„The Central Register of Civil Servants, E-Data or E-Knowledge"?

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1. Abstract

One of the core objectives of every public administration reform is creating expert, professional, effective and efficient administration as a real citizen-oriented service. The Republic of Macedonia makes its first steps within such a reform. As a part of our public administration reform process, the Civil Servants Agency, in addition to having other competencies, is responsible for developing policies related to civil servants (the most important component of public administration). One of the most important policies in state administration is, of course, human resource policy. In other words, creating policies that are directly related to the establishment of the organisational structure of state bodies, to recruitment and appointment of civil servants, continuous development and, finally, performance appraisal and evaluation, are among the most important segments of the functionality of state administration.

On the basis of its legal competencies, the Civil Servants Agency manages the Central Register of Civil Servants. Being the original author of the Central Register and as someone dealing with it on a day-to-day basis, I will point to the following in my essay:

- The concept of the Central Register;
- The data content of the Central Register;
- Central Register data analysis;
- The accessibility of data and analyses.

However, the end of this paper will focus on answering a question that, in my opinion, is the most important: is the Central Register "a mere" database or is it an enormous knowledge on a subject that, if properly managed and used, would be a key policy making and decision making tool within the state administration reform. This paper will present the experiences related to "proving" that the Central Register is an enormous E -Knowledge increasingly used by state bodies as a basis for policy making and decision making, although already in its beginning it faced scepticism and underestimation, probably due to insufficient awareness of the power of information-telecommunication technologies.

2. Introduction

The knowledge is one of the biggest wealthy of each person, institution and company. This is one of the most important factors for personal, institutional and companies' success and prosperity. Therefore, recently, more and more attention is dedicated to the area of knowledge management and it is a one of the biggest world wide actual trends.

2.1 Types of knowledge

According to the manner of knowledge keeping the theory recognizes two general types of knowledge:

2.1.1 Tacit knowledge

This type of knowledge is kept into the "peoples heads" and it is their own property. Major challenges in managing this type of knowledge are reaching the clear picture for all that those persons know as well as to locate such persons that "know something". In this situation when such persons live the institution or the company might cause serious negative consequences on the institution or companies'

success because with those persons together the knowledge needed for successful accomplishment of working tasks "gone" too.

2.1.2   Recorded Knowledge

This type of knowledge is kept recorded on some electronic media (disks, CD's, floppies etc.) in digital form as documents, tables, presentations, data bases and similar. Major challenges in managing this type of knowledge is to locate place where the knowledge is recorded and its presentation in usefull and understadable form for other people. By recording the knowledge in digital form it becomes property of the institution or the company, so the consequences of the persons that have gone are significantly lower.

2.2   Data, Information, Knowledge

It is necessary to be made a clear distinction umong above mentioned words in order to understand the concept of the mening of knowledge manegment. The theory offers lots of definitions for data, information, and knowledge and I have extracted the following:

Data can be described as a "set of discreet, objective facts for the events"[1] or as "facts, pictures, numbers presented without context"[2].

On the other hand, information can be described as a "message, mostly in a form of written document or audio/video communication"[1] or as an "organized data presented in context "[2].

Knowledge, as the highest form, can be described as an" information in context together with understanding of that how it can be used "[2].

Due to above explanation the "hierarchical" position of this three words is obvious:

DATA	→	INFORMATION	→	KNOWLEDGE

Graphic 1: „Hierarchical"position of data, information and knowledge

It is obvious that the difference between data and information is the evident exsitece of interaction umong the person, IT technologies or combination of them where those data and information get additional value [3].
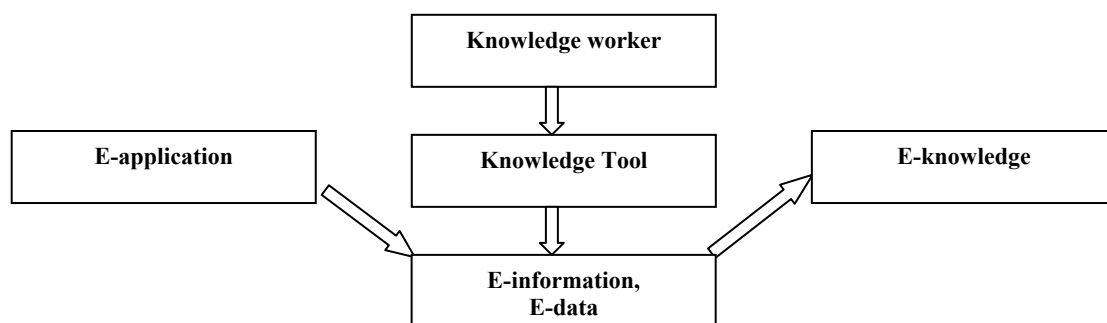
Graphic 2: „Modern Way "to knowledge

