describes current symptoms and uncovers the processes, policies, and practices that are contributing factors.

2. Data Challenges

Public managers must bridge the gap between business needs (i.e. program initiatives and work practices) and the relevant data available to support them. Data is the raw material for decision making and planning- the foundation for actions taken by the agency. Turning data into usable information requires an understanding of what work must be accomplished as well as the data available to help

3. Cost Factors

Three kinds of relationships must be considered in estimating the relationship costs in a project. The first is managing the relationships inside the day-to-day working environment of the project.

Unit 5: ICT and Public Network

Unit Structure

- 1.1 Introduction
- 1.2 Learning Outcomes
- 1.3 ICT public Network
- 1.4 Public Network Concept

- 1.5 Public net-work projects
- 1.6 Summary
- 1.7 References/Further Readings/Web Resources
- 1.8 Possible Answers to Self-Assessment Exercise(s) within the content



1.1 Introduction

Recall our discussions in the previous units on the connections between information technology and how this can improve the public policy-making process by providing opportunity for citizens to contribute to the policy process. In this unit we are going to discuss this issue further by examining a new concept ‘public network’ and see how this can also impact on the policy process.



1.2 Learning Outcomes

At the end of this unit, you should be able to:

1. Discuss public network project;
2. Examine online features



1.3 ICT public Network

According to Clift (2004) public net-work is a new concept. It represents the strategic use of ICTs to better implement established public policy goals and programs through direct and diverse stakeholder involvement online. If e-democracy in government represents input into governance, then public net-work represents participative output using the same or similar online tools. Public net-work is a selective, yet public, approach that uses two-way online information exchange to carry out previously determined government policy.

Self-Assessment Exercises 1

- | |
|--|
| 1. What do you understand by the term public net-work? |
|--|

1.4 Public Network Concept

According to Clift (2004) public net-work is a new concept. It represents the strategic use of ICTs to better implement established public policy goals and programs through direct and diverse stakeholder involvement online. If e-democracy in government represents input into governance, then public net-work represents participative output using the same or similar online tools. Public net-work is a selective, yet public, approach that uses two-way online information exchange to carry out previously determined government policy.

1.5 What are public net-work projects?

To succeed, these projects must adapt emerging models of distributed information input and information sharing and develop models for sustained knowledge exchange/

discussion. They must also build from the existing knowledge about online communities, virtual e-libraries, newsletters, and Communities of Practice/Interest. Some of the specific online features include:

1. Topical Portal – The starting point for public net-work is a web site that provides users a directory to relevant information resources in their field – these often include annotated subject guide links and/or standard Yahoo-style categories.
2. E-mail Newsletter –. Most projects keep people up-to-date via regularly produced e-mail newsletters. This human edited form of communication is essential to draw people back to the site and can be used to foster a form of high value interaction that helps people feel like they are part of the effort.
3. Personalization with E-mail Notification – Some sites allow users to create personal settings that track and notify them about new online resources of interest. New resources and links to external information are often placed deep within an overall site and “What’s New” notification dramatically increases the value provided by the project to its users.
4. Event Calendar – Many sites are a reliable place to discover listings of key current events and conferences.
5. FAQ and Question Exchange – A list of answers to frequently asked questions as well as the regular solicitation of new or timely questions from participants. Answers are then gathered from other participants and shared with all via the web site and/or e-newsletter.
6. Document Library – Some sites move beyond the portal directory function and gather the full text of documents. This provides a reliable long-term source of quality content that often appears and is removed from other web sites without notice.
7. Discussions – Using a mix of e-mail lists and/or web forums, these sites encourage ongoing and informal information exchange. This is where the “life” of the public net-work online community is often expressed.
8. Other features include news headline links from outside sources, a member directory, and real-time online features (Clift, 2004).

Self-Assessment Exercises 2

- | |
|--|
| <ol style="list-style-type: none">1. What is Public Network Concept?2. What are public net-work projects? |
|--|



1.6 Summary

In this unit we have discussed how public network can improve policy process. Public net-work represents participative output using the same or similar online tools. It involves

the strategic use of ICT tools for better implementation of public policy goals. Its effective use invariably can improve public service delivery



1.7 References/Further Readings/Web Resources

Clift, S. (2004) E-Democracy, E-Governance and Public Network. Open-Source-Jahrbuch 2004, hrsg. von Robert A. Gehring und Bernd Lutterbeck, Berlin (Lehmanns Media) 2004



1.8 Possible Answers to SAEs

These are the answers to the SAEs within the content. Arrange the answers in accordance with the way the SAEs appear in the content. For example

Answers to SAEs 1

Public net-work is a new concept. It represents the strategic use of ICTs to better implement established public policy goals and programs through direct and diverse stakeholder involvement online. If e-democracy in government represents input into governance, then public net-work represents participative output using the same or similar online tools. Public net-work is a selective, yet public, approach that uses two-way online information exchange to carry out previously determined government policy.

Answers to SAEs 2

1. Public net-work is a new concept. It represents the strategic use of ICTs to better implement established public policy goals and programs through direct and diverse stakeholder involvement online. If e-democracy in government represents input into governance, then public net-work represents participative output using the same or similar online tools. Public net-work is a selective, yet public, approach that uses two-way online information exchange to carry out previously determined government policy.
2. To succeed, these projects must adapt emerging models of distributed information input and information sharing and develop models for sustained knowledge exchange/ discussion. They must also build from the existing knowledge about online communities, virtual e-libraries, newsletters, and Communities of Practice/Interest. Some of the specific online features include:
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10. Other features include news headline links from outside sources, a member directory, and real-time online features.

MODULE 3

Unit 1 e-Service in Public Sector

Unit Structure

- 1.1 Introduction
- 1.2 Learning Outcomes
- 1.3 e-Service in Public Sector

- 1.3.1 Barriers to e-Service Development
- 1.4 e-Health and e-Learning
- 1.5 Advantages of using Online Tools
- 1.6 Summary
- 1.7 References/Further Readings/Web Resources
- 1.8 Possible Answers to Self-Assessment Exercise(s) within the content



1.1 Introduction

In this unit, student will be introduced to the concept of e-service, different aspect of eservice as well as benefits that are derived from e-service. The unit will also discuss different elements that constitute barriers to e-service development.



1.2 Learning Outcomes

At the end of this unit, you should be able to: Discuss the concept of e-service; Examine different aspect of e-service; Identify and discuss barriers to e-service development Discuss the concepts of ‘E-Health’ and ‘E-Learning’.



1.3 e-service in Public Sector

The concept of e-service represents one prominent application of utilizing the use of information and communication technologies in different areas. E-services are deeds, efforts or performance whose delivery is mediated by information technology. Such e-service includes the service element of e-tailing, customer support and service delivery (Rowley, 2006). This definition reflects three main components: service provider, service receiver and the channels of service delivery (i.e., technology). As concerned public e-service, public agencies are the service provider and citizens as well as businesses are the service receiver. Internet is the main channel of service delivery. Other classic channels include, telephone, call center, public kiosk, mobile phone and television.

E-service Benefits

E-service benefits include the following:

- Accessing a greater customer base
- Broadening market reach
- Lowering of entry barriers to new market and cost of acquiring new customers
- Alternative communication channels to new customers
- Increasing services to customers
- Enhancing perceived company’s image
- Gaining competitive advantages
- Potential for increasing customer knowledge
- Different aspects of an e-service

There are different aspects of e-service which can be considered. A public e-service is about two actors communicating. A company needs information from the municipality in order to make decisions about the business and the application, i.e. the company needs to

be informed by the municipality and the municipality needs to inform the company. The company needs to send an application to the municipality to get a decision from the municipality; i.e. the company needs to inform the municipality and the municipality needs to be informed about the application from the company. The company is both a sender and a receiver and these are also the roles of the municipality in the communicating process.

A public e-service is also about two organisations conducting their respective tasks. One important task for a municipality is to give permission to firms doing business, and for the company it is important to get permission in order to produce results, e.g. selling food in a shop or in a restaurant. This means that the e-service developed is created to support the producing processes in two different types of work practices, one producing food permissions (a municipality) and the other producing food to customers (Rostlinger and Cronholm,

Self-Assessment Exercises 1

1. What are the main benefits of e-service?

1.3.1 Barriers to E-service Development

Hassan, Shehab and Peppard (2010) gave a variety of elements that get in the way of eservice development. Those elements can be grouped under six major categories. However, many elements can fall under more than one category, depending on different perspectives.

These categories are:

Political barriers - Those barriers are related to the political leadership such as lack of potential will and support, lack of vision and strategy, absence of an E-government champion, over-ambitious milestone, and absence of detailed policy.

Administrative barriers - Those barriers relate to the complex issues that can arise as a result of poor organisational infrastructure, complexity and poor project management, lack of coordination among organisations/ departments, conflicting priorities of organisations, old structure and processes, lack of e-service applications, lack of partner readiness and cooperation difficulty in reengineering of internal processes.

Resistance barriers - This category relates to barriers around resistance to innovation by all levels of government personnel which can slow down, impair or prevent the necessary redesign of organizations and their processes required to deliver effective eservice. The employees may resist the shift of power resulting from the introduction of e-service. Further, this initiation will require structural reforms in the organization, modification of job descriptions and change in duties.

Technological barriers - Many e-services are based on the evolution of earlier public administration systems and ICT network infrastructures, which can create technical incompatibilities between systems within one administration. Other technological challenges include developing secure identification and

authentication systems, poor infrastructure, lack of standards for quality, design of websites/portals, unreliable internet connections and issues related to security and privacy. Cultural barriers are those associated with either organisational or social culture. Examples may include: lack of awareness/ information, inactive citizens' participation, opposition by professional or union interests, e-literacy, multi-lingual/ multicultural issues, resistance to change by citizens, and government's reluctance for citizens' involvement. Legislative barriers relate to the existence of appropriate laws, regulations, directives that allow or facilitate the deployment of electronic services. Lack of suitable legal framework/ Unsuitable legislations, complexity of required policies and lack of methods for productivity and progress monitoring, are examples of the legislative barriers .We may consider two services that may be produced and delivered online

1.4 E-Health and E-Learning

E-Health

E-health is defined as the cost-effective and secure use of information and communication technologies in support of health and health-related fields, including health-care services, health surveillance, health literature and health education, knowledge and research (WHO)

Eysenbach offers the definition of e-health as:

“E-health = Medicine+Communication+Information+Society”

Eysenbach listed 10 other "e's" implicit in eHealth. These are:

1. To increase Efficiency in health care;
2. Enhancing quality of care;
3. Evidence-based;
4. Empowerment of consumers and patients;
5. Encouragement of a new relationship between patient and health professional;
6. Education through online sources;
7. Enabling information exchange and communication in a standardized way between health establishments;
8. Extending the scope of health care beyond its conventional boundaries;
9. Ethical considerations;
10. Equity, as all measures need to be taken to bring benefits to all people without exception.

e-Health applications vary widely and can be used to:

1. store, process and transmit patient information;
2. manage the diverse clinical, administrative and financial information generated in hospitals; provide mechanisms for diagnostics and treatment between health professionals separated by distance; build capacity by offering health sciences training and continuing education courses online to students and health professionals; take advantage of the growing number of mobile devices to offer innovative approaches to health care;make highly complex biomedical research achievable through distributed computing or Grids (ECOSOC, 2009).

