Human Resources Management by Using Some IT Governance Tools

Miroslav Gecovič
Technical University of Zvolen,
Zvolen, Slovakia
Miroslav.Gecovic@orangemail.sk

Galina Gagarinskaia
Samara State Technical University
Samara, Russia
eyo080505@mail.ru

Irina Kuznetcova
Samara State Technical University
Samara, Russia
irenekuz@yandex.ru

ABSTRACT
The paper describes main issues standing behind the decision to implement ITSM in the organization. A comparison of economic and IT processes is being offered to support the decision. Two approaches – ITIL® and CobiT are mentioned.

Keywords
ITIL®, COBIT, IT governance, ITSM, certification.

1. MANAGEMENT OF INFORMATION TECHNOLOGIES COMPARED TO THE FUNCTIONING OF ECONOMIC PROCESSES
Many areas of human activity have their approaches and processes "verified" by centuries. Let us look, as an example, an economic (accounting) agenda. There is no doubt how the process of administration of accounting documents is handled - from their registration in the organization (in paper or electronic form), through their exact required treatment, to the final output (either designated for the management of an organization or, for example, destined to a tax administrator). Terms such as an invoice, cash receipt, general ledger, balance sheet, profit or loss, or tax return of a legal entity are generally known, widely accepted and used. Processing an accounting agenda is, therefore, a detailed, accepted process being kept in each organization. Economic processes, approaches and requirements are often contained directly in the legislation of each country.

In the case of information technology (IT), the situation is somewhat different. Apart from the early aspects of historical development, the actual beginning of the information age dates back to the 1970s. It is necessary to emphasize that under information technology are being considered not only the technical aspects or the available data, but above all the information, resulting from the transformation of data using hardware and software resources. The information obtained in such a process further serves as a means intended to support strategy and a core business of the organization.

In the economic agenda, it is normal for each document to be registered after its creation or delivery, including the data contained therein. Each document has its exact circulation, the way of depositing, the protection against unauthorized access, the determined procedure of its archiving and liquidation. These practices are today a common part of teaching (not only) in vocational schools and universities. In the case of a voluntary or forced departure of an employee from the respective position in the economic structure of the enterprise, it takes a while for his work to be divided or a new employee to be accepted, but thanks to the aforementioned defined and embedded process, there is no presumption that the organization could collapse, even if it is a case of so-called "key" economist.

Let's look at a similar situation for employee leaving a post in IT department. The forced departure of IT employee in a key position (he/she has not to be a manager) cannot often be considered at all, and his voluntary departure (for various reasons) can become a nightmare for his superiors at all levels. But it's not just a human factor that has to be taken into account.

2. SEARCHING FOR SOLUTIONS
According to the principle that chain strength is given by its weakest element, it is advisable to think which item is the weakest in the "information chain" of the organization.

Is an organization able to help IT users (not only their own employees, but – nowadays - also more and more external persons, including often ordinary citizens) in a timely, flexible and prioritized manner, or is this process random? Is the number of staff – IT employees - sufficient, would it be necessary to take some or should someone be released? Does the organization have the procedures described, how to manage it in the event of a critical situations, so that IT would also be available at the same time? Are there changes that occur throughout the process of using information technology managed and registered, or are they left only to the decision of IT employee? A number of additional questions could be raised, but also those that have been spoken up so far suggest that there are often processes in the information technology operating in an organization, the management of which is left to chance. Looking for answers for the questions above is in the focus of a number of well-known or less well-known organizations and individuals, and practical application of solutions often varies considerably. In this article, the two approaches are considered. The first is the Information Technology Infrastructure Library (known as ITIL® (Information Technology Infrastructure Library), the UK Office of Government Commerce (OGC), an independent organization falling under the authority of the Government of the United Kingdom. The second approach is within ISACA's (Information Systems Audit and Control Association) area of interest and it is titled COBIT (Control Objectives for Information and Related Technology).

It is necessary to mention that in this article both approaches are discussed very shortly and in a simplified manner. Due to better understanding the decision was made to deal with the versions ITIL® ver. 2, COBIT ver. 4.1 verified by practice (and author's experience with ITIL implementation in state administration body), although they are not officially supported yet. However, there is an intention to continue and to deal with this areas in some articles in the future.

3. SELECTED TERMS

Prior to dealing with both approaches - ITIL® and COBIT - it is necessary to introduce some related terminology.