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[1] Davenport & Prusak 1998
[2] Brooking 1999
[3] Nonaka & Takeuchi 1995

3. Central Register for Civil Servants

One of the most important legal competencies of the Civil Servants Agency is conducting the Central Register for Civil Servants. Considering the fact that the acctual model of civil service in the Republic of Macedonia has been established in 2000, it was necessary he process of creating and establishing the Central Register of Civil Servants to be started from zero level. During that process the experiences from some neighborhood countries as well as some of the most developed countries were used.

3.1 Concept of the Central Register

Starting with a strong commitment that the Central Register for Civil Servants shall be a base for decision making and policies creating in human resources management within the civil service in the Republic of Macedonia, the team authorized for designing the concept of the Register has aproached to create such a concept compatible with the model for knowledge management, explained in previous item. So, according to received data form the state bodies and civil servants, information are created (reports and analyses) that serve as a base for suggesting solutions of particular situations and for policies creating in human resources management by persons responsible for that.

By defining data that will content the Register, reports and analyses that shall be created , fist of all deep researching of the law regulation regarding civil servants has been made (primary and secondary legislation). Afterwards, proper proposal of sub-legislation act was created regarding the data and the way of collecting them for the Register as well as the manners and procedures of their using. After the consultations with appropriate state bodies, some constructive remarks were added and the Rulebook has been adopted. Adopting of the Rulebook was in fact the official start of the Central Register of Civil Servants in the Republic of Macedonia.

3.2 Data content in the Central Register

The Central Register contents three major types of data:
- Basic data
- Data on organizational structure of state bodies
- Data on civil servants

3.2.1 Basic data

Basic data are data that are used on state level as coded for example, data on settlements, municipalities, states, nationalities, education level, foreign languages, as well as specially created codes for Register purposes such as the state administration bodies, positions of civil servants and reasons for recalling civil servants. Those data have not some "value" and serve for accompanying data of two other groups. The most important characteristic of those data is that if some need appears for updating it can be vary easily done on a very easy and fast way by system operators.

3.2.2 Data on the structure of the state bodies

Those data reflect the organizational structure of the state bodies (sectors, units and other organizational structures), as well as working positions according the acts on systematization and organization of the working places. Working places are described with the title of the working place, job position, number of employees, necessary working experience, educational and professional degree and some particular requirements for that working place. This data provide getting clear picture on organizational structure of the state bodies and further connection, meaning on which working place which civil servant works.

3.2.3 Data on civil servants

Data on civil servants are divided on three bigger groups such as followed:
- General data on civil servant
- Data on career of the civil servant
- Data on professional improvement and training of civil servant

3.2.3.1 General data on civil servant

In the form purposed for collecting general data on civil servant the personal data are recorded such as name, surname, unique personal identification number, date of birth, place of birth, address and place of living, nationality, merritial sattus and supported persons by the civil servant, data for level and type of education and foreign languages. This for are fulfilled by the civil servant him/her self and he/she confirms their factuality and is responsible for.

3.2.3.2 Data on career of civil servant

The form purposed for collecting data on career of civil servant is divide in two parts – registration and termination – how it can provide easy and simple way for following the career movment of the civil servant. Registration contains data on civil servant position, his/her working place, professional phone number (normal and mobile), e-mail address, date when he/she has been posted on that working place and the manner of his/her employment – positioned. Termination part contains data for the date of termination and reasons for that. Data on career are fulfilled by the civil servant responsible for human resources in the state body and he/she confirms their factuality and is responsible for both parts - Registration and Termination.

3.2.3.3 Data on professional improvement and training of civil servant

The form purposed for collecting data on professional improvement and training of civil servant contains data on attended traings, seminars, workshops, conferencies, etc., as well as on received certificates (certificates of attendance and of success). This for are fulfilled by the civil servant him/her self and he/she confirms their factuality and is responsible for.

