Research Paper　　**Computer Science**

Awareness and training in E-Government

Mr. Ritesh P. Lakhtaria	"Shivkrupa", Block No.101, K. P. Shah's Wadi, Rameshwarnagr. Jamnagar – 361008
Dr. Dhaval R. Kathiriya	IT Director, University Bhavan, Anand Agriculture University, Anand - 3888110

ABSTRACT　*eGovernance goes a step further. Many have called it the second stage of eGovernment. Advances in Information and Communication technologies (ICT) are providing technical capability to provide efficient on-line eServices. Both western and third world countries are recognizing the importance of efficiency and accountability in government. eGovernement is changing the service process itself. Long waits are being replaced by on-line services and paper documents are being replaced by digital documents. Customers can access these from the comfort of their homes. However, for any sector to provide efficient services training is of utmost important. Unfortunately training has traditionally been ignored and it is assumed employees somehow will learn needed skills by themselves. This has lead to uneven expertise across employees performing similar job. We propose three levels of skills that employees must be trained for depending on the services they are performing and propose steps to achieve them. eGovernance involves actual citizen participation in government decision making.*

1. Introduction

eGovernment is creating an environment where governments are providing "more" for "less". Corruption is reducing and accountability is increasing. Many countries both rich and poor are joining the "e" bandwagon. Spatial boundaries are disappearing and national identities are getting blurred. Limitation on information exchange is disappearing. Governments are putting more and more non-critical information on the net. Any traveler can find visa requirements of another country, and employees can find abundance of information like policies, procedures and important holidays etc on line. eGovernment is beginning to operate like non-profit eBusiness. The survival of eBusiness is "customer" satisfaction which requires appropriate employee's training. Quite often training is ignored in government resulting in customer dissatisfaction and sub performance.

eGovernment involves providing information and services to interested parties using information and communication technologies within the framework of country's laws and regulations . Its customers include citizens, businesses, other governments, visitors or any other interested parties. This information dissemination occurs without human involvement less expensive.

eGovernance can go even a step further in creating eKnowledge. For example, tracing visitors and using data mining technologies to study visitor patterns and using it in promoting country among potential tourists. Its features are:
· 　Participative eGovernment
· 　mproves eServices
· 　reates Efficiency
· 　Creates Accountability
· 　Treats citizens as "customers"
· 　Interacts with businesses, local communities to create networked societies
· 　Anti Corruption Tool

2. Training

On one hand the Internet is allowing customers to access information quickly and to make just-in-time decisions and on the other hand and it is allowing a government worker to respond to customer's queries quickly. In any business "efficiency" and "effectiveness" are important measures of operations and decision making respectively. This is no difference in eGovernment. eServices require appropriate training, a training very

different than what is needed for face-to-face services or accessing information from file based systems. However, one thing that is often overlooked is

employee's need for training. Somehow it is assumed that employ-

ees must already know what is needed to access information, make decisions and implement them in the "e" environment. This is obviously not the case. An ill or untrained employee can be resistive and detrimental to the "e" environment. Training/learning should be an integral part of any successful governance structure, be it traditional or virtual.

eGovernance is a process and ICT is a vehicle to achieve learning goals of that process. It should be remembered that ICT is an enabler and not a goal in itself. Training has many different levels. It is similar to a course, where there are prerequisites, basic training needed for the course, course related training and advanced training for future or professional course. Table I compares levels in eCourse and eTraining within the context of a Database Course.

Table-1: Levels in eGovernment training

LEVELS	eTraining
LEVEL 1	Basic IT Knowledge
LEVEL 2	Basic IT Competency
LEVEL 3	Specific IT Competency

We propose following steps for eTraining in eGovernance:
· 　Identify Goals
· 　Identify Customers
· 　Identify Service Requirements in eGovernance
· 　Develop Training plans

3. Identify Goals

What is the purpose of eGovernment and eGovernance. This is where public sector can learn from private sector. eGovernment reengineers the process itself, there are no more phone calls, letters or paperwork. eGovernance changes the process as:
· 　eResponsive
　　be responsive to "customers" need, reduce query response time; provide up to date information, suggest alternatives
· 　eAdministration
　　Introduce efficiency and become a paperless environment. Reduce corruption and increase accountability
· 　eCoordination

Facilitate on-line and ongoing dialog between various parts of the society, businesses, political leaders, society icons and other experts This requires new form of training. Training goals must be established:
· 　What do we expect to achieve?
· 　Why are we training?
· 　Whom are we training?
· 　Who are the ultimate potential beneficiaries?
· 　What are the success measurements?

In addition, customer's need to know the purpose of eGovernance and how they can participate in its achievement. Simply training in ICT without knowing the process would be meaningless and ultimately result in frustrated customers. It is similar to having sophisticated systems but nobody uses it because of lack of understanding.