E-learning

E-Learning is defined as all forms of electronic supported learning and teaching, which are procedural in character and aim to effect the construction of knowledge with reference to individual experience, practice and knowledge of the learner. Information and communication systems, whether networked or not, serve as specific media to implement the learning process.

E-learning is essentially the computer and network enabled transfer of skills and knowledge.

E-learning refers to using electronic applications and processes to learn. E-learning applications and processes include Web-based learning, computer-based learning, virtual classrooms and digital collaboration. Content is delivered via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM. It is used by the educational Institutions to enhance and support the class room teaching and offering courses to a larger population of learners across the Globe. It can be self-paced or instructor led and includes media in the form of text, image, animation, streaming video and audio (Nagarajan and Jiji, 2010).

Before implementing eLearning, organizations need to set common goals or objectives.

Common goals and objectives include the following:

- To reduce learning costs
- To motivate employees
- To improve flexibility of course delivery
- To expand the capabilities of the business
- To reduce the need for classroom training
- To track employee progress
- To track training effectiveness (or absorption)
- To link training with Knowledge Management
- To reduce time away from the job
- To improve job performance
- To support business objectives
- To make learning available anytime, anywhere (Nagarajan and Jiji, 2010)

E-Learning represents an innovative shift in the field of learning, providing rapid access to specific knowledge and information. It offers online instruction that can be delivered anytime and anywhere through a wide range of electronic learning solutions such as Web-based courseware, online discussion groups, live virtual classes, video and audio streaming, Web chat, online simulations, and virtual mentoring.

E-Learning enables organizations to transcend distance and other organizational gaps by providing a cohesive virtual learning environment. Companies must educate and train vendors, employees, partners, and clients to stay competitive, and eLearning can provide such just-in-time training in a cost-effective way (Nagarajan and Jiji, 2010)

1.5 Advantages of Using Online Tools

- Keeping in line with global trend
- Sharing and gleaning of ideas
- Free innovative, interactive online learning tools

Useful online lectures

Make teaching and learning less stressful and informative

Provides solution to space problems

Overcrowding challenges at classes abated

Teaching/learning made 'actually' interactive

Time and cost effective (Agbaeze, 2010).

Self-Assessment Exercises 2

1. Discuss critically those elements that constitute barriers to the development of e-service.
2. Discuss common goals that organizations will need to set before implementing e-learning



1.6 Summary

In this unit, we have looked at the concept of e-service, discussed the benefits of e-service.

The unit has also discussed different aspect of an e-service as well as various barriers to eservice development. The unit also examined the concepts of e-health and e-learning, discusses their importance to citizens in the areas of health and education.



1.7 References/Further Readings/Web Resources

Agbaeze, G. (2010) Unlimited Internet Resources. Lagos. GEOTEK NETWORK.

Eysenbach, G. What is e-health? J Med Internet Res, 2001, 3(2):e20

ECOSOC, (2009) eHealth: use of information and communication technology in health.

Hassan, H. S., Shehab, E. and Peppard, J. (2010) Towards Full Public Service Environment in Developing Countries. World Academy of Science, Engineering and Technology, 42.

Nagarajan, P. and Jiji, G.W. (2010) Online Educational System (e-learning). International Journal of u- and e- Service, Science and Technology Vol. 3, No. 4, December.

Rostlinger, A., and Cronholm, S. (undated) Design Criteria for Public E-service



1.8 Possible Answers to SAEs

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Answers to SAEs 1

E-service Benefits

E-service benefits include the following:

Accessing a greater customer base
Broadening market reach
Lowering of entry barriers to new market and cost of acquiring new customers
Alternative communication channels to new customers
Increasing services to customers
Enhancing perceived company's image
Gaining competitive advantages
 Potential for increasing customer knowledge
Answers to SAEs 2

1. Political barriers –

Those barriers are related to the political leadership such as lack of potential will and support, lack of vision and strategy, absence of an E-government champion, over-ambitious milestone, and absence of detailed policy.

Administrative barriers –

Those barriers relate to the complex issues that can arise as a result of poor organisational infrastructure, complexity and poor project management, lack of coordination among organisations/ departments, conflicting priorities of organisations, old structure and processes, lack of e-service applications, lack of partner readiness and cooperation difficulty in reengineering of internal processes.

Resistance barriers –

This category relates to barriers around resistance to innovation by all levels of government personnel which can slow down, impair or prevent the necessary redesign of organizations and their processes required to deliver effective e-service. The employees may resist the shift of power resulting from the introduction of e-service. Further, this initiation will require structural reforms in the organization, modification of job descriptions and change in duties.

Technological barriers –

Many e-services are based on the evolution of earlier public administration systems and ICT network infrastructures, which can create technical incompatibilities between systems within one administration. Other technological challenges include developing secure identification and authentication systems, poor infrastructure, lack of standards for quality, design of websites/portals, unreliable internet connections and issues related to security and privacy.

Cultural barriers

Are those associated with either organisational or social culture. Examples may include: lack of awareness/ information, inactive citizens' participation, opposition by professional or union interests, e-literacy, multi-lingual/ multicultural issues, resistance to change by citizens, and government's reluctance for citizens' involvement.

Legislative barriers

Relate to the existence of appropriate laws, regulations, directives that allow or facilitate the deployment of electronic services. Lack of suitable legal framework/ Unsuitable

legislations, complexity of required policies and lack of methods for productivity and progress monitoring, are examples of the legislative barriers

2. Before implementing eLearning, organizations need to set common goals or objectives.

Common goals and objectives include the following:

To reduce learning costs

To motivate employees

To improve flexibility of course delivery

To expand the capabilities of the business

To reduce the need for classroom training

To track employee progress

To track training effectiveness (or absorption)

To link training with Knowledge Management

To reduce time away from the job

To improve job performance

To support business objectives

To make learning available anytime, anywhere

Unit 2: Models of E-Service

Unit Structure

1.1 Introduction

1.2 Learning Outcomes

1.3 E-Service Models

1.4 Summary

1.5 References/Further Readings/Web Resources

1.6 Possible Answers to Self-Assessment Exercise(s) within the content



1.1 Introduction

This unit looks at different stages of e-service as discussed by Persson and Goldkuhl. Student will be introduced to different stages of e-service development as provided by the two authors. There are the Swedish model presented by SAFAD, the model by Layne & Lee, the model by the National Auditing Office in Australia (ANAO), and a model by Hiller and Belanger. These models have several properties in common; they categorize the development into different stages, the models from Australia and Sweden have purposes to measure, point out direction and evaluate the emergence of e-services in a national context and the Layne & Lee model attempts at categorizing the development and to point out difficulties at each stage (Persson and Goldkuhl, 2005)



1.2 Learning Outcomes

At the end of this unit, you should be able to:

- i. Discuss the various models of e-service development.
- ii. Make a comparison between the models.



1.3 E-Service Models

The ANAO Model

This model is developed by the Australian National Auditing Office to categorize the government agencies electronic service delivery via the Internet. This model divides the delivery of services into 4 categories or stages, indicating that this is a model pivoting the emerging e-services and the development of e-services.

Stage 1: Publishing information:

At this stage providing static information about the agency and downloadable and readable publications from the agency to the users are the pivoted and focused issues. Access to information is not limited. Interaction between user and e-service are limited to an inquiry and search functionality.

Stage 2: Interaction:

This stage involves limited interaction possibilities in government agency databases to the users. This is done with expanded search and filtering possibilities as well as calculation services for calculating, debts or levels of government subsidies. There is still no limitation regarding accessibility to the site and services.

Stage 3: Transaction of secure information:

Stage 3 requires secure identification related to the individual interacting with the government agency. Data access is restricted to a specific individual who is provided personal information and services. The providing of personal information requires a higher level of secure channels between agency and the user. Example services are retrieving cargo import information, and lodgment of tax returns. Creating services on this stage involves addressing risks involving security, privacy and financial transactions.

What separates this stage from the two prior stages is the need for secure identification of the user identity.

Stage 4: Sharing information with other agencies:

The last stage covers the exchange of information between different government agencies regarding a specific user (A business, organization or individual). ANAO exemplifies this with an agency notified of a change of address, a bit of information of interest for all government agencies involved in providing services to this individual. This information is to be shared with these other agencies. As in stage 3 this exchange of information need the user to be identification to make sure that the information provided and spread is correct.

SAFAD model

This model is based on the assumption that technology and service levels are intimately interwoven factors in the emerging e-Government services.

Stage 1: Information

This stage pivots on the presentation of static material such as publications and information about the services provided by the agency. SAFAD describes this information as “packaged” by the agency with only limited possibilities to interact with the website. This functionality is basically limited to search and inquiry as in the Australian model above. According to SAFAD this stage include services such as presenting the mission of the agency, parliament bills relating the services of the agency and providing mail access for inquiries.

Stage 2: Interaction

SAFAD describes this stage as providing “interactive information”. This includes the possibility for basic interaction with the website. At this stage services as searching in agency databases, ordering printed publications, downloading and ordering forms relating agency services and subscribing to newsletters from the agency. This stage range from completely public services such as searching in databases to basic identification of the client that is limited to email addresses or mail addresses.

Stage 3: Transaction

This stage includes picking up and leaving personal information related to the services provided by the agency. This includes initiating and following agency specific services by the agency. To be able to provide this type of services online the client need to be securely identified. This stage ranges from initiating a simple case with identification of the client to more advanced transactions such as tax declaration online.

Stage 4: Integration

The last stage of the SAFAD model addresses the integration of services between government agencies. This is the realisation of a one-stop government that regardless of organizational boundaries provides services at one point of entry even where several agencies are involved. Addressed at this stage is the complete process of a service provided online, from initiating the case to paying the service, tax or what the service is about online.

This mean that the organisational boundaries in the government structure is somewhat erased or is left with no or little visibility to the clients.

Layne & Lee model

This model is derived from observations on the evolving eGovernment in the United States.. Layne and Lee (2001) state that the model and the related discussion initiated from the state level but can be used on federal as well as local level. Layne and Lee see the development of government agencies as a natural progress in which the agency evolves because of and in response to functionality needs and customer expectations. In the realization of these four stages the result will be true one-stop shopping for the citizens.

Stage 1: Catalogue

This stage focuses on establishing an online presence for the government agencies. This includes the efforts of many government agencies in the basic web development of presenting information about the agency and publications made at the agency. According to Layne and Lee the movement into this stage is initiated because of external pressure in terms of citizen and business expectations. The name of this stage, catalogue, is derived from the typical functionality that is afforded by the agency. The agency will at this stage publish documents and information that is of general nature. This is information in general terms about the agency and its services. At the end of this stage the agency will address the need for an organized portal site that present the published documents and information in a structured and usable way.

