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Are Public Employees in Romania Prepared for eGovernment?

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Abstract

An efficient administration can not be conceived without the advantages offered by the use of IT&C in the development of public services. However, once new technologies are adopted, the accumulation of specific capabilities by the public employees is mandatory. Guidelines in drawing up an eGovernment training plan were formulated herein using skill-sets detailed by the European Public Administration Network and the U.S. Information Technology Management Reform Act.

Keywords: eGovernment, skills, public services, public employers

Introduction

With emphasis on the use of information technology in providing services, eGovernment (eGov) offers a governmental agency the possibility of rethinking the manner in which services are rendered. More accurately, it offers the occasion to examine its current transactions and procedures, identifies processes and practices that can be rationalized or simplified and implements them and adopts new technologies that can increase these improvements. Adopting IT&C systems leads to increasing efficiency, quality and productivity (Spano et al., 2009). The technological progress has created new opportunities for generating and using, in a more confident manner, data and information in public organizations (Smith and Kavanagh, 2008).

While previous studies have been concentrated on describing the introduction of eGov in European countries under different perspectives, it seems there is a link missing: which is and to what extent does the performance of specific eGov public services is influenced by the level of qualification and the competences of public sector employees? Along with financial resources, organizational conditions, leadership, frameworks or Information and Technology Infrastructure, the reserve of skilled workforce proving a good learning capacity is one essential

factor for eGov (Italy Ministry for Innovation and Technologies and United Nations, 2002). This sustains a popular opinion according to which the personnel are one of the key factors in determining the success or failure of technology applications (Schelin, 2004). In fact, the survey carried out by the World Bank regarding eGov projects, revealed that such successful projects spend at least 10% of their budget on training (World Bank, 2004).

Theory

Despite the technological progress, the lack of professionals in the technical and technologies domain, which is the basis of eGov services, remains a major deficiency in countries with medium and low incomes (United Nations, 2010). Few civil services are able to compete with the wages from the private sector and this inevitable outcome displays the fact that the top personnel have the tendency to employ in private organizations.

Romania has no strategy or program in the field of competence development for public sector employees, which is necessary in order for them to work with specific eGov services and projects. A quantitative research at the level of public sector employees (Velicu et al., 2012), revealed the fact that about 25% of the interviewed subjects participated in IT&C programs or training sessions between 2009 and 2011. Such percentage is very poor since all employees use at least the P.C. in their daily activity.

The competences that are necessary to employees, especially for those in the public sector developing activities in an environment mostly based on IT&C may be registered in two categories, namely general and specific competences. The most important general abilities include *Education level, Experience on the labor market, Comprehension of foreign languages, Ability to work in a team, Analytical thinking, Ability to work under pressure, Flexibility, Initiative, Efficiency and Communication and Relationship abilities* (Waldner 2012).

Specific abilities, more exactly the ones necessary to public sector employees involved in design and communication of electronic public services, represent the flashpoint of the training system and at the same time the main topic of this study.

Specific eGov Skill Requirements

European Public Administration Network (EPAN) identified four sets of skills essential for eGov: information technology (IT), information management (IM), information society (IS) and updated management skills. These skills are relevant to government employers and managers in general. Basic IT skills, including working knowledge of applications and their use for work improvement, quality and efficiency must be provided to employees, since the integration of IT&C into public administrations is currently increasing. Managers are as well expected to understand how technology is used as a tool in accomplishing and/or improving government processes. Managers are also required skills that allow them to work with their organization's IT and IM experts as to match government processes with the appropriate technical solutions. The four skills-sets are briefly described below:

Table no. 1 – EPAN essential eGov skills

No.	Competences	Description	Needed by
1	**Information Technology Skills**	Technical skills – IT literacy for all employees; technical skills for IT specialists to design and implement technical elements of eGov projects (hardware, software, communication).	All employees, managers and IT specialists
2	**Information Management Skills**	It stands for the division of knowledge in public administrations and sharing knowledge with partners and other stakeholders outside the institution.	Managers and Information Management specialists
3	**Information Society Skills**	It includes the ability of using IT&C resources in order to implement a specific eGov strategy accordingly to the general and main strategy of the institution.	Managers
4	**Updated Management Skills**	The manager's capacities to improve customer responsiveness, develop accountability frameworks, create incentives for cooperation and manage relationships with the private sector.	Managers

Source: EPAN (2003)

The Clinger-Cohen Act of 1996, also known as the U.S. Information Technology Management Reform Act (ITMRA), directed agencies to assess the requirements established for agency personnel regarding knowledge and skills in information resources management and the adequacy of such requirements for facilitating the achievement of the performance goals established for information resources management. The competencies and the learning objectives demonstrating competence are revised and expanded periodically and are used by CIO University Partner Schools, National Defense University's Information Resources Management College and other institutions for higher education. This revision presented in Table no. 2 is the 2012 version.