3.2.4 Data on civil servants that will be collected soon

Considering the fact that one significant part of the Law on Civil Servants was not in force the Register does not contain data on assesment on civil servants as well as data for their wages and allowances. Since, that part of the Law enters into force recently the Register will collect data on marks of the civil servants, their wages and allowances and with that the Register will contain all segments of human resources management.

3.3 Analyses data in the Central Register

Organization of data on the manner described above, provides creating a lots of different information. They can be divided in two basic groups: information by one parameter (ex. gender structure, ages, nationality, education, or structure by positions of civil servants and similar) and information get with crosscutting of two or more parameters (ex. structure by gender and ages, structure by gender, ages and nationality and similar).
Above mentioned information are excellent base for review of actual situation in the civil service of the Republic of Macedonia, but also for making analyses and simulations such as " what would be if should be" (ex. what would be the gender structure of the civil service next year after particular number of civil servants will be retired and similar). Such analyses most often give answers on the key question: what policy to be chose for solving particular problems and situations.

3.4 Access to data and analyses

Considering the fact that data from the Central Register for Civil Servants are professional secret the access is possible only for the civil servants and bodies where civil servants works.
Civil servants have right to require and to get extract only with data that are concerned only for them self (himself/herself).
Bodies where civil servants works have right to require and to get extract of data regarding the particular body that request such information, and also data, information and analyses for all civil service in purpose of using them for decision making significant for the particular body or for entire civil service.

Final objective of the register regarding the data access is to make them available though Internet for all citizents and interested subjects. This will be real when proper necessary legal and organizational conditions would be created.

4. Software solution for the Central Register

Software solution for serving the Central Register of the Civil servants is diveloped speciallyt for this purpose following teh world trendies and experiences in this type of applications. It is based on Microsoft technologies (MS Windows 2000, MS SQL Server 2000, MS Visual Studio.net), and in the part of multi-dimensional analytics one of the leading world products in this area is used and it is   the Crystal Analysis. Solution is highly functional multi-based application according all above mentioned world wide known standards and companies.

4.1 Data entering module

During the creating the application a great attention was put on the module for data entering because of the fact that only based on "quality" data might be get "quality" information and might be made right decisions. The entering data itself as a process clearly points out the significant presence of the human factor. Very often it is required the operators to be able for speed data entering that might results with mistakes during the entering process. Aiming to avoid or get on minimum this types of mistakes, during the creating the data base for the Register we have approached with creating tables with so-called general data (codes) everywhere where it was possible. This way of data organization provides decreasing number of fields where is necessary classical way of data entering because the operators fulfilled these fields by chousing some already entered option. Also, in the same application are integrated options for choice of previously entered data (not coded) for particular institution or civil servant. We are stressing that general data accuracy and of previously entered data are controlled at first by the supervisors of the data operators.
Application makes and additional control on data in some fields where entering is in classical manner but there is a possibility of control with algorithm for data creating and by using data from several different fields.
However, there are still left fields where data are entering in classical manner and there is no possibility for automatic software control. Those quality data control is made by known statistical methods.

4.2 Data analyses module

This module task is to provide quick, easy and efficient use of data contained in the Register as a base for creating information and analyses for conditions in the civil service of the Republic of Macedonia It contains set of pre-defined reports (by one parameter or with cross-cutting of more parameters) and provides creating the ad-hock reports according to the needs. Data base organization with help of this module also provides to get so-called historical data (ex. what was the condition by some parameters some years ago) that might be used for making comparative analyses.

4.3 Administration module

Data security in the register is one of the most important characteristics of the concept. Administrative module provides fixing of mechanisms for security on applicative level and easy, fast and efficient following of all actions done on the data in the Register. This module provides complete picture of that which user when and what has done in the application, trace that is necessary form security point of view, from data quality aspect as well as from employees management. Namely, following reports produced by this module can be get a clear factual picture regarding the needed time for each operator for data entering and what data quantity he/she entered in some period of time which is the excellent opportunity for planning the time and resources by the managers and to have review of the quality of preformed work by each operator, separately. Level of security is lifted in the same time when some one is "in touch" with the Register, each action is recorded in the application and might serve to prove eventual abuses of the Register content.
Here I would like to stress that data protection from not authorized enters into the system from outside (trough Internet) is solved on systems level by placing the most modern solutions for firewall, content and anti-virus protection. Also, on the systems level the data beck up is solved and it is made daily.