Stage 2: Transaction

The second stage according to Layne and Lee is a focus shift towards integrating the internal systems in the agency with the website. In doing this the agency will allow the clients to interact with personal information in transaction-based services provided by government agency. This stage will allow citizens to renew licences and pay fines online in integration with agency internal systems. The end of this stage will according to Layne and Lee be focused on the full integration of agency systems with the web interface allowing the transactions between client and agency to be posted directly into the agency systems minimizing the interaction with agency staff.

Stage 3: Vertical integration

This stage and the last stage are based on the distinction between government functions and government levels. The vertical integration addresses the integration between different levels of government but in the same functional areas. Layne and Lee exemplifies this with the integration of local level business license application being linked to state and government level to obtain an employer identification number. In other words this stage will consist of the linking of local level systems to higher-level systems.

Stage 4: Horizontal integration

This last stage focuses on the integration of information systems in government agencies with different functionality that has some relation in common to the clients. An example of horizontal integration is the possibility to pay different business fees and taxes to different agencies at the same time because of the integration of these systems in the different agencies.

These last two stages involve that the government agencies will not only address publishing information, information systems development and integration of website and internal systems but the organizational development in focusing on the processes in the agency relating to other government agencies.

Hiller & Belanger model

This model by Hiller and Belanger differ from the models above in adding a fifth stage stating the importance of political participation.

Stage 1: Information

This is according to Hiller and Belanger the most basic form of eGovernment, where information is simply posted on the agency website. These information websites contain General information about services provided by the agency and information directed towards the public including businesses, politicians or other government agencies. The biggest challenge is to maintain the quality of information to ensure that the information is updated and accurate. This stage is in a high degree implemented in the government agencies.

Stage 2: Two-way communication

At this stage government agencies allow users to interact with the agency in simple requests.

According to Hiller and Belanger this is often the case of email services provided by the agency. This stage includes services as requesting information from the agency or requesting the government agency to send back personalised services via mail or email. Hiller and Belanger exemplify this as applying for new Medicare cards or benefit statements from the government.

Stage 3: Transaction

At this stage government agencies provide the possibility to interact with the agency and to conduct transactions completely online. According to Hiller and Belanger this is the most advanced level of eGovernment widely available. Services at this stage can be renewing licences for businesses and individuals and paying fines and taxes online. At this stage public servants are replaced at large extent by the possibility for clients to conduct self-services online.

Stage 4: Integration

This stage contains the integration of government services. This can and is most frequently done with a single portal allowing clients to access services at a single point of entry. By using a single point of entry clients can access services at one place no matter what agency that actually offers them. One of the biggest obstacles according to Hiller and Belanger are the lack of integration of back-office systems between government agencies. Integration of back-office systems and online services could mean saving a lot of time and resources for the government agencies involved.

Stage 5: Political participation

The last stage of the model political participation includes services such as voting online and posting comments online. Hiller and Belanger argue that although this can be seen as a part of stage 2, two-way interaction, the importance of the political dimension motivate a separate category or stage for this type of services. Currently there are very few services

available that fall into this category. The uniqueness of the privacy and security concerns in this stage is one of the main factors behind stating this as a separate category. In the future of transaction based e-Government include the possibility of voting online.

All of these models start off with a stage of providing information to the public. After this stage the models begin to differ from each other in a more substantial way. ANAO and SAFAD continue with an interaction stage where there is increasing interaction between agency website and the client. Hiller and Belanger continue in their second stage with two way communication a stage where the client and agency exchange email and order publications in communication with the agency. The third stage In ANAO, SAFAD and Hiller and Belanger and the second stage of Layne and Lee are more or less the same. At these stages the client and agency exchange personal information about the client in a secure fashion. SAFAD is focusing less on financial transfers between client and agencies; the other models state this as an important feature of the applicable stage.

The models by SAFAD and ANAO are very similar altogether. The division into 4 stages that are basically the same except for the last stage where SAFAD pivot the realization of networking agencies and ANAO limit the discussion to sharing information. On this point we argue that the sharing of information is only a small part of what integration of governments in e-service development will include. The next step in the models is the integration of government agencies. In Layne and Lee this is divided into vertical; cross-hierarchical integration and horizontal; cross-functional integration. The other models do not separate the cross-functional and cross-hierarchical integration from each other.

Only one model (Hiller and Belanger) discusses the participative dimension of e-Government (Persson and Goldkuhl, 2005: 2-7).

Self-Assessment Exercises 1

1. Discuss the ANOA and SAFAD models of e-service
2. What are the processes involved in Layne and Lee model of e-service.



1.6 Summary

In this unit, we have examined various models of e-service as provided by ANAO, SAFAD, Hiller and Belanger as well as the model developed by Layne and Lee.



1.7 References/Further Readings/Web Resources

Persson, A. and Goldkuhl, G (2005) Stage-models for public e-services – investigating conceptual foundations. Scandinavian Workshop on e-Government, Copenhagen.



1.8 Possible Answers to SAEs

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This stage involves limited interaction possibilities in government agency databases to the users. This is done with expanded search and filtering possibilities as well as calculation services for calculating, debts or levels of government subsidies. There is still no limitation regarding accessibility to the site and services.

Stage 3: Transaction of secure information:

Stage 3 requires secure identification related to the individual interacting with the government agency. Data access is restricted to a specific individual who is provided personal information and services. The providing of personal information requires a higher level of secure channels between agency and the user. Example services are retrieving cargo import information, and lodgment of tax returns. Creating services on this stage involves addressing risks involving security, privacy and financial transactions. What separates this stage from the two prior stages is the need for secure identification of the user identity.

Stage 4: Sharing information with other agencies:

The last stage covers the exchange of information between different government agencies regarding a specific user (A business, organization or individual). ANAO exemplifies this with an agency notified of a change of address, a bit of information of interest for all government agencies involved in providing services to this individual. This information is to be shared with these other agencies. As in stage 3 this exchange of information need the user to be identification to make sure that the information provided and spread is correct.

SAFAD model

This model is based on the assumption that technology and service levels are intimately interwoven factors in the emerging e-Government services.

Stage 1: Information

This stage pivots on the presentation of static material such as publications and information about the services provided by the agency. SAFAD describes this information as “packaged” by the agency with only limited possibilities to interact with the website. This functionality is basically limited to search and inquiry as in the Australian model above. According to

SAFAD this stage include services such as presenting the mission of the agency, parliament bills relating the services of the agency and providing mail access for inquiries.

Stage 2: Interaction

SAFAD describes this stage as providing “interactive information”. This includes the possibility for basic interaction with the website. At this stage services as searching in agency databases, ordering printed publications, downloading and ordering forms relating agency services and subscribing to newsletters from the agency. This stage range from completely public services such as searching in databases to basic identification of the client that is limited to email addresses or mail addresses

Stage 3: Transaction

This stage includes picking up and leaving personal information related to the services provided by the agency. This includes initiating and following agency specific services by the agency. To be able to provide this type of services online the client need to be securely identified. This stage ranges from initiating a simple case with identification of the client to more advanced transactions such as tax declaration online.

Stage 4: Integration

The last stage of the SAFAD model addresses the integration of services between government agencies. This is the realisation of a one-stop government that regardless of organizational boundaries provides services at one point of entry even where several agencies are involved. Addressed at this stage is the complete process of a service provided online, from initiating the case to paying the service, tax or what the service is about online. This mean that the organisational boundaries in the government structure is somewhat erased or is left with no or little visibility to the clients.

2. Stage 1: Catalogue

This stage focuses on establishing an online presence for the government agencies. This includes the efforts of many government agencies in the basic web development of presenting information about the agency and publications made at the agency. According to Layne and Lee the movement into this stage is initiated because of external pressure in terms of citizen and business expectations. The name of this stage, catalogue, is derived from the typical functionality that is afforded by the agency. The agency will at this stage publish documents and information that is of general nature. This is information in general terms about the agency and its services. At the end of this stage the agency will

address the need for an organised portal site that present the published documents and information in a structured and usable way.

Stage 2: Transaction

The second stage according to Layne and Lee is a focus shift towards integrating the internal systems in the agency with the website. In doing this the agency will allow the clients to interact with personal information in transaction-based services provided by government agency. This stage will allow citizens to renew licences and pay fines online in integration with agency internal systems. The end of this stage will according to Layne and Lee be focused on the full integration of agency systems with the web interface allowing the transactions between client and agency to be posted directly into the agency systems minimizing the interaction with agency staff.

Stage 3: Vertical integration

This stage and the last stage are based on the distinction between government functions and government levels. The vertical integration addresses the integration between different levels of government but in the same functional areas. Layne and Lee exemplifies this with the integration of local level business license application being linked to state and government level to obtain an employer identification number. In other words this stage will consist of the linking of local level systems to higher-level systems.

Stage 4: Horizontal integration

This last stage focuses on the integration of information systems in government agencies with different functionality that has some relation in common to the clients. An example of horizontal integration is the possibility to pay different business fees and taxes to different agencies at the same time because of the integration of these systems in the different agencies.

These last two stages involve that the government agencies will not only address publishing information, information systems development and integration of website and internal systems but the organisational development in focusing on the processes in the agency relating to other government agencies.

Unit 3 Approach of e-services in the Public Sector

Unit Structure

- 1.1 Introduction
- 1.2 Learning Outcomes
- 1.3 INTRODUCTION
 - 1.3.1 Services in public sector
 - 1.3.2 E-Service Benefits
 - 1.3.3 Procedure for e-service model construction
- 1.4 Summary
- 1.5 References/Further Readings/Web Resources
- 1.6 Possible Answers to Self-Assessment Exercise(s) within the content



1.1 Introduction

In this unit, student will be introduced to the concept of e-service, i.e. provision of services through electronic networks. E-service may be regarded as a result of automating the business process of traditional service. The model of constructing e-service is also discussed in this unit.



1.2 Learning Outcomes

At the end of this unit, you should be able to:

- i. Discuss the procedure for constructing e-service model
- ii. Examine E-service benefits
- iii. Discuss the procedure for e-service model construction



1.3 e-Services in public sector

The focus is on modeling in the public sector e-services that are basically referenced from the Common List of basic public services (e.g., Personal Documents – Passports, e ID, Driver Licenses, Car Registration, Application for Building Permission, Birth and Marriage Certificates, Announcement of Moving, Registration of a New Company, etc.), but the list is not restricted and may cover other public or commercial e-services as well. For delivering all these services, Internet-based or non-Internet technologies and different access media and devices including personal computers, mobile phones, electronic kiosks and other equipment could be used (Ostasius and Petraviciute, 2010).

Self-Assessment Exercises 1

- | |
|--|
| 1, What is e-service in public sector. |
|--|

1.3.1 E-Service Benefits

E-service is offering a large number of benefits to their users: • Familiarizes individuals with electronic information and educates them about the benefits of using advanced technology.