Table no. 2 – ITMRA essential eGov skills

No.	Competences	Description
1	**Policy and Organization**	The required skills for this competence include the ability to: develop agency missions, organizations, function, procedures and policies; understand the regulations and laws related to IT; contribute to government's decision-making, execution, policy-making and budget formulation
2	**Leadership/ Management**	Leadership skills extend beyond management to cover the ability to: define roles, skill sets and responsibilities of senior officials, CIO, staff and stakeholders; understand the methods for building federal IT management and technical staff expertise; provide standards for competency testing through certification, performance assessment and other methods
3	**Process/Change Management**	Process and change management skills cover the ability to: know and apply techniques and models of organizational development and change; apply techniques and models of process management and control; use modelling and simulation tools and methods; define models for quality assessment; carry out business process re-design and reengineering
4	**Information Resources Strategy and Planning**	Information Resources Management (IRM) strategic planning must begin with the business strategic planning process and integrate with the organization's business functions and plans since business planning and IRM planning are parallel and coupled processes. Specific skills include: define and describe performance goals; evaluate a current baseline analysis; design performance analysis; design systems to address interdepartmental, interagency and intergovernmental functional analyses; identify and describe approaches that will assess the value, benefit, and cost of IT and its impact on the business
5	**IT Performance Assessment: Models and Methods**	Performance assessment is crucial for determining whether the set goals are met. Specific skill requirements for this competence include the ability to: measure the business value of IT and customer satisfaction; monitor and measure new system development activities; measure the success of IT initiatives; apply processes and tools to create, administer and analyze survey questionnaires; select techniques for defining effective performance measures; and specify performance criteria
6	**IT**	The skill-set for this competence includes the ability to define

	Project/Program Management	project scope and requirements, and to manage project integration, time and cost performance, quality, procurement and risks.
7	**Capital Planning and Investment Control**	This skill-set entails: knowledge of the current and best practices in cost benefit and risk analysis; knowledge of the risk management models and methods; ability to evaluate alternative IT investments; knowledge of capital investment analysis models; ability to analyze business cases; and ability to integrate performance with mission and budget
8	**Acquisition**	The basic skill-set includes: providing acquisition strategies based on strategic and annual performance plans; understanding and operating post-award IT contract management including evaluation of past performances; and the ability to apply best practices in acquisition
9	**E-Government**	This competence covers the ability to: understand strategic business issues and changes with the advent of e-government, e-business and e-commerce solutions; create the strategies for web development; understand industry standards, communication practices and channel strategies; understand dynamic pricing as it relates to government transactions; evaluate existing customer relationship management models and recommend them to the agencies; and identify social issues
10	**Information Security/Information Assurance**	This skill-set covers: understanding fundamental principles and best practices in Information Assurance; recognizing threats and vulnerabilities in IT systems; understanding legal and policy issues for management and end-users; providing IT security assistance; and providing standard operating procedures for intrusion or misuse of government IT systems
11	**Enterprise Architecture**	Enterprise architecture establishes an agency-wide roadmap to meet mission goals through the optimal performance of core business processes and supporting information technology resources (e.g. systems, applications, databases, websites, and networks). Specific skills include: Identify and describe roles in an EA program; describe how strategic planning is related to enterprise architecture; describe and discuss impacts of key regulatory requirements and guidance as they relate to enterprise architecture; identify and describe the purpose of the main elements of an enterprise architecture
12	**Technology Management and Assessment**	Since the inception of the Clinger-Cohen Act, the CIO's role as technology manager has become increasingly complex. The ability to ensure effective development and deployment of

		technology requires a broad awareness of current and emerging technology capabilities, standards, policies and law. CIO's must also be able to identify and evaluate the strategic benefits of technology applications within the business environment. Specific skills include: explain the capabilities and limitations of data transmission; explain data transmission concepts, functions, and mechanisms; evaluate the benefits and limitations of commonly-used local wired and wireless voice and data communication architectures, devices, and protocols

