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Corporate Informatics and Strategic Management

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Abstract

Paper provides information about the most important international standards regarding corporate informatics and strategic management, i.e. ISO/IEC 38500, ISO 20000, IT Governance. Paper provides the most important information about these standards and try to make a link among them and map it to the management levels in the company. The final result of this paper is a new visualization of links among standards and finding, that the international standard ISO/IEC for IT Governance represents an effective tool of corporate informatics management on the strategic level. To make it usable for corporate informatics management as a whole, it is useful to integrate its processes with those of tactical and operational management.

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1. Introduction

The current situation in the world of ICT (information and communication technology) standards and standards in general that more or less influence ICT can be described as a huge number of documents and methods that are very different yet trying to manage the very same thing in different ways and manners. A typical example can be the standards ISO/IEC 38500, CobiT Framework and ITIL that approach corporate informatics management differently but try to achieve the same goal, i.e. a purposeful and effective provision of corporate informatics services to the organization's principal and secondary processes (Kalina, Smutny and Reznicek, 2013).

What is important in this context is that corporate informatics management is very much influenced not only by the aforesaid standards directly created for, or at least remotely connected with, IT but also by many other standards

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that seemingly have nothing in common with ICT management. Such as e.g. financial management standards and methods applied in ICT management - ABC (Activity Based Costing) or EVA and ESA for ICT project management and many others (Maryska and Novotny, 2013; Maryska and Doucek, 2014).

In general, we can say that the importance of standards and their best practices keeps growing, which is proven e.g. by:

- the creation of new standards;
- the formalization of existing informal methods well-proven in practice that give rise to generally adopted standards (e.g. the history of ISO/IEC 20000);
- the formalization of existing standards in multinational institutions, such as e.g. ISO/IEC (International Organization for Standardization/International Electrotechnical Commission).

The objective of this article is to present the basic relationships between Corporate Governance, IT Governance and “ISO/IEC 38500 – IT Governance“ and to mainly focus in detail on the second one.

2. Methodologies and Standards

The premise of the company’s satisfaction with corporate informatics is that it provides services in the volume and quality required by end users, i.e. the company’s individual departments and employees (Dorcak Delina, 2011).

In the introduction we mentioned several standards that differ e.g. as to:

- level of management where ISO/IEC 38500 – IT Governance focuses on the highest, i.e. strategic, level of solutions, while CobiT focuses primarily on the tactical level but with an overlap to the operational level and ITIL v3 focuses mainly on the operational level with an overlap to the tactical level;
- approach to management where ISO/IEC 38500 includes mainly described processes without any indicators and metrics; CobiT also describes processes, but recommends specific indicators. ITIL takes a different approach; it focuses on management from the perspective of services and similarly to CobiT includes recommended indicators but does not specify how to achieve them.

The authors of the article then focus on individual standards and analyze in detail the relationship between IT Governance and ISO/IEC 38500 and their link to Corporate Governance.

3. Corporate Governance

The important characteristic feature of Corporate Governance is its legal regulation; one of its last regulations concerned statutory audits as a response to the crisis in 2008 and in particular as a response to auditors’ mistakes. The importance of codifying Corporate Governance was then reinforced by many other mistakes of auditors that came to light in previous years when major losses of financial institutions were discovered even though these financial institutions had been audited on a yearly basis.

One of the legal frameworks, which regulates general Corporate Governance and in this case audit, is the 8th Directive on Statutory Audits of Annual and Consolidated Accounts (2006/43/EC) approved by the European Parliament on 3 April 2014.

IT Governance is going through a similar consolidation and formalization and is gradually becoming the focus of normalization institutions. It is only a matter of time when this area will be regulated as well although the first codification attempts have already come in effect on the American continent as the famous SOX (Sarbanes-Oxley Act).

4. IT Governance

IT Governance can be described as a systematic structured approach to corporate informatics management as to all its management levels and areas, i.e. from the perspective of IT and its strategy as well as from the perspective of the corporate strategy, including their mutual consolidation, monitoring and verification that the current implemented measures at the level of corporate informatics management lead to, and achieve, the set objective in a purposeful and effective manner.