- i. Enables telecommuting.
- ii. Provides integrated informative systems with social, cultural and economical aspects of the individuals.
- iii. Transparency of information
- iv. Removes time and location barriers
- v. Enhances data acquisition, transformation and retrieval, unlike the data chaos in a traditional service provider
- vi. Promotes reuse of information

- vii. Reduces operation time
- viii. Reduces costs
- ix. Improves information access for decision-making
- x. Cultivates better relationships with customers
- xi. Reduces overhead costs such as benefits administration
- xii. Speeds process turnover such as expense reimbursement
- xiii. Allows searches of large volumes of heterogeneous data (documents, pages, database, messages, multimedia)
- xiv. Involves the citizens in governmental activities providing easy access to information using Internet (Batagan and Pocovnicu, 2009).

1.3.2 Procedure for e-service model construction

Procedure for the construction of an e-service model is presented using the relations of activities that can be presented as a logical step-by-step sequence in the business process model in the diagram below.

1. E-service. e may be initiated by the human – the system user – or by the system itself and may be based on the ‘life-events’, ‘business-events’, ‘business situations or a request for information. Some samples illustrate ‘life events’ – birth, marriage, moving, buying a new car (initiated by human), expired passport, Id-card, driver license, vehicle registration (initiated by human or machine service).

2. Selection of the type of service means the choice of a particular service from the available list of public services. One type of services could cover data access services from registers and information systems that can be used in any type of interaction.

3. User identification starts from authentication activities where the identity of the person accessing data or services is established. This involves verifying and confirming personal data provided by the user. The next step is authorization – the activity that allows access data or services that are conditioned by the individual’s access level and his/her role. It also determines the rights, privileges and obligations of the identified person, which depend on the accessing data or service.

4. Selecting the subject(s) of the service is optional (subject(s) means individual(s) or organization(s)). It means the choice of a particular person or organization for whom the service should be provided or who is directly related to the service (e.g., a co-owner of the vehicle). It is also applicable when the subject(s) of the service is not the user but other person(s) and may be needed in cases when the service is executed by an organization representative (e.g., by the staff of the authority that provides the service) or by the agent that is authorized by the service initiator (e.g., by the owner of the vehicle).

5. Selecting the object(s) of the service means the choice of the particular object(s) from the list of objects available for a particular customer and for the type of service that was selected (e.g., a particular vehicle). The agent or the organization representative may represent many customers but access the objects of a particular customer only when they deliver the service to him or her. 6. Selecting the operation(s) for the service means the choice of a particular operation from the list of operations available for the selected object, the service initiator and for the type of service selected (the operation here means the subdivision of a particular type of service; the type of service may consist of one or

more operations; operations cannot be subdivided). There should be a possibility to select one or more operations that can be logically executed together for a particular service (e.g., change of the owner's address and the vehicle plate number).

7. Gathering data means that all the data and information that are required for the service and are electronically accessed should be gathered in an automatic way. The other required data and information that cannot be accessed electronically or are not available should be entered manually. Depending on the specific data, it could be done in two ways: entered by the customer himself/herself (e.g., selection of the address for the deliverables of the service – vehicle number plates and registration license; input of the phone number, e-mail address for communication) or by an agent or the organizational representative according to the contents of the data sources – non-electronic or electronic documents provided by the customer or organization. In this case, the agent or the organizational representative has to approve electronically the reliability of the entered data based on the original documents that were presented.

Self-Assessment Exercise 1

1. What is E-Service Benefits?
2. State the Procedure for e-service model construction



1.4 Summary

In this unit we have looked at an e-service model for modeling complex governmental processes. The unit presents the detail procedure involved in constructing e-service for the public sector.



1.5 References/Further Readings/Web Resources

Batagan, L. and Pocovnicu, A. (2009) E-Service Quality Management. Journal of Applied Quantitative Methods. Vol. 4, No. 3.

Ostasius, E. and Petraviciute, Z. (2010) Modelling E-service in the Public Sector. INFORMACIJOS MOKSLAI 2010. 53



1.6 Possible Answers to SAEs

These are the answers to the SAEs within the content. Arrange the answers in accordance with the way the SAEs appear in the content. For example

Answers to SAEs 1

The concept of e-service, i.e. provision of services through electronic networks. E-service may be regarded as a result of automating the business process of traditional service. The public sector e-services that are basically referenced from the Common List of basic

public services (e.g., Personal Documents – Passports, e-ID, Driver Licenses, Car Registration, Application for Building Permission, Birth and Marriage Certificates, Announcement of Moving, Registration of a New Company, etc.),

For delivering all these services, Internet-based or non-Internet technologies and different access media and devices including personal computers, mobile phones, electronic kiosks and other equipment could be used

Answers to SAEs 2

- i. E-service is offering a large number of benefits to their users:
- ii. Familiarizes individuals with electronic information and educates them about the benefits of using advanced technology.
- iii. Enables telecommuting.
- iv. Provides integrated informative systems with social, cultural and economic aspects of the individuals.
- v. Transparency of information
- vi. Removes time and location barriers
- vii. Enhances data acquisition, transformation and retrieval, unlike the data chaos in a traditional service provider.

Procedure for the construction of an e-service model is presented using the relations of activities that can be presented as a logical step-by-step sequence in the business process model in the diagram below.

1. E-service. e may be initiated by the human – the system user – or by the system itself and may be based on the ‘life-events’, ‘business-events’, ‘business situations or a request for information. Some samples illustrate ‘life events’ – birth, marriage, moving, buying a new car (initiated by human), expired passport, Id-card, driver license, vehicle registration (initiated by human or machine service).

2. Selection of the type of service means the choice of a particular service from the available list of public services. One type of services could cover data access services from registers and information systems that can be used in any type of interaction.

3. User identification starts from authentication activities where the identity of the person accessing data or services is established. This involves verifying and confirming personal data provided by the user. The next step is authorization – the activity that allows access data or services that are conditioned by the individual’s access level and his/her role. It also determines the rights, privileges and obligations of the identified person, which depend on the accessing data or service.

Unit 4: E-Government Development around the World

Unit Structure

- 1.1 Introduction
- 1.2 Learning Outcomes
- 1.3 E-Government Development around the World
- 1.4 Summary
- 1.5 References/Further Readings/Web Resources
- 1.6 Possible Answers to Self-Assessment Exercise(s) within the content



1.1 Introduction

This unit focuses on the development and trends of e-government across the globe. Student will get to know more about the happening on e-government around the world. The first unit of this module presents a general overview of this development. Subsequent units will look at specific countries cases.



1.2 Learning Outcomes

At the end of this unit, you should be able to:

1. Discuss the trends in the world of e-government across the globe



1.3 E-Government Development around the World

Palvia and Sharma (2004) provide some of the indices developed by the United Nations' Division for Public Economics and Public Administration. This index is an indicator of the progress the UN member countries have made in implementing e-government services. Parameters and factors used include web presence measures (indicating stages of government websites), telecommunication infrastructure measures which define the capacity of a country's ICTs (indicators are Internet hosts per 10,000 people, percentage of a nation's population online, and PCs, telephone lines, mobile phones, and televisions per 1000 people); and human capital measures (using the UNDP Human Development Index, the Information Access Index, and urban/rural population ratio as indicators).

The 2005 readiness index is a composite measurement of the capacity and willingness of countries to use e-government for ICT-led development. It is a composite index comprising the Web Measure Index, the Telecommunication Infrastructure Index and the Human Capital Index (The UN global E-Government Readiness Report 2005).

The Web Measure Index

Web Measure Index 2005 is based upon a five stage model of e-government framework.

These five stages are;

- Emerging Presence is Stage I representing information which is limited and basic.

The e-government online presence comprises a web page and/or an official website; links to ministries/departments of education, health, social welfare, labor and finance may/may not exist; links to regional/local government may/may not exist; some archived information such as the head of states' message or a document such as the constitution may be available on line; most information remains static with the fewest options for citizens.

- Enhanced Presence is Stage II in which the government provides greater public policy and governance sources of current and archived information, such as policies, laws and regulation, reports, newsletters, and downloadable databases. The user can search for a document, there is a help feature and a site map is provided. A larger selection of public policy documents exists, such as an e-government strategy, policy briefs on specific education or health issues. Though more sophisticated, the interaction is still primarily unidirectional with information flowing essentially from government to the citizen.

- Interactive Presence is Stage III in which the online services of the government enter the interactive mode with services to enhance convenience for the consumer such as downloadable forms for tax payment, and application for license renewal.

Audio and video capability is provided for relevant public information. The government officials can be contacted via email, fax, telephone and mail. The site is updated with greater regularity to keep the information current and up to date for the public.

- Transactional Presence is Stage IV that allows two-way interaction between the citizen and his/her government. It includes options for paying taxes; applying for ID cards, birth certificates/passports, license renewals and other similar C2G interactions by allowing him/her to submit these online 24/7. The citizens are able to pay for relevant public services, such as motor vehicle violation, taxes, fees for postal services through their credit, bank or debit card. Providers of goods and services are able to bid online for public contracts via secure links.

- Networked Presence is Stage V representing the most sophisticated level in e-government. It is characterized by an integration of G2G, G2C and C2G services. The government encourages participatory deliberative decision-making and is willing and able to involve the society in a two-way open dialogue. Through interactive features such as the web comment form, and innovative online consultation mechanisms, the government actively solicits citizens' views on public policy, law making, and democratic participatory decision making. Implicit is the integration of public sector agencies with full cooperation and understanding of the concept of collective decision-making, participatory democracy and citizen empowerment as a democratic right.

Telecommunications Infrastructure Index

The Telecommunication Infrastructure Index is a composite weighted average index of six primary measures of a country's ICT infrastructure capacity. These are: PCs/1000 persons; Internet users/1000 persons; Telephone Lines/1000 persons; Online population; Mobile phones/1000 persons; and TV's/1000 persons.

Human Capital Index

The data for the Human Capital Index relies on the UNDP 'education index' which is a composite of the adult literacy rate and the combined primary, secondary and tertiary gross enrollment ratio with two third weight given to adult literacy and one third to gross enrollment ratio.

E-Participation Index

The E-Participation Index is used to assess the quality and usefulness of information and services provided by a country's government for the purpose of engaging its citizens in public policy issues. This index is indicative of both the capacity and the willingness of the country's government in encouraging the citizens in promoting deliberative and participatory decision-making and of the reach of its own socially inclusive governance program.

The Table below provides the indices for the top 50 countries with the United States of America (0.9062) being the world leader followed by Denmark (0.9058). Sweden (0.8983) has bypassed the United Kingdom (0.8777) to arrive at the 3rd global position.

Among In the rest of the world category (after North America and Europe), the rankings in descending sequence were:

South and Eastern Asia (0.4922); and South and Central America (0.4643), Western Asia (0.4384); the Caribbean (0.4282); South and Central Asia (0.3448); Oceania (0.2888) and finally Africa (0.2642). The World e-government Readiness Index was 0.4267 in 2005.