To support above capabilities eTraining, as a minimum, will have to develop following capabilities:
· Web browsing competency
· Basic computer knowledge
· E-mail competency
· Ability to telnet, ftp etc.
· Ability to provide real-time on line help
· Ability to provide Group Coordination
· Ability to Maintain Data Bases and Data Currency
· Ability to Create Knowledge

4. Identify Customers

Customer "first" must be the policy of any eGovernment services. It is important to identify customers and recognize their needs. Training plans should be developed to efficiently satisfy customer's needs. Since eGovernance involves federal, state and local entities, it is not possible to describe each and every job. We will look at some generalized grouping and describe tasks and match them to level of employee's expertise. Broadly, we can group jobs as:

· **Operational workers**

Their job is to maintain and continue eGovernment operations. Their duties involve routine and repetitive tasks such as answer emails and forward questions to appropriate levels. These workers are similar to assembly line workers in a plant. Basic IT knowledge (Level 1) like familiarit y with email, the Internet and browsing through websites will be sufficient

· **Middle level Managers**

Their job is to monitor day-to-day operations or plan for long-term eGoverment operations. They job is to ensure eGovernment information is correct and employees are responding efficiently to customer's querie. This is similar to a foreman or a supervisor in a plant. Level 1 and 2, IT competencies are required.

· **Top Level Managers**

Their job is to plan for long-term eGovernment operations. They must plan for future eGovernment enhancements. Level 3 training will be essential to allow managers to keep with emerging trends.

· **Technical Personnel**

Their job is to assure seamless IT operations. They must have expertise in existing technologies and be ware of evolving IT.
Level 4 training is essential for this group.

5. Develop Training plan

Once service requirements are identified, next step is to develop Training plans. Training can be on the web or in-class. Table-2 summarizes Training models. They are traditional and asynchronous learning modules. In this form employees learn simultaneously. For example, there may be a PC competency class in a lab and all employees in need to level-1 training could attend this. This is not pure eTraining since some human interaction is involved. Model "a" where web is used for information storage, dissemination and retrieval. This form of training is good for learning pre and basic competencies that relate to levels -1 and 2. As a first level course this also builds confidence as we move from traditional to web environment. Instead of sending employees to an async web learning this form allows employees to learn basic skills in a familiar traditional classroom learning environment. This is cooperative learning in the sense it provides same "traditional" environment but the concepts are web oriented or web assisted. This also allows formal training where first time students can get help from their peers in real time. The session

itself could be instructor free, ie, there need not be any instructor and all learning could be done through on-line videos or modules. Instructor may be available on-line in real time to assist in case of questions or problems.

Table-2: eTraining Models

TIME/ PLACE	SAME	ANY
SAME	Traditional Learning	Module-based Training
ANY	Web/TV broadcasting	ETRAINING (self-paced learning)

For more advanced students sync web training may be more appropriate where employees need not go to a lab but could learn from their offices or wherever they are. This is useful where employees are geographically spread and have basic ICT knowledge to be comfortable to learn long distance. Level-2 and some 3 training may be appropriate in this form of synchronous learning environment. This still assumes co-operative learning is desirable due to basic nature of skills involved.

6. Async Learning

This form of training is useful for one on one learning, where an employee can go to a lab or information center and learn at his/her convenience. This is useful for managers who may require personal assistance and may not feel comfortable learning with other employees. This is generally suitable for level 4 training where professionals are needed to train for specialized skills or where busy executives have time constraints to learn in sync environment.

7. Web-based Training

This form oftraining provides time and place independent learning. In this mode training becomes individual's responsibility. 24/7 eTraining is available. This is suitable for self-motivated individuals who have level 1 and some level 2 skills. Individuals can go online, search the web, download appropriate software, research white papers and train themselves in level 4 skills. In the IT age where societies are becoming knowledge societies, the ability to etrain is desirable. It is economical and efficient. From employer's perspective it shows initiative, ambition and self-motivation by employees who are getting ready for eGovernance and keeping up with the changing demands of their jobs. Though we have identified several levels it must be noted that every employee for a given job may not need all level of training. As IT literacy is expanding many employees already have some basic IT knowledge and in many cases IT competency. It is possible that a stakeholder may have some but not all IT competency needed for a given level. In such cases a modular approach is desirable. This is similar to Java applets or plug-ins approach where you download what you need as you need. For example, an employee may have good word processing knowledge but may not know spreadsheet concepts. In this case a web-based spreadsheet modules could be downloaded and employee could learn it at his/her leisure. Training improves efficiency, however it is not a static occurrence.

8. Concluding Remarks

eGovernemnt and eGovernance are becoming part of daily lives of many citizens. Governments are committing millions of dollars to these projects with encouraging results. The objective of e-governance is to service and support its stakeholders in a seamless on-line environment. This increases efficiency due to 24/7 availability and efficiency due to enhanced accountability. Efficiency in government has been ignored with the perception that government employees do not work or are ill trained to perform their duties. To provide efficient services employees must provide 'customer-focused' services and above all must have commitment to eGovernance. Employees must be trained to provide efficient eSupport to external customers. To foster continuous learning and efficiency it is important that training must focus on the "total" needs of users, jobs and organizations and evolve with the external users. In the absence of continuous training, there will be resistance to "change" as users become comfortable with the "current" technology.

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