Source: **2012 Clinger-Cohen Core Competencies Learning Objectives**

Recommendations

This paper highlights the best practices in the development of public workforce for eGov provided by the EPAN and ITMRA. These practices generally refer to: Information Management, Technology Management, Leadership, Performance Assessment, Project Management and Information Technology. Competences concern specific categories of employees, as well as general public officers. Next, a set of recommendations was formulated based on the best practices presented earlier and the literature review on the topic:

- A human resource development plan specific for eGov should be created, as part of the overall strategic plan;
- The Government should form strategic partnerships with universities, tertiary education institutions and training organizations in order to be able to offer courses and assessments in their areas of expertise;
- The public organizations should establish and maintain a skill inventory of its employees; also it should assess the existing skill-gaps related to eGov necessities;
- The "lifelong learning" philosophy should be promoted among public employees, as such philosophy is absolutely necessary in an Information Society;
- The Government should unlock and begin the development of online learning infrastructure and make it easy and accessible to the public workforce, for instance by means of organizations intranets;
- Every public employee should be encouraged to define and maintain a self development plan.

A thorough analysis of the specialized literature suggests the imperative to define and adopt strategies regarding the development of human resources abilities to work with eGov. The main competences refer both to politics, leadership organization and planning as well as to acquisitions or informational security. Such competences are directed to managers, IT or informational management specialists as well as to other categories of employees.

The findings also imply a need for a determined management and organizational commitment in the field of employees' competence assessment and improvement of career

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development possibilities. The results strengthen the conclusions of Kim and Wright (2007). At the same time the organizations have to build of a positive attitude among employees. For a successful implementation of IT&C technologies, the quality and efficiency of the new processes have to be demonstrated (Anton et al., 2013). Also, existing eGov projects can be used to refine and implement these recommendations. In addition, public management has to focus on determination, motivation and loyalty of employees, as they represent important factors affecting the performance of the organization (Gould-Williams and Davies, 2005).

Conclusions and Discussions

The human resources development plan should be a key component of the overall eGov strategy of any government. This paper has provided some guidelines in drawing up an eGov training plan. It has also discussed the skill-sets for eGov as prescribed by the EPAN and the ITMRA. Leadership, schedule management, project management, process and change management, acquisitions, technical and basic IT skills are some of the core skills that are required from the contemporary public officers and the eGov's managers. The paper also propounds some recommendations in order to prepare and develop personnel for eGov. They suggest the development of a government–wide training schedule for public workforce, leveraging online learning and promoting the ideas for lifelong learning and responsibility for one's self-development.

Attracting employees having IT competences represents a *sine qua non* condition for the public administration in case there is an intention to path the way to eGov. The deficiencies from this point of view are currently characterizing Romania. Moreover, the competition with the private sector in terms of IT specialized human resources will only increase this fault. A manner in which this trend can be stopped is focusing on the design of a reward system for knowledge, abilities and results, similar to the system from the private sector. Competence-based remuneration is an innovative approach in the public sector as it supposes the establishing of a benefits package of employees, depending on their competence range (Thompson and Lehew, 2000). This type of system is in contrast to the traditional manner based on a mix of obligations and responsibilities. The competence-based remuneration was established to reward employees that learn to work on miscellaneous types of equipments and software programs. Human Resources Management must be redesigned and reconsidered in order to be adapted to the real necessities regarding the development and implementation of new procedures and processes within public organizations, opinion which is also suggested by Schimmel and Muntslag (2009).

It is also important to keep in mind the resistance that reformers might stumble across while confronting a rigid public sector. Recent research show the fact that there is a high degree of reticence from the public employees in accepting new technologies and processes (Baldwin et al., 2012). Beyond technological changes, profound transformations are imperative behind the scene, especially in a context where some practices are deeply rooted, in case the exchange of information is more an exception than a rule, and in case the technological capacity of the public administration is limited. A viable alternative should be the outsourcing

of activities for eGov services development and supplying to the private sector. A competitive contracting process shall ensure the participation of the most powerful private sector suppliers thus leading to the design of quality services.

Finally, for a country to excel in eGov, the policymakers will have to join forces and change mentalities and behaviors while offering public officers the possibility of achieving the necessary abilities in a modern organization.

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