Self-Assessment Exercises 1

1. Examine the Human Capital Index and the E-participation Index



1.6 Summary

In this unit we tried to examine the e-readiness of countries across the globe. The unit also present the main indexes used to evaluate the preparedness of countries towards government digital services.



1.7 References/Further Readings/Web Resources

Narayan, G. (2007) Addressing the Digital Divide: E-governance and M-governance in a Hub and Spoke Model. The Electronic Journal on Information System in Developing Countries. www.ejisdc.org



1.8 Possible Answers to SAEs

These are the answers to the SAEs within the content. Arrange the answers in accordance with the way the SAEs appear in the content. For example

Answers to SAEs 1

Human Capital Index

The data for the Human Capital Index relies on the UNDP ‘education index’ which is a composite of the adult literacy rate and the combined primary, secondary and tertiary gross enrollment ratio with two third weight given to adult literacy and one third to gross enrollment ratio.

E-Participation Index

The E-Participation Index is used to assess the quality and usefulness of information and services provided by a country’s government for the purpose of engaging its citizens in public policy issues. This index is indicative of both the capacity and the willingness of

the country's government in encouraging the citizens in promoting deliberative and participatory decision-making and of the reach of its own socially inclusive governance program.

UNIT 5 E-GOVERNMENTS IN AFRICA

Unit Structure

- 1.1 Introduction
- 1.2 Learning Outcomes
- 1.3 **E-Government in Africa**
- 1.4 **Challenges to E-government in Africa**
- 1.6 Summary
- 1.7 References/Further Readings/Web Resources
- 1.8 Possible Answers to Self-Assessment Exercise(s) within the content



1.1 Introduction

In this unit, we examine e-government situation in Africa. The unit also discusses some of the challenges of e-governance in Africa



1.2 Learning Outcomes

At the end of this unit, you should be able to:

1. Discuss e-government in Africa;
2. Examine the challenges of e-government in Africa.



1.3 E-Government in Africa

E-Government has already arrived in most African countries, and the number of e-government projects is growing apace, albeit driven significantly by external stakeholders and an external agenda. The key challenge for the e-government development of Africa remains the widespread lack of infrastructure and functional literacy. Despite recent expansion in mobile telephony, most countries in Africa remain at the tail end of the digital divide.

These challenges have translated into a lower than world average e-government development for all sub-regions. Southern Africa (0.3934) consistently outpaces all other sub-regions. Though there has been some improvement in all sub-regions, except for Northern Africa and Middle Africa, it has been minimal, with the least e-ready sub-region being it is notable that all of the African leaders increased their e-government development index value in 2012 but lost in comparative performance around the world, except for Kenya and Morocco, which gained in the world rankings from 124 to 119 and from 126 to 120 respectively. Tunisia (0.4833) and Egypt (0.4611) declined in rank substantially as did Cape Verde (0.4297) because their improvements did not keep pace with those of other countries (UN e-governance Survey, 2012).

Self-Assessment Exercises 1

1. Discuss the situation of e-government in Africa.

1.4 Challenges to e-government in Africa

Most African countries are confronted with challenges in applying e-government due to the fact that; first, most African countries have undertaken only a limited number of e-government projects. Second, most African e-government projects fail in some way.

African governments have fewer e-government initiatives than industrialized countries; make less use of ICTs in their work than industrialized countries; and use older generations of technology than industrialized countries. The major explanation for this is financial. African governments have far less money in both absolute and per capita terms

to spend on ICTs than Western governments. Both related and additional to this issue is the greater lack of strategic "e-readiness for e-government" in Africa (Heeks, 2002).

Six factors that are of main relevance to e-government in Africa are presented here. These can be posed as an inventory of "e-readiness for e-government" questions. Is the data systems infrastructure ready: are the management systems, data standards, records and work processes in place to provide the quantity and quality of data to support the move to e-government? In many African countries, data quality and data security – for example – are very poor, and there are few mechanisms to address these issues.

Is the legal infrastructure ready: are the laws and regulations required to permit and to support the move to e-government in place? In most African countries, for example, digital signatures cannot be accepted.

Is the institutional infrastructure ready: e-government can only progress if the institutions exist to act as a focus for awareness and to act as a means for facilitation of e-government. In most African countries, there are no institutions to co-ordinate and lead and drive e-governance.

Is the human infrastructure ready: are the attitudes, knowledge and skills in place – especially within the public sector – that are required to initiate, implement and sustain e-government initiatives? In many African countries, key skills gaps relate to business analysis and system design, and to project management, contract management and vendor management.

Is the technological infrastructure ready: although there have been great strides forward, the fact remains that most African countries are a long way short of the computing and telecommunications infrastructure on which many Western e-government initiatives have been based.

Is the leadership and strategic thinking ready: a critical pre-condition in successful e-government is an e-champion or small group of e-champions: leaders with vision who put e-government onto the agenda, who set e-government within a broader reform agenda, and who make it happen. The limited number of senior officials who feel willing or able to champion ICTs in government in Africa acts as a most serious constraint to e-government diffusion (Heeks, 2002).

These six areas of e-readiness represent the strategic challenge to e-government in Africa.

Self-Assessment Exercises 2

1. What are the Challenges to e-government in Africa



1.6 Summary

In this unit, we have considered the situation of e-government in Africa. The top ten countries in the continent were examined. We also discussed the factors that are of relevance to e-government in Africa.



1.7 References/Further Readings/Web Resources

Heeks, R. (2005). E-Government in Africa: Promise and Practice. iGovernment Working Paper Series. Paper No. 13. Manchester. Institute for Development Policy Management. United Nations E-Governance Survey 2012



1.8 Possible Answers to SAEs

These are the answers to the SAEs within the content. Arrange the answers in accordance with the way the SAEs appear in the content. For example

Answers to SAEs 1

E-Government has already arrived in most African countries, and the number of e-government projects is growing apace, albeit driven significantly by external stakeholders and an external agenda.

The key challenge for the e-government development of Africa remains the widespread lack of infrastructure and functional literacy. Despite recent expansion in mobile telephony, most countries in Africa remain at the tail end of the digital divide.

These challenges have translated into a lower than world average e-government development for all sub-regions. Southern Africa

Answers to SAEs 2

Six factors that are of main relevance to e-government in Africa are presented here. These can be posed as an inventory of "e-readiness for e-government" questions.

Is the data systems infrastructure ready: are the management systems, data standards, records and work processes in place to provide the quantity and quality of data to support the move to e-government? In many African countries, data quality and data security – for example – are very poor, and there are few mechanisms to address these issues.

Is the legal infrastructure ready: are the laws and regulations required to permit and to support the move to e-government in place? In most African countries, for example, digital signatures cannot be accepted. Is the institutional infrastructure ready: e-government can only progress if the institutions exist to act as a focus for awareness and to act as a means for facilitation of e-government. In most African countries, there are no institutions to co-ordinate and lead and drive e-governance

Is the human infrastructure ready: are the attitudes, knowledge and skills in place – especially within the public sector – that are required to initiate, implement and sustain e-government initiatives? In many African countries, key skills gaps relate to business

analysis and system design, and to project management, contract management and vendor management. Is the technological infrastructure ready: although there have been great strides forward, the fact remains that most African countries are a long way short of the computing and telecommunications infrastructure on which many Western e-government initiatives have been based.

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MODULE 4

Unit 1: E-Government in Europe

Unit Structure

1.1 Introduction

1.2 Learning Outcomes

- 1.3 E-Government in Europe
- 1.4 Summary
- 1.5 References/Further Readings/Web Resources
- 1.6 Possible Answers to Self-Assessment Exercise(s) within the content



1.1 Introduction

This unit examines e-government development and progress in Europe. The government is building an e-government infrastructure encompassing citizen access to government processes. This is what is discussed in this unit.



1.2 Learning Outcomes

At the end of this unit, you should be able to:
Discuss e-government development in Europe.



1.3 E-Government in Europe

The European region has the highest level of e-government development, which is around 50 per cent higher than that of the world as a whole.

Europe as a region has been in the vanguard of information technology and setting the pace for others to follow. Building on the existing strength of high levels of human capital and infrastructure, the transformative role of ICT has been recognized and adopted to further streamline e-government services. Moving beyond improving public sector efficiency, Europe is now looking to adapt innovative technologies to human development and economic sustainability in the future.

With a common e-government framework, EU countries are encouraged to deploy advanced technologies, institute better governance and provide expanded services with concomitant pursuit of greater transparency, efficiency and inclusion. Notwithstanding, differences remain between regions and within them. Key European countries spend more than double the EU average amount per capita on ICT; others, around half of it. The Netherlands (0.9125) made substantial gains, advancing to the top position in Europe and 2nd in world rankings, followed by the United Kingdom (0.8960) in 3rd place and Denmark (0.8889), which also advanced and occupies the 4th position this year. Within the aforementioned common e-government framework, all of the top countries of Europe offered more or less the same level of user centric services to their citizens resulting in marginal assessment difference among them. For example, Germany (0.8079), the 10th leading country in Europe as a whole, achieved about 89 per cent of the e-government development level of the regional leader, the Netherlands (UN E-Government Survey 2012). Of the countries of the region of Europe which are global leaders, several of them offered examples of best practice. In the Netherlands, efficiency and citizen inclusion are the objectives of the e-government strategy. Integration of a back-office management system has been undertaken with a belief that citizens should provide information once.

The government is building an e-government infrastructure encompassing citizen access to government processes including electronic authentication, uniform identification numbers for both citizens and businesses and electronic personal identification. As part of its broader ICT strategy the focus of e-government in the Netherlands was on improving efficiency of services concomitant with reduction of administrative cost and burden.

Based on extensive technological infrastructure, the recently concluded National Implementation Programme (NUP) for Better Services and e-Government laid out agreements among the national government, provinces, and municipalities to improve service delivery. Its high levels of broadband connectivity ensured further enhancements in eservices undertaken during the last few years (UN E-Governance Survey, 2012)

Self-Assessment Exercises 1

1. Discuss e-government development and progress made in Europe.



1.4 Summary

“This unit discussed how e-governance are defined. As we can see, e- governance is more than just a government on the website. The strategies of e-governance can enable government and citizens to engage and partner with each other and other stakeholders. We also discussed the objectives of e-governance as well as the types of service delivery in e-governance. Subsequent units will discuss some other aspects of e-governance.



1.5 References/Further Readings/Web Resources

United Nations E-Government Survey, 2012



1.6 Possible Answers to SAEs

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Answers to SAEs 1

The European region has the highest level of e-government development, which is around 50 per cent higher than that of the world as a whole.

