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Possibilities and Perspectives of Using Open Source Applications in Public Administration in Slovakia

Summary

In this contribution, we deal with the options of applying open source software in the process of informatisation of public administration. The key factor in the process is the concept of lifelong learning as the prerequisite of security of first-class, professional power in public administration. The need for approach to public administration management and its software support is also mentioned in the connection.

Keywords

public administration, open source software, education in public administration, New Public Management

1. Introduction

Informatisation of public administration is categorized among the key tasks of the Slovak government programs and is financed with considerable resources. To see a progress in this area, is necessary to implement information technology with organization changes, new procedures and skills to public administration together. The submitted article mentions new ways of cost saving by means of applying open source software in public administration.

2. Informatisation of public administration and possibilities of use of open source software

By effectively using information and communication technologies (ICT), the transfer of the increasing amount of information is faster, of higher quality and more secure; concurrently, geographical and time barriers are eliminated and competition in a new knowledge society is supported. Many countries of the European Union (EU), including Slovakia, are experiencing this evolutionary trend. Informatisation of the society supports the transformation of Slovakia into a dynamic knowledge economy. Its important part, which increases the level of quality of life of each citizen, is e-Government. It constitutes a so called "virtual institution", which will be able to provide its services and fulfil the needs of the public with the help of the Internet and other modern communication means.

Evolutionary trends in the EU show that open source solutions create capacity for optimising the process of informatisation of public administration. The first step in catching up and developing these European trends is to (Ministerstva spravodlivosti Slovenskej republiky, 2010):

- formulate the vision of the use of software products in public administration,
- summarize the requirements for the use of software products (European and Slovak),
- specify the principles of the effective use of software products,
- establish the impact of the implementation of principles and
- define the factors influencing the selection of software.

The European Union engaged in the use of open source software in 1998, when a working group for the examination of the issue was established with the aim of providing potential resolutions to transition to the open source standard. Research activities are performed in the form of quarterly framework programs. In the course of these programs, many projects have been processed and the programs are still active. The results of the majority of studies suggest the introduction of open source solutions, which has been confirmed by research performed by individual EU countries such as Austria, Finland, Denmark, Italy, France, Germany, Holland, Spain and the United Kingdom. Furthermore, the issue has been discussed in Poland, the Czech Republic and Slovenia. Open source software is very frequently used in third world countries, where

there are insufficient means for the purchase of proprietary licenses. It is actively used mostly in Latin America, China and India.

In 2009, the European Parliament adopted a document called Interoperability Solutions for European Public Administrations (ISA), which basically makes the use of open sources formats obligatory in public administration. The document defines general principles such as the principle of technological neutrality and adaptability, openness, reusability, privacy and protection of personal data and security. In this context, an important task is not only to specify software platforms, but also to create multiple layers of interoperability (Van Overeem, Witters, & Peristeras, 2007), which are the following:

- procedural - concerned with the unification of public administration processes in the EU countries,
- semantic - defines the common semantics and taxonomy of the processes in terms of the EU,
- technical - secures the proper transfer of messages, unified protocols, common language, syntax and the like and
- trivial - regarding network infrastructure.

Despite a relatively high competitiveness of Slovakia and a well-working market and business environment, in terms of developing a highly effective knowledge economy, Slovakia ranks among the weakest members of the EU. Concerning the level of open source activities per inhabitant, Slovakia ranked 41st in the world. The new Open Source Index elaborated by the Red Hat company and the Georgia Institute of Technology considers several types of data; for instance, the legislative support of open source, number of registered users of certain types of open source software, number of developers in certain areas of open source activities, levels of national support of Linux, but also Internet conditions. One of the reasons for the ranking is the insufficient technological infrastructure and digitalized content and the lack of ICT skills, mostly at the level of public administration. Therefore, the informatisation of public administration is one of the key tasks of programs of the Slovak government and considerable financial means are allocated for this process. To achieve progress in this area, ICT need to be integrated into public administration together with organizational changes, new procedures and skills.

In terms of the state program of research and development "Building the Information Society",

the Ministry of Education of the Slovak Republic posed the research task "Open Source Infrastructure", the core of which was to design a concept of application and support of the open source solution in state administration, the school system and the sector of small and medium-sized enterprises. The output of the project was that the use of open source software may be effective for the Slovak public administration, but it is hard to implement in practice.