Business strategy of the organization - determined procedures for achieving core business goals. It should be emphasized that organization does not have to be a commercial entity at all; for example, "business strategy" should have determined also organizations in the public sector.

IT governance - a framework that defines IT asset management in an organization as an integral part of managing the organization at the highest level to ensure that its business strategy is met. It is made up of management structures and processes aimed at implementing the organization's strategies and goals.

IT strategy of the organization - a set of objectives, procedures and standards for effective and comprehensive management of IT in the organization (including roles, responsibilities, communication plans and other activities) that aim to support the organization's business strategy through IT governance.

Asset - anything that has value for the organization, e.g., physical components, software, data, services, human resources, goodwill, etc.

Process - a sequence of related activities (events, operations, etc.) grouped to achieve a goal requiring certain resources, the process has a defined starting point and end point as well and it is methodically controlled by rules and procedures.

Information Technology Service Management (ITSM) - a concept based on the ISO / IEC 20000 standard, which sets out and describes the minimum requirements for processes that the organization must fulfill to meet the defined quality.

4. THE OBJECTIVES OF IT GOVERNANCE

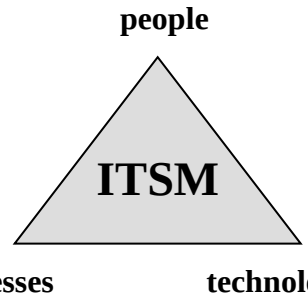
A basic issue for IT governance [1] is an organization's business strategy with defined goals, requirements, and expectations that need to be matched and integrated with the IT strategy. It is necessary to:

- utilize most of the opportunities that information technology offers, to manage these opportunities and to increase the value of business processes,
- manage the information assets which have direct influence on the success or even on the survival of the organization, including management of the process of changes,
- effectively utilize available resources, including the protection of investments into technical equipment, software, communication infrastructure, and manage human resources and knowledge as well,
- ensure the integrity, security and reliability of the information used, with special emphasis on sensitive information,
- less but not least to manage and eliminate the associated risks.

Both IT governance approaches considered - ITIL® and COBIT - use their own ways to achieve the above goals.

5. IT GOVERNANCE USING ITIL®

The basis for ITIL® is the concept of IT management [2], dealing with the management of the triangle "people-processes-technology", where IT activities are perceived as services. ITIL® is a standard for ITSM and it is a set of best practice recommendations, not an existing methodology or a set of precise workflows.



In practice, this means that ITIL® is necessary to implement in every organization, i.e., to apply it to the conditions of a specific organization based on organization’s needs and requirements.

Implementation products will represent internal regulations, manuals, but also changed processes and new working habits for employees. Implementation sometimes does not pay enough attention to the last aspect, despite the fact that the human factor is one of the most crucial in accepting changes due to the introduction of new processes and procedures.

In ITIL® applications it is possible to meet with two versions - ITIL® ver.2 and ITIL® ver.3 (2011). In this paper, based on the practical experience gained, the approach with version 2 is used and it is based on the two groups of processes - service support and service delivery.

IT Service Support involves processes [3]:

- Configuration Management
- Incident Management
- Problem Management
- Change Management
- Release Management

IT Service Delivery consists of processes [4]:

- Service Level Management
- Availability Management
- Continuity Management
- Capacity Management
- Financial Management

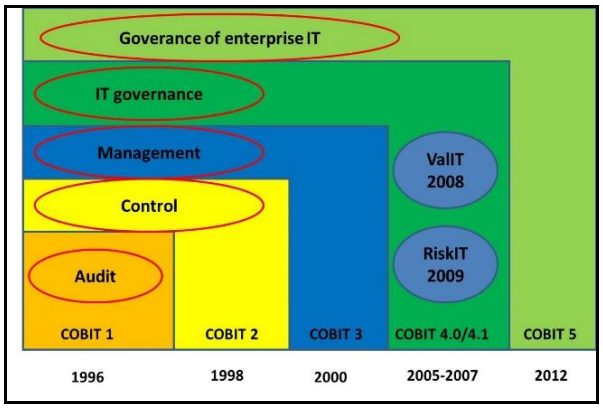
A stand-alone position in the ITIL® structure has a Service Desk that is not a process, but a function (it is a kind of department in fact). Beyond the basic structure of both groups of processes is Customer Relationship Management and Security Management. Individual processes are not described here, as their content is indicated in the presentation, which is a complement to this article.