Europe as a region has been in the vanguard of information technology and setting the pace for others to follow. Building on the existing strength of high levels of human capital and infrastructure, the transformative role of ICT has been recognized and adopted to further streamline e-government services. Moving beyond improving public

sector efficiency, Europe is now looking to adapt innovative technologies to human development and economic sustainability in the future. With a common e-government framework, EU countries are encouraged to deploy advanced technologies, institute better governance and provide expanded services with concomitant pursuit of greater transparency, efficiency and inclusion. Notwithstanding, differences remain between regions and within them. Key European countries spend more than double the EU average amount per capita on ICT; others, around half of it. The Netherlands (0.9125) made substantial gains, advancing to the top position in Europe and 2nd in world rankings, followed by the United Kingdom (0.8960) in 3rd place and Denmark (0.8889), which also advanced and occupies the 4th position this year. Within the aforementioned common e government framework, all of the top countries of Europe offered more or less the same level of user centric services to their citizens resulting in marginal assessment difference among them.

UNIT 2: E-Government in Americas

Unit Structure

- 1.1 Introduction
- 1.2 Learning Outcomes
- 1.3 E-Government in Americas
- 1.4 Summary
- 1.5 References/Further Readings/Web Resources
- 1.6 Possible Answers to Self-Assessment Exercise(s) within the content



1.1 Introduction

In this unit, we examine e-government in America. Both the United States and Canada have consistently had e-government development levels far above the world average from 2003 to 2012 in the Americas. This unit looks at the details.



1.2 Learning Outcomes

At the end of this unit, you should be able to:

- i. Discuss e-government development in America



1.3 E-Government in Americas

E-government strategies in the Americas are geared towards user centric solutions, which serve to synergize governance processes and systems across multiple public administration domains.

As noted in figure below the sub-region of Northern America (0.8559), encompassing only the United States and Canada, is the world leader with values far higher than the world average and all other sub-regions. In 2012, all sub-regions collectively improved performance in the Americas, including the Caribbean (0.5133) and South America (0.5507). Barbados (0.6566) has been and remains the sub-regional leader among the Caribbean countries in 2012 followed by Antigua and Barbuda (0.6345) and the Bahamas (0.5793) The national site of Barbados offered a user friendly approach of “channels” such as the Government Channel, Citizens & Residents Channel, Businesses Channel, etc., making it easier for the user to find relevant information. Moving towards transactional offerings, it allowed for calculation of land taxes.

Improvements in online offerings along with investments in telecommunications and human capital allowed Antigua and Barbuda to advance to a world ranking of 49th in 2012. Similarly, in Dominica and in Grenada, substantial investments in access infrastructure, especially broadband, contributed to an advance in world rankings. All countries of the Central America sub-region increased their offerings in 2012.

Since the United Nations Survey started tracking e-government development in 2003 both United States and Canada have been among the top world leaders with integrated portals and increasingly inclusive citizen services spread across theme, functionally and now by life cycle and events. For example, the United States e-government portal (<http://www.usa.gov>) comes closest to a pure integrated portal with access to interlinked searchable information from the United States Government, state governments, and local governments all in one place. Substantial back office integration has gone into the user interface, which offers a simple convenient and easy-to-use facility for everything from government departments and agencies to verifying a social security number, getting an employer identification number, multiple online participation efforts and much more. Early recognition of the use of ICT for rolling out citizen centric services has contributed

to the United States' top rankings in the last decade. As the figures indicate, both the United States and Canada have consistently had e-government development levels far above the world average from 2003 to 2012 (UN E-Governance Survey 2012)

Self-Assessment Exercises 1

1. Discuss the nature of e-government development in America.



1.4 Summary

In this unit, we have discussed e-government development in America. The unit examined some countries performances in e-government operation in the region of America.



1.5 References/Further Readings/Web Resources

United Nations E-Government Survey, 2012.



1.6 Possible Answers to SAEs

These are the answers to the SAEs within the content. Arrange the answers in accordance with the way the SAEs appear in the content. For example

Answers to SAEs 1

E-government strategies in the Americas are geared towards user centric solutions, which serve to synergize governance processes and systems across multiple public administration domains.

As noted in figure below the sub-region of Northern America (0.8559), encompassing only the United States and Canada, is the world leader with values far higher than the world average and all other sub-regions. In 2012, all sub-regions collectively improved performance in the Americas, including the Caribbean (0.5133) and South America (0.5507). Barbados (0.6566) has been and remains the sub-regional leader among the Caribbean countries in 2012 followed by Antigua and Barbuda (0.6345) and the Bahamas (0.5793) The national site of Barbados offered a user friendly approach of “channels” such as the Government Channel, Citizens & Residents Channel, Businesses Channel, etc., making it easier for the user to find relevant information. Moving towards transactional offerings, it allowed for calculation of land taxes. Improvements in online offerings along with investments in telecommunications and human capital allowed Antigua and Barbuda to advance to a world ranking of 49th in 2012. Similarly, in Dominica and in Grenada, substantial investments in access infrastructure, especially

broadband, contributed to an advance in world rankings. All countries of the Central America sub-region increased their offerings in 2012. Since the United Nations Survey started tracking e-government development in 2003 both United States and Canada have been among the top world leaders with integrated portals and increasingly inclusive citizen services spread across theme, functionally and now by life cycle and events. For example, the United States e-government portal (<http://www.usa.gov>) comes closest to a pure integrated portal with access to interlinked searchable information from the United States Government, state governments, and local governments all in one place. Substantial back office integration has gone into the user interface, which offers a simple convenient and easy-to-use facility for everything from government departments and agencies to verifying a social security number, getting an employer identification number, multiple online participation efforts and much more. Early recognition of the use of ICT for rolling out citizen centric services has contributed to the United States' top rankings in the last decade. As the figures indicate, both the United States and Canada have consistently had e-government development levels far above the world average from 2003 to 2012.

UNIT 3: E-Government in Asia

Unit Structure

- 1.1 Introduction
- 1.2 Learning Outcomes
- 1.3 E-Government in Asia
- 1.4 Summary
- 1.5 References/Further Readings/Web Resources

1.6 Possible Answers to Self-Assessment Exercise(s) within the content



1.1 Introduction

Like in the last three units we are examining e-government in Asia in this unit. The development and progress made by countries of this region are discussed in this unit.



1.2 Learning Outcomes

At the end of this unit, you should be able to:

i. Discuss the development and progress in e-government operations in countries of the Asia.



1.3 E-Governance in Asia

Asia as a whole continued to expand e-government services further. Investments were made horizontally to expand infrastructure, including support for broadband and mobile access, while at the same time governments reached out to provide greater online services and improve e-governance. The Republic of Korea (0.9283), the world leader in e-government, is also the top performer in Asia with around double the average world e-government offerings. The 2nd slot is taken this year by Singapore (0.8474) followed by Israel (0.8100) and then Japan (0.8019). The performance of the United Arab Emirates (0.7344) is especially notable as it advanced 21 positions to the ranking this year of 28th globally and 5th in Asia. The rapid progress of the United Arab Emirates is a best practice case highlighting how effective e-government can help support development. With double the population and three quarters of the GDP per 100 capita, the United Arab Emirates has achieved around the same level of online services as those offered in Norway, a global leader at the 8th position. Commensurate with global progress, all countries of Central Asia improved their service offerings, pulling up the sub-regional average by around 17 per cent. Kazakhstan was the sub-regional leader, improving its global ranking by around eight positions in 2012. Kazakhstan in recent years has made efforts to modernize the public sector, including technology based reform of administrative governance systems. A parallel effort has been a focus on the use of ICT for provision of services and inclusion. As in other developing countries the acceleration of informatization is aimed at increasing the efficiency of the government and exploiting synergies towards a sustainable model of development.

Self-Assessment Exercises 1

1. Discuss the development and progress in e-government operations in countries of the Asia.



1.4 Summary

In this unit, we discussed the development of the Asia. The unit observed progress that has been made by some countries in their e-government offerings.



1.5 References/Further Readings/Web Resources

United Nations E-Government Survey, 2012



1.6 Possible Answers to SAEs

These are the answers to the SAEs within the content. Arrange the answers in accordance with the way the SAEs appear in the content. For example

Answers to SAEs 1

Asia as a whole continued to expand e-government services further. Investments were made horizontally to expand infrastructure, including support for broadband and mobile access, while at the same time governments reached out to provide greater online services and improve e-governance. The Republic of Korea (0.9283), the world leader in e-government, is also the top performer in Asia with around double the average world e-government offerings. The 2nd slot is taken this year by Singapore (0.8474) followed by Israel (0.8100) and then Japan (0.8019). The performance of the United Arab Emirates (0.7344) is especially notable as it advanced 21 positions to the ranking this year of 28th globally and 5th in Asia. The rapid progress of the United Arab Emirates is a best practice case highlighting how effective e-government can help support development.

Unit 4: Nigeria's E-Governance Initiative: the role of National Information Technology Development Agency (NITDA)

Unit Structure

- 1.1 Introduction
- 1.2 Learning Outcomes
- 1.3 Nigeria's E-Governance Initiative
- 1.4 NITDA Information Technology (IT) Hub

- 1.4.1 The role of NITDA Information Technology (IT) Hub
- 1.5 NITDA Digital Economy
 - 1.5.1 Objective of NITDA Digital Economy
- 1.6 Summary
- 1.7 References/Further Readings/Web Resources
- 1.8 Possible Answers to Self-Assessment Exercise(s) within the content



1.1 Introduction

The unit will discuss the Nigeria's E-Governance Initiative using the National Information Technology Development Agency (NITDA) as a reference point.



1.2 Learning Outcomes

At the end of this unit, you should be able to:

1. Explain the Nigeria's E-Governance Initiative
2. Discuss the NITDA Information Technology (IT) Hub
3. State the role of NITDA Information Technology (IT) Hub
4. Discuss NITDA Digital Economy
5. State the objective of NITDA Digital Economy



1.3 Nigeria's E-Governance Initiative

National Information Technology Development Agency (NITDA) was created in April 2001 to implement the Nigerian Information Technology Policy and co-ordinate general IT development in the country (NITDA, 2001). The Act of the National Information Technology Development Act (2007) mandate the agency to create a framework for the planning, research, development, standardization, application, coordination, monitoring, evaluation and regulation of Information Technology practices, activities and systems in Nigeria (NITDA, 2001).

The role therefore is to develop, regulate and advise on Information technology in the country through regulatory standards, guidelines and policies. Additionally, NITDA is the clearing house for all IT projects and infrastructural development in the country. It is the prime Agency for e-government implementation, Internet governance and General IT development in Nigeria (NITDA, 2001).

NITDA is poised to actualize its mammoth mandate through strategic and inclusive stakeholder management, local and international partnership and efficient utilization of resources in the interest of Nigeria. For the organogram of the agency use this link: <https://nitda.gov.ng/organogram/>.

1.4 NITDA Information Technology (IT) Hub

Information Technology (IT) is increasingly recognized as the key enabler in promoting knowledge-based growth, creating jobs and providing access to information and knowledge for both developed and developing countries. Access to information and knowledge can stimulate economic growth by creating new products, increasing productivity and promoting new commercial and administrative methods. IT Hub is one of such ventures that help nations to achieve economic growth through innovation, and entrepreneurship (NITDA, 2022).