IT Governance is based on the principles of Corporate Governance mentioned above. However, an important part of IT Governance is not just a checkback but mainly the setting of ways, i.e. methods and processes, of achieving the set strategic objectives. In general, we can say that IT Governance should include descriptions allowing a complex functioning of ICT both within the company as a whole and outside the company as a service-oriented organization that provides services to internal or external customers with the goal to achieve a mutual synergy.

Based on the aforesaid, it may seem that IT Governance is only for large companies, but it is not true. Any company that makes use of provided ICT services needs to define the processes and methods of corporate informatics operation and management. The difference between the size and activity of companies affects in particular the depth of the implementation of IT Governance methods and the target values of the indicators considered crucial for informatics management in the context of their impact on the company as a whole.

Large companies operating in certain industries often have no choice but to implement one of the IT Governance methods since their implementation is dictated by other standards, such as by the mentioned SOX, which require the creation and setting of internal control processes in IT management.

5. ISO/IEC 38500 – IT Governance

The standard ISO/IEC 38500 was first published under this name in 2008 and was approved the same year by the majority of the members of the international organization ISO. However, it had been already published in 2007 under a different name, namely ISO/IEC 29382. The standard is based on the standard AS 8015, which was issued in Australia (Power, 2011).

It is an internationally recognized standard whose objective is to support the administration and management of information technologies with formalized procedures and processes. The standard provides, just like the other above-mentioned standards, guidance on how to achieve set goals and to obtain a certificate for the standard. The standard also includes a framework for its implementation into practice.

ISO/IEC 38500 is structured as sector-independent, and the size of a company that implements it should not be a limiting factor. The standard sets out six key principles:

- Responsibility – every company employee must know his duties and competences;
- Strategy – the ICT strategy must comply with the possibilities of corporate informatics and with the objectives and strategy of the company as a whole;
- Acquisition – ICT investments should be made on the basis of business transactions, i.e. a business rationale for an investment;
- Performance – performance of IT systems must be on such a level so that corporate processes be optimally supported;
- Conformance – all processes (both in and outside corporate informatics) must conform with the law;
- Human Behavior – all processes, principles, rules and methods must meet the requirements for human behavior and the needs of people who are involved in described processes.

These principles are closely linked to the three principal tasks based on the PDCA management method, which is very often used for similar standards. Monitoring – which makes possible to check e.g. performance against defined plans. Evaluation – which evaluates the actual results discovered during monitoring and makes possible to take them into consideration in the planned use of IT in the future. Management – which prepares, proposes and implements the plans and set policies that support the integration of IT goals and requirements and the department's business.