From human resources point of view each process is represented by process owner, process manager, process analyst (level I, level II). Each role characterizes its description in detail, as well as exact duties and tasks [5].

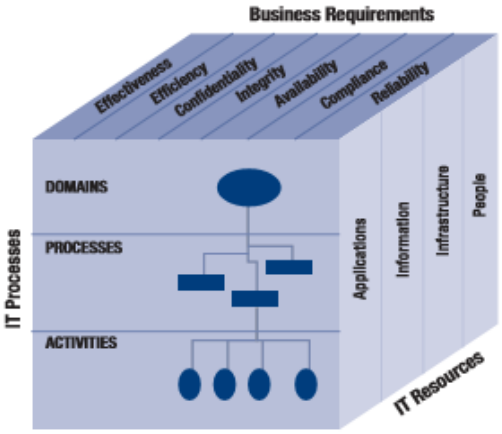
6. IT GOVERNANCE USING COBIT

Since its first version in 1996 to the fifth version in 2012, COBIT (Common Objects on Information and Related Technology) has evolved, as illustrated schematically in figure below (adaptation based on [6]). From an initially

designed instrument primarily to the auditor, COBIT has become a means for the target group of those affected (but above all, those that affect) the information technology in the organization.



COBIT in its version 4.1, consists of four so-called domains that are further divided into processes and activities. Relationships between the domains, goals and requirements of the organization, and available resources are described on the so-called multidimensional cube shown below [7]. Here are some of the questions that COBIT is trying to answer within each domain [7]:



Domain 1 - Plan and Organize
It focuses on strategic and tactical management, relationship to organizational business goals and their alignment, resource optimization, mapping and risk management, and last but not least, a clear definition of goals in an organization's IT projects.

Domain 2 - Acquire and Implement
It focuses on identifying the solutions chosen to implement the established IT strategy, aspects of compliance with the timetable, compliance with the established budget, as well as assessing the impact of planned changes on the main processes of the organization.

Domain 3 - Deliver and Support
It describes the provision of IT services in accordance with the priorities of the main activities of the organization, including cost optimization, security management, continuity of IT services - their integrity and availability.

Domain 4 - Monitor and Evaluate
It helps to control the quality of outputs and their compliance with established criteria, measuring IT performance to prevent problems, measure requirements and provide outputs of risk, control, and performance.

From human resources point of view each process contains RACI chart (matrix), containing a list of roles joined with the process, while each role is exactly indicated by option of Responsible, Accountable, Consulted or Informed involvement.

COBIT, as well as ITIL® is subject to continuous development. At present, version 5 is still available and it represents a significant strategic step in the development of IT governance in the organization.

7. ITIL OR COBIT?

There are many views on ITIL® and COBIT, for illustration only a few.

According to www.itsm.sk, ITIL® and COBIT are not mutually exclusive, but they complement each other - there are businesses that declare that they have implemented both ITSM processes using ITIL® and COBIT processes as well. => ITIL® processes are then used for operational and tactical management, while COBIT is used as a strategic management tool.

In the book market, there are a number of publications dealing with "bridging" both approaches as a whole, or by mapping their components together. The decision to choose one of the approaches is unclear and depends on several factors going beyond this article. In any case, by consistently implementing either one or the other approach, the organization can only get it.

8. IT GOVERNANCE CERTIFICATION AND LABOR MARKET

For the successful implementation and use of IT governance, as in other areas of human activity, there is a certification system that creates conditions to achieve the highest quality of either the services provided (certification of supplier's employees) or the services received (certification of the customer's employees).

For certifications provided by ISACA, their system is different and the following types of certificates are available [6]:

- Certified Information Systems Auditor, CISA,
- Certified Information Security Manager, CISM,
- Certified in the Governance of Enterprise IT, CGEIT,
- Certified in Risk and Information Systems Control, CRISC.

In either case, either ITIL® or COBIT, the certificate owner has wider opportunities to be employed on the labor market, which is also evidenced by many job offers where certificates are required either as a general requirement or for a particular level.

9. SUMMARY

Successful delivery of IT services either to internal employees or to customers in large organizations is practically impossible without IT governance. Several solutions exist to deal with this issue and it is up to organization to decide for any of them or their combination, depending on its needs and requirements. Any choice is made, it is expected that ordinary IT users will profit from it.

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