1.4.1 The role of NITDA Information Technology (IT) Hub

1. IT Hub is a platform where Technology, Business, Innovation and Entrepreneurship are nurtured by building pools of both native and evolving talent and footloose IT professionals.
2. IT Hubs are used in many countries worldwide as a tool to promote the development of both upstream and downstream IT components for economic development across all sectors.
3. NITDA had identified that there is a clear lack of adequate skilled manpower that will drive local content development and industrialization in the country.
4. To address and reduce those inhibiting factors, the use of IT Hubs to foster the further development of all sectors has become imperative. To achieve this and also support the primary responsibility of the agency which is regulation and promote the development of the IT sector, it established IT Hubs in strategic locations across the country. This is also seen as another strategic effort to attract and support stakeholders who are industry players toward the promotion of IT for industrialization. Through capacity development programmes at the centres, the country will overcome the shortage of skilled manpower and address the poor business and investment climate which increasingly hamper the growth of the IT sector.
5. Through the Hub, NITDA tends to provide the right enabling environment by putting in place, a combination of high quality infrastructure, support services. It is expected that the host communities and environs will leverage on the facilities available at the centres and create a full value chain across the IT sector ecosystem.
6. The Hubs are fully equipped with both networking and computing devices to support the complete state of the art Printed Circuit Boards (PBC) production machines. The centres are expected to develop competency for local production of PCB devices and other downstream components of the IT goods.
7. Through the use of the IT Hubs, Nigeria is poised to achieve some of the followings among others:
8. Diversification of the nation's economy through local production of IT tools and services.
9. Development of strategic thrusts where Technology, Finance, and Human Resources, are going to be harnessed to create an enabling environment for the potential development of microelectronics, Software applications, and Entrepreneurship.
10. Create a means of creating a stronger bond between Government, Academia and the private sector by focusing on the development of local talent through research and business ideation and promotion.

11. To establish a well Structured IT Hub that will operate along the full IT value chain, from ideation to commercialization, and will be well positioned to help fulfill the expanding economic missions of the country. Each Hub will serve as a regional Hub for next-generation IT research and incubation projects, and will also capture value by commercializing IT products and services. As a long term objective, the Hub will create self-sustaining ecosystems that will expedite the development of an indigenous IT industry and help Nigeria transform herself into a knowledge-based society.

12. Create a local supply for the IT Sector to meet the increasing demand for IT goods and services from both the public and private sectors. Generate a steady stream of suitably skilled graduates for companies in the IT Hub to meet the expected high demand for skilled manpower.

Self-Assessment Exercise 1

1. Explain the Nigeria's E-Governance Initiative
2. Discuss the NITDA Information Technology (IT) Hub

1.5 NITDA Digital Economy

NITDA Digital Economy is the project that gives rise to digital skills in educational institutions and rural areas of the country. In addition, Information Technology (IT) knowledge is integrated into the underserved areas and cities so as to develop human capital and provide universal access to knowledge with the aim of creating knowledge based economy. A total of nine hundred and eighty-eight (988) centers have been established across the nation between 2007 to 2017 (NITDA, 2022).

1.5.1 Objective of NITDA Digital Economy

The main objective of DJCC is to create digital job/wealth, develop digital skills, and promote the connection of underserved areas, schools, libraries and institutions to broadband Internet. The project is aimed at facilitating a digital lifestyle in the institutions, underserved areas (rural), as well as in the communities' schools. Beneficiaries are expected to share these facilities with their surrounding communities on a commercial basis to support maintenance and ensure sustainability of the project. Other objectives of this project include;

- i. To enhance the abilities of communities to access information, manage local level information and disseminate this information to external communities;
- ii. To create an enabling environment that will nurture Innovation and Entrepreneurship;
- iii. To develop training & professional programs to promote self-employment and entrepreneurship;
- iv. To provide & promote professional IT skills to community so that they are equipped with industry oriented quality education and training;
- v. To introduce practical computer courses to improve computer literacy of students, teachers and parents;
- vi. To impart education and training with the aim of generating quality human resources in the IT industry;

- vii. To impart a basic level IT Literacy program for the rural & Semi urban people;
- viii. To offer job-oriented courses like E-commerce, retail management, Web design etc. to enhance IT skill;
- ix. To bridge the gap relative working in neighbouring cities, towns, countries or abroad with those in the rural areas through the Internet and e-mail; and
- x. To ensure that local small-scale industries have access to information about market prices thus saving on time and travel costs.

Self-Assessment Exercise 2

1. State the role of NITDA Information Technology (IT) Hub
2. Discuss NITDA Digital Economy
3. State the objective of NITDA Digital Economy



1.6 Summary

The unit explains that, National Information Technology Development Agency (NITDA) was created in April 2001 to implement the Nigerian Information Technology Policy and co-ordinate general IT development in the country (NITDA, 2001). NITDA is poised to actualize its mammoth mandate through strategic and inclusive stakeholder management, local and international partnership and efficient utilization of resources in the interest of Nigeria IT Hub is a platform where Technology, Business, Innovation and Entrepreneurship are nurtured by building pools of both native and evolving talent and footloose IT professionals

The main objective of DJCC is to create digital job/wealth, develop digital skills, and promote the connection of underserved areas, schools, libraries and institutions to broadband Internet. The project is aimed at facilitating a digital lifestyle in the institutions, underserved areas (rural), as well as in the communities' schools. Beneficiaries are expected to share these facilities with their surrounding communities on a commercial basis to support maintenance and ensure sustainability of the project.



1.7 References/Further Readings/Web Resources

National Information Technology Development Agency (NITDA) (2001). NITDA Information Technology (IT) Hub. <https://nitda.gov.ng/>
 National Information Technology Development Agency (NITDA) (2022). NITDA Information Technology (IT) Hub. <https://nitda.gov.ng/>
 National Information Technology Development Agency (NITDA) (2022). NITDA Digital Economy. <https://nitda.gov.ng/>



1.8 Possible Answers to SAEs

Answers to SAEs 1

1. National Information Technology Development Agency (NITDA) was created in April 2001 to implement the Nigerian Information Technology Policy and co-ordinate general IT development in the country (NITDA, 2001)

NITDA is poised to actualize its mammoth mandate through strategic and inclusive stakeholder management, local and international partnership and efficient utilization of resources in the interest of Nigeria

2. IT Hub is a platform where Technology, Business, Innovation and Entrepreneurship are nurtured by building pools of both native and evolving talent and footloose IT professionals

NITDA had identified that there is a clear lack of adequate skilled manpower that will drive local content development and industrialization in the country

Answers to SAEs 2

2. NITDA Digital Economy is the project that gives rise to digital skills in educational institutions and rural areas of the country. In addition, Information Technology (IT) knowledge is integrated into the underserved areas and cities so as to develop human capital and provide universal access to knowledge with the aim of creating knowledge based economy. A total of nine hundred and eighty-eight (988) centers have been established across the nation between 2007 to 2017 (NITDA, 2022)

2. Objective of NITDA Digital Economy

The main objective of DJCC is to create digital job/wealth, develop digital skills, and promote the connection of underserved areas, schools, libraries and institutions to broadband Internet. The project is aimed at facilitating a digital lifestyle in the institutions, underserved areas (rural), as well as in the communities' schools. Beneficiaries are expected to share these facilities with their surrounding communities on a commercial basis to support maintenance and ensure sustainability of the project. Other objectives of this project include;

- xi. To enhance the abilities of communities to access information, manage local level information and disseminate this information to external communities;
- xii. To create an enabling environment that will nurture Innovation and Entrepreneurship;
- xiii. To develop training & professional programs to promote self-employment and entrepreneurship;
- xiv. To provide & promote professional IT skills to community so that they are equipped with industry oriented quality education and training;
- xv. To introduce practical computer courses to improve computer literacy of students, teachers and parents;

Unit 5: NITDA Information Technology's Regulations

Unit Structure

- 1.1 Introduction
- 1.2 Learning Outcomes
- 1.3 NITDA Information Technology's Regulations

- 1.4 NITDA Code of Practices
- 1.5 Summary
- 1.6 References/Further Readings/Web Resources
- 1.7 Possible Answers to Self-Assessment Exercise(s) within the content



1.1 Introduction

The unit will discuss the NITDA Information Technology's Regulations and NITDA Code of Practices as well as Responsibilities of interactive Computer Service Platforms/Internet Intermediaries additional responsibilities



1.2 Learning Outcomes

At the end of this unit, you should be able to:

1. NITDA Information Technology's Regulations and NITDA
2. Code of Practices
3. Responsibilities of interactive Computer Service Platforms/Internet Intermediaries additional responsibilities



1.3 NITDA IT Regulations

NITDA has been mandated by the National Information Technology Development Act (2007) to establish Standards, Guidelines and frameworks for the development, standardization, and regulation of Information Technology practices in Nigeria (NITDA, 2007). The Agency's role, therefore, is to develop Information technology in Nigeria through the use of regulatory instruments. As a regulatory Agency, NITDA is the clearinghouse for all Government Information Technology projects and infrastructural development in the country.

The instruments are designed to achieve the Information Technology policy objectives by providing frameworks within which to implement policies.

NITDA has published several instruments and monitors their compliance for the development of information technology in Nigeria. The instruments serve as a minimum benchmark in the development and implementation of information technology in Nigeria and enforceable by law.

The instruments are being reviewed frequently due to the dynamic nature of the IT environment and technology innovations.

Self-Assessment Exercise 1

1. Briefly explain the mandated by the National Information Technology Development Act (2007)

1.4 NITDA Code of Practices

Part I

Responsibilities of interactive Computer Service Platforms/Internet Intermediaries

All Interactive Computer Service Platforms/Internet Intermediaries (Platform) shall:

Abide by Nigerian laws and not deploy or modify their Platform in any way that will undermine or interfere with the application and/or enforcement of the law.

Act expeditiously upon receiving a Court order directing a Platform to provide any information under its domain or any assistance to any authorised government agency for the purpose of carrying out an investigation, combating cybercrimes, or prosecuting an offence.

Act expeditiously upon receiving a notice from a user, or an authorized government agency of the presence of an unlawful content on its Platform. A Platform must acknowledge the receipt of the complaint and take down the content within 24 hours.

Act expeditiously to remove, disable, or block access to non-consensual content that exposes a person's private areas, full or partial nudity, sexual act, deep fake, or revenge porn, where such content is targeted to harass, disrepute, or intimidate an individual. A Platform must acknowledge the receipt of the complaint and take down the content within 24 hours.

Disclose the identity of the creator of information on its Platform when directed to do so by a Court order. Provided that an order of this nature shall apply for the purpose of preventing, detecting, investigating, or prosecuting an offence concerning the sovereignty and integrity of Nigeria, public order, security, diplomatic relationships, felony, incitement of an offence relating to any of the above or in relation to rape, child abuse, or sexually explicit material. Where the first creator of the message in question is located outside Nigeria, the first creator of that information in Nigeria shall be deemed to be the first creator. Exercise due diligence to ensure that no unlawful content is uploaded to their Platform. Where a Platform receives a notice from a user or any authorized government agency that an unlawful content has been uploaded, such Platform is required to take it down and ensure it stays down. No liability shall be incurred by a Platform where such Platform has taken all reasonable steps to ensure that an unlawful content is taken or stays down. Provide a dedicated channel that is available all the time where an authorized government agency can lodge or forward a request or complaint against contents that are unlawful or harmful.