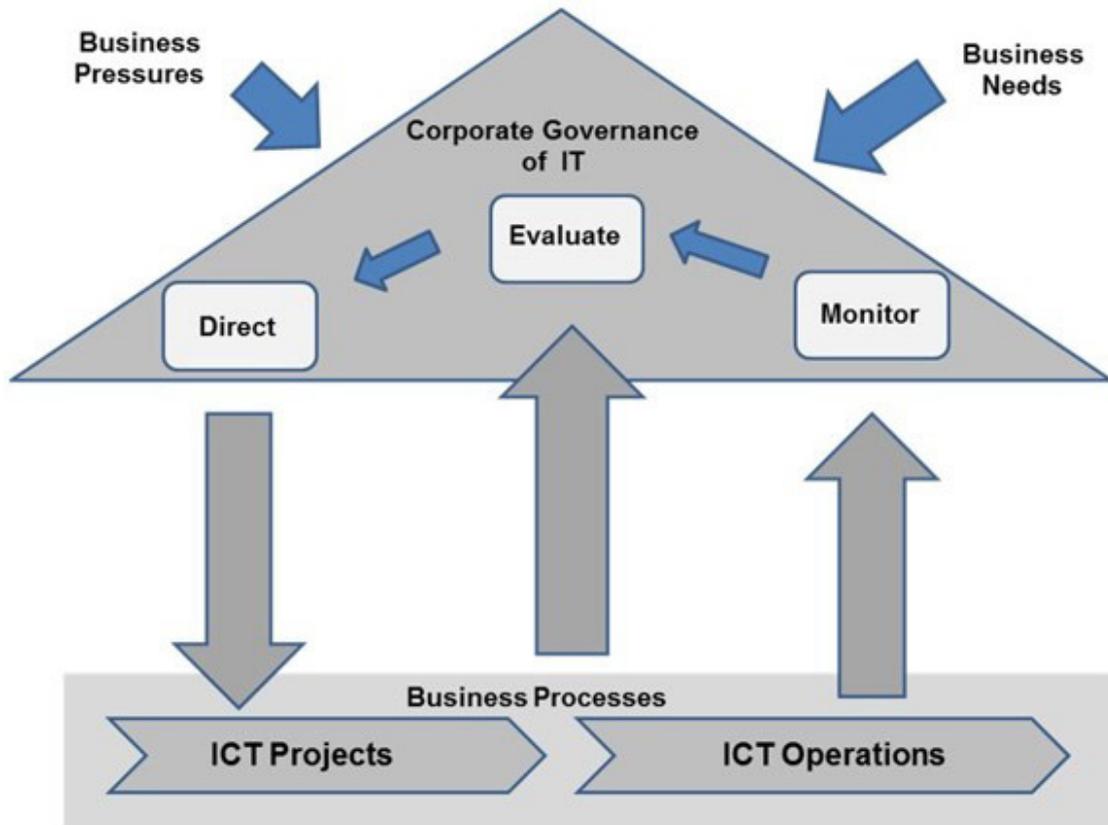


Figure 1: Structure of ISO/IEC 38500 norm

Source: ISO/IEC 38500

Contrary to CobiT, ITIL and other standards that focus on all management levels, ISO/IEC 38500 typically focuses on the needs of the top management of the organization. The important characteristic feature of ISO/IEC 38500 – IT Governance is its readiness for integration with the aforesaid standards.

If we compare ISO/IEC 38500 with other standards and methodologies as shown in following Picture 1 or Figure 1 – I do not know what it is in the model?, we can see that the focus of ISO/IEC 38500 is relatively narrow and mainly oriented on strategic management. The other mentioned methodologies and standards have a wider use and can be used on several management levels, in particular ISO/IEC 26000 – Social Responsibility. Versions 4 and 5 of the CobiT framework (ISACA, 2011) also have a wide use; the ITIL framework (ITIL, 2007) focuses on the operational management of informatics processes. From this point of view, it is purposeful to implement the ITIL framework together with ISO/IEC 38500. Contrary to other standards, ISO/IEC 38500 does not recommend any indicators or metrics limiting the applicability and usability of the standard in different parts of the world. This is a very good feature of this standard since it is not encumbered with any characteristics of a selected area.