4.4 Plans for software upgrading

Central Register for the Civil Servants of the Republic of Macedonia should be one of the key data bases and applications in the part of G2G and G2C of the E-Government. Software upgrading will go in direction to create such conditions necessary for that each state body to be able for its own data entering though Government Intranet, to use entered data and citizets to be able to see data they are interested in though Internet. Projection of the system is made on a way that will enable easy and fast "opening" of the system towards state bodies and citizens.

5. Experiences of the Register use

As I have already mentioned, starting attitude of the creators of the Register was that the data collecting process and data themselves will be clear factual picture for conditions in the civil service of the Republic of Macedonia and will enable consideration of all positive and negative sides of its functioning and will provide full implementation of the legislation.

Formal start of the Central Register of Civil Servants was at the beginning of September 2002 after the Rulebook that regulates the manner and procedure for collecting and processing data on civil servants enter into force[4]. Soon after, one day lasting workshop was organized where participants were all coordinators responsible for human resource management in the state bodies. This workshop was a training of coordinators for the manner of fulfilling and submitting forms with data on civil servants as well as for the manner of using this data. During the workshop a fruitful discussion was acting regarding the significance of the Register, possibilities that it offers and expected results from its permanent updating and using. Participants discussions at the workshop pointed out that particular part of coordinators had not received their obligations for submitting data on civil servants to the Register with approval. Generally those were persons in the state bodies that deals with human resources management and with appropriate approval of the responsible person in their bodies have been appointed as coordinators on human resources. Those persons at that time have understood this obligation as non-needed additional task that they would have to perform besides their regular and for them "more important" working engagements.

Further functioning of the Register shows that the biggest part of above mentioned persons have still no confidence in the Register. This non-confidence resulted with not appropriate update and with not proper and timely data submitting to the Civil Servants Agency and even with a complete ignore of the Register because some of them did not submit data at all. Unfortunately, there was no possibility this situation to be sanctioned because there were not stipulated penalty measures in the legislation. But, during the time, thanks to the great effort of the employees in the Civil Servants Agency and their daily communication with state bodies and coordinators, the biggest part of them have changed their opinion and persuaded themselves that the Register is not a sum of data without useful value and considered that the Register contains enormous knowledge on the state administration.

Coordinators that work in state bodies that have organizational structure for human resources management were the first that understood and accept at once this function of the Register and become its supporters and cooperators at the same beginning.

But, unfortunately, I have to mention that up today we still have problems with providing accurate data for the Register. As I have also mentioned above, main obstacle is still the legislation. Therefore, the last amendments of the Law on Civil Servants propose precisely defining of the state bodies obligations for submitting data to the Central Register. After, those amendments would enter into a force appropriate correction of the sub-legislation act will be made with special accent on improvement the procedure for data submitting as well as some small correction of data collected in purpose of the civil servants. We consider that this manner will solve completely this problem regarding the data accuracy that for now is the main problem for functioning of the Register.

Proper solution of this problem will enable more aggressive presentation and using of data from the Register. Having accurate and quality data will provide for shore creating quality information that combined with peoples knowledge whose work on this area will enable creating quality policies and right decisions in purpose of development human resources in state administration. They shall be made based on the Register information and based on simulations made such as "what would be if should

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[4] The Rulebook on the manner and procedure for collecting and processing data on civil servants, „Official Gazette of the Republic of Macedonia" No. 68/2002

be". Till now functioning of the Register proved that using knowledge contained within it is the only right path for key decision making with enormous impacts on the entire civil service and state as well.

At the end of this my „case study" I would like to mention that the civil service of the Republic of Macedonia is still in a phase of so-called children dieses. Namely, I consider that three and a half years are not enough for establishing stable civil services system especially by having in mind the circumstances in our state in general during this period of time (military conflict, post conflict period with significant Constitutional amendments, elections that resulted with changes in government, difficult economic situation etc.). Besides the Register also is passing the same "its own" so-called children dieses, day by day it is more and more clear that the Register is the best "diagnosis maker". Doctors say that if there is a right diagnosis, curative is significantly easier. I would like to express my optimism that the Register will very soon points out its power and that enormous e-knowledge will be a base for state bodies organization and human resources management within them.

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