Provide a mechanism or channel that is available all the time where a user can lodge complaints against contents that are unlawful or harmful.

Provide a complainant with a unique code or ticket number for tracking the progress of a complaint. Inform the user or authorized government agency in writing, the findings and resolutions of the complaint and furnish the respective parties with the evidence used in the determination. Make provision for verifying official government accounts and authorized government agencies subject to approval by NITDA. The account shall only be used for official purposes and NITDA reserves the right to withdraw approval by notifying the Platform in writing, stating the grounds for such action.

Part II: Additional Responsibilities

All Platforms shall:

Publish on their website, application, or both, the rules for access or usage of its Platform by any person or entity opting to use its services. These rules should be easily accessible

and summarized in simple language. Inform users through the terms of service not to create, publish, promote, modify, transmit, store or share any content or information that: is harmful to a child; could cause any physical or psychological harm to another user directly or indirectly; is defamatory, libellous, pornographic, revenge porn, bullying, harassing, obscene, encouraging money laundering, exploiting a child, fraud, violence, or inconsistent with Nigeria's laws and public order; infringes the subsisting intellectual property rights of another individual; the user is not the lawful owner and to which no authorization was secured from the lawful owner is false or misleading; compromises the security or undermines the unity, integrity or sovereignty of Nigeria or promotes act of terrorism; and instigates public disorder or interfere with an ongoing investigation.

Carry out risk assessment to determine whether a content is harmful, upon receiving a notice. A Platform shall take steps to mitigate and manage the impact of such content and ensure that the community rules or guidelines specify how children and adults will be protected from harmful content which they may encounter. In assessing such content, a Platform shall consider:

- a. The nature of the content, and if there is a material risk of it having a direct or indirect physical or psychological impact on a child or an adult.
- b. That there is a material risk of the content's dissemination having a physical or psychological impact on a child or an adult. Consideration should be giving to:
- c. The level of risk or harm posed by the content;
- d. The potential reach and interaction with the content
- e. The socio-cultural peculiarities of Nigeria.
- f. Preserve a disabled or removed content, and any related record as required by law.
- g. Display a label to a disabled or removed content, stating grounds for such action.
- h. Preserve any information concerning a person that is no longer a user of a Platform due to withdrawal or termination of registration, or for any other reason, as required by law.

Regularly inform users that access and usage to the Platform is subject to compliance with rules and regulation. Where a user fails to comply, the Platform reserves the right to terminate the user's access to the Platform.

Inform users whenever there is a change or update to their rules.

File an annual compliance report with NITDA that indicates the:

- a. Number of registered users on its Platform in Nigeria;
- b. Number of active registered users on its Platform in Nigeria;
- c. Number of closed and deactivated accounts in Nigeria
- d. Number of removed content with and without notice or Court order;
- e. Number of contents put back with or without notice;
- f. Number of contents removed and reuploaded;
- g. Information on how children and adults are protected from harmful content which they may encounter;
- h. Information on the number of complaints registered with a Platform;
- i. Number of resolved and unresolved complaints;
- j. Independent awareness report on disinformation and misinformation;
- k. Number of contents taken down due to disinformation and misinformation;

1. Any other relevant information.

Part III: Large Service Platforms

All Platforms whose users are more than one hundred thousand (Large Service Platform) shall, in addition to the responsibilities stated above:

Be incorporated in Nigeria.

Have a physical contact address in Nigeria, details of which shall be available on their website or Platform.

Appoint a Liaison Officer who shall serve as a communication channel between the government and the Platform.

Provide the necessary human supervision to review and improve the use of automated tools to strengthen accuracy and fairness, checkmate bias and discrimination to ensure freedom of expression and privacy of users.

On demand, furnish a user, or authorised government agency with information on: reason behind popular online content demand and the factor or figure behind the influence. why users get specific information on their timelines.

Provide users or authorised government agency, upon request, with report of due process on their activities, and/or open investigation to ensure individuals are not targeted. NITDA may require a Platform whose users are less than one hundred thousand (100, 000) to comply with the obligations of a Large Service Platform where it appears necessary to preserve the sovereignty, security, public order, foreign diplomatic relations, and integrity of Nigeria.

Part IV: Prohibition

A Platform shall not continue to keep prohibited materials or make them available for access when they are informed of such materials. Prohibited material is that which is objectionable on the grounds of public interest, morality, order, security, peace, or is otherwise prohibited by applicable Nigerian laws.

In considering what prohibited material is, consideration should be given to the laws of Nigeria, including but not limited to the following:

Nigerian Communications Act;

National Broadcasting Commission Act;

Nigeria Broadcasting Code;

Cybercrimes (Prohibition, Prevention, etc.) 2015;

Advance Fee Fraud and other Fraud Related Offences Act 2006;

Nigeria Data Protection Regulation 2019;

Advertising Practitioners Act 2004;

Sales Promotions of Nigerian Code of Advertising Practice Sales Promotion and other Right/Restrictions on practice Act 2004.

Terrorism Prevention Amendment Act 2022

NCC Consumer Code of Practice Regulations 2017

Federal Competition and Consumer Protection Act (FCCPA) 2018.

In all instances when a Platform has been informed of the existence of prohibited material, the Platform is under obligation to remove the content within 24 hours.

Part V: Measures on Disinformation and Misinformation

Disinformation and misinformation are multidimensional growing problems that do not have a single root cause or solution. The National Information Technology Development Agency (NITDA), Nigerian Communications Commission (NCC) and the National Broadcasting Commission (NBC) are conscious of the fact that optimal responses to disinformation and misinformation need to be multivariate, requiring Platforms to work collectively with stakeholders to combat disinformation and misinformation.

All Platforms shall:

Acquaint themselves with indigenous and contextual manifestations causing disinformation and/or misinformation and factors motivating its spread in Nigeria.

Collaborate and invest in continuous and consistent research with indigenous academics, media organisations, journalists, civil society organisations, government agencies, and other stakeholders on the causes and implications of disinformation and misinformation in Nigeria and provide effective responses.

Provide independent researchers, media organisations, journalists, civil society organisations, government agencies, access to the necessary data to facilitate research in combatting disinformation and misinformation.

Independently organise and conduct media literacy program that educates users on critical thinking and informed decisions when they encounter false information online.

Collectively collaborate with indigenous media organizations, journalists, civil society organisations, authorised government agencies, and other stakeholders to organise and conduct a media literacy program educating users on critical thinking and informed decisions when they encounter false information online. Authorised government agencies and indigenous civil society organisations shall participate and facilitate in the actualisation of these programs, ensure media coverage to the society, and in case of a collective program, oversee and keep a register and report of the program.

Engage the services of certified factcheckers to identify information targeted to disinform or misinform users in Nigeria. Where information appears to disinform or misinform users, adequate measure should be taken to restrict access to such information and where necessary, correct or factual version of events from credible sources and alternative perspectives should be provided.

Where a false information is likely to cause violence, public disorder, or exploitation of a child, the Platform shall caution the publisher and remove the content as soon as reasonably practicable.

A user shall not be liable, without intent, for merely redistributing through intermediaries, the content of which they are not the author and which they have not modified.

Provide users with easily accessible tools to report disinformation and/or misinformation and improve access to different authentic sources with alternative perspectives. Prioritize authentic information in search, feeds, or other distribution channels. Trace, expose, penalize, and close accounts and sources that amplify disinformation and misinformation.

PART VI: Miscellaneous

This Code of Practice may be reviewed and amended by the National Information Technology Development Agency (NITDA) from time to time. Non-compliance with this Regulation shall be construed as a breach of the provisions of the National Information Technology Development Agency (NITDA) Act of 2007.

Any Platform and/or internet intermediary that is responsible for the violation of this Regulation may be liable to disciplinary measures under civil service rules, prosecution and conviction for violation of NITDA Act 2007

Self-assessment Exercise 2

1. Explain the NITDA Code of Practices as related to Responsibilities of interactive Computer Service Platforms/Internet Intermediaries



1.6 Summary

This unit explain that, NITDA has been mandated by the National Information Technology Development Act (2007) to establish Standards, Guidelines and frameworks for the development, standardization, and regulation of Information Technology practices in Nigeria (NITDA, 2007). The Agency's role, therefore, is to develop Information technology in Nigeria through the use of regulatory instruments. As a regulatory Agency, NITDA is the clearinghouse for all Government Information Technology projects and infrastructural development in the country

NITDA Code of Practices includes; Responsibilities of interactive Computer Service Platforms/Internet Intermediaries and that, All Interactive Computer Service Platforms/Internet Intermediaries (Platform) shall: Abide by Nigerian laws and not deploy or modify their Platform in any way that will undermine or interfere with the application and/or enforcement of the law. All Platforms shall: Publish on their website, application, or both, the rules for access or usage of its Platform by any person or entity opting to use its services. These rules should be easily accessible and summarised in simple language. Inform users through the terms of service not to create, publish, promote, modify, transmit, store or share any content or information that: is harmful to a child; could cause any physical or psychological harm to another user directly or indirectly.



1.7 References/Further Readings/Web Resources

National Information Technology Development Agency (NITDA) (2001). NITDA Information Technology (IT) Hub. <https://nitda.gov.ng/>

National Information Technology Development Agency (NITDA) (2022). NITDA Information Technology (IT) Hub. <https://nitda.gov.ng/>

National Information Technology Development Agency (NITDA) (2022). NITDA Digital Economy. <https://nitda.gov.ng/>



1.8 Possible Answers to SAEs

Answers to SAEs 1

1. NITDA has been mandated by the National Information Technology Development Act (2007) to establish Standards, Guidelines and frameworks for the development, standardization, and regulation of Information Technology practices in Nigeria (NITDA, 2007). The Agency's role, therefore, is to develop Information technology in Nigeria through the use of regulatory instruments. As a regulatory Agency, NITDA is the clearinghouse for all Government Information Technology projects and infrastructural development in the country

Answers to SAEs 2

1 NITDA Code of Practices

Part I

Responsibilities of interactive Computer Service Platforms/Internet Intermediaries

All Interactive Computer Service Platforms/Internet Intermediaries (Platform) shall:

Abide by Nigerian laws and not deploy or modify their Platform in any way that will undermine or interfere with the application and/or enforcement of the law

ADDITIONAL RESPONSIBILITIES

All Platforms shall:

Publish on their website, application, or both, the rules for access or usage of its Platform by any person or entity opting to use its services. These rules should be easily accessible and summarised in simple language.

Inform users through the terms of service not to create, publish, promote, modify, transmit, store or share any content or information that: is harmful to a child; could cause any physical or psychological harm to another user directly or indirectly