Open source products are available in Slovakia, but still in limited use. The most frequently used open source software includes:

- Apache - a globally used functional web server;
- Linux - an operational system;
- Mozilla Firefox - a well-known Internet browser;
- Open Office - a complete open source office suite;
- Gimp - a full replacement of commercial graphics editors.

Because of the use of the Open Office suite, a survey was conducted with research sample of 61 public administration organizations. Based on the survey, we have found that 51% of the organizations were not apprised of the use of this software because of less propagation. Other organizations have tried to implement this free Office software.

The results of testing and using this software were diversified – about 1/3 of results were positive but there were also many negative ones, especially because of these aspects:

- incompatibility with MS Office,
- poor quality and. Functionality,
- lack of technical support,
- incompatibility with integrated information systems,
- financial cost of education and
- a loss of time associated with implementation and training.

3. New approaches to management of public administration and their software support

New Public Management (NPM) is a model of public administration management based on the implementation of management procedures and tools, applied both in the private and the public sector (Barzelay, 2001). In the last two decades, NPM has been executed in the developed countries as the new philosophy, which strives to introduce

more effective mechanisms of business administration, applied in a market environment, in terms of public administration management. The basic aims of NPM lie in the increase of economic efficiency of the public sector and the extension of public services and their orientation towards the needs of customers (Grell, 2005).

Despite the fact that regarding document transfer in the EU Microsoft enforced the OOXML format, code Open Office XML, as the international standard, imperfections of the format have arisen; therefore, some states (Denmark, Belgium, Sweden and Holland) follow the example of Norway and plan on selecting publicly accessible services for their government, e.g. ODF (Open Document Format) which is an open source file format for saving and exchanging office documents (text documents, tables, graphs, presentations...) originally developed by Sun Microsystems, but standardized by the Organization for the Advancement of Structured Information Standards (OASIS) as Open Document Format for Office Applications (OpenDocument) TC - OASIS ODF TC, (ISO/IEC 26300:2006 Open Document Format for Office Applications (OpenDocument) v1.0). From this aspect, it is suitable to use, for example, the open source system ERP5 (Nexedi, n.d.) in public administration which is based on a document oriented approach whereby workflow processes can be observed by monitoring document flows. ERP5 supports GRID technologies, service oriented architecture, processes, hybrid indexing and other features.

4. Training in public administration

The present time brings a need to develop an effective system of lifelong learning.

This system has to create a real and efficient background to ensure first-class, professional performance in public administration.

Training in public administration basically involves two aspects: institutional (aimed at the quality improvement of operations of public administration institutions) and educational (involves the provision of knowledge in the school system). In the conditions of Slovakia, the foundation of both aspects may be presented by the Strategy of Informatisation of Public Administration, which formulates four main goals by 2013:

- increased satisfaction of citizens, entrepreneurs and other members of the public with public administration,

- electronisation of processes of public administration,
- more effective and efficient public administration and
- enhanced competence of public administration.

Accomplishing these goals will fulfil the conditions which contribute to economic growth in the digital world and the whole society.

Institutional aspect

The area of education in public administration covers mostly the fourth main goal by way of the following partial goals:

- computer literacy,
- employees of public administration wall fulfil the requirements of a knowledge society and
- electronic training.

This educational process should improve the information and computer literacy, language skills as well as special knowledge needed for performing functions in public administration. Employees connected to an innovative learning in practice maximize their performance and provide better services to the public.

Educational aspect

We are mostly engaged in training in the area of higher education with the support of open source software products in the area of subjects in connection with public administration. Currently, the dominant areas of knowledge in public administration are the application of the process approach and the use of information technologies. The process approach and Internet technologies also significantly bring the content and the form of access to knowledge about information systems of public administration up to date. Specialized software plays a significant role in the creation and administration of the integrated information system of public administration. The use of demo versions of software applications in the area of education could be an important incentive.

5. Conclusion

Open source software products are cost saving and free in most of the cases.

Users only need to get their Internet connection or any kind of portable and recordable (data) medium. Training is essential to make the introduction of open source products in public administration in Slovakia easier. It should be focused on raising awareness of software products,

gaining skills in individual areas of software use and joint understanding of licensing, support and commercial conditions. There have been considerations to establish a non-profit organization "Open Source Academy", which would collect and provide know-how in the area of open source product application mainly in the public sector (Letkovsky, 2005).

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