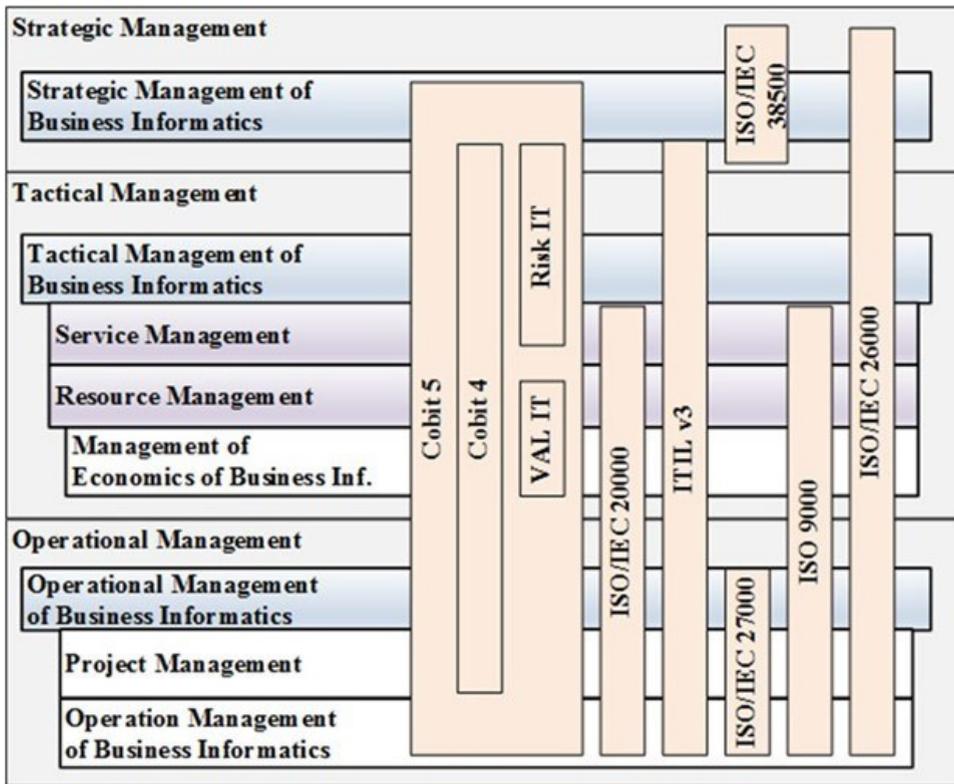


Figure 2: Methodologies, Standards and Frameworks and Their Use in Corporate Informatics Management.

6. Results

Organizations very often build an integrated management system, which is based on the common PDCA principle that integrates all partial management systems of the organization, including corporate informatics management. It is based on a procedural and systematic viewpoint of the organization's main processes and managing and support processes. This method can also be very well applied in implementing the system of corporate informatics strategic management represented by ISO/IEC 38500.

The interlink and combination of individual, mutually influencing processes within the entire unified system of the organization leads to higher usefulness and effectiveness in achieving the objectives of the organization as well as to the reduction of the cost of individual processes that will be logically tied together in the integrated management system. An output of one process will become an input of the following process. The level of connectedness of processes in particular is a limiting factor of the integrated management system functioning.

The organization can use well-proven procedures and methods of creating documentation structure and management, process management, training and internal audits. A member of the top management, who is responsible for the implementation of the environment management system, must have at least basic knowledge and information about natural sciences. All these advantages of a joint (integrated) approach can also be applied to the corporate informatics management system on the basis of ISO/IEC 38500.

7. Discussion

The advantage of the international standard ISO/IEC 38500 lies in defining the processes that primarily help to create the conditions for a purposeful and effective functioning of corporate informatics in particular on a strategic level. On this level, it represents the main tool of integrating the system of strategic objectives of the organization and corporate informatics management. The purpose of corporate informatics is to support the achievement of these strategic objectives. However, if we wish to manage corporate informatics as a whole, it is also necessary to expand the action of the described processes for tactical and operational levels. The standards or frameworks that are usually integrated with ISO/IEC 38500 are for operational management – the ITIL framework, which primarily focuses on corporate informatics operational management. The tactical level of management is usually represented by selected chapters of the CobiT framework or selected chapters of ISO 20000. In the case of project management, they are integrated in the entire ISO/IEC 38500 framework by means of different proprietary methodologies of project management that are used in organizations.

Other aspects mainly in financial management represent the inclusion of corporate informatics performance indicators in the general framework of ISO/IEC 38500 and the connection with the tools of internal implementation of Business Intelligence for the needs of corporate informatics management.

8. Conclusion

The international standard ISO/IEC for IT Governance represents an effective tool of corporate informatics management on the strategic level. To make it usable for corporate informatics management as a whole, it is useful to integrate its processes with those of tactical and operational management. Overall, ISO/IEC 38500 can be considered a very good basis for corporate informatics strategic management, but must include specific indicators for:

- Interlinking the achievement of the organization's strategic goals and the specific services of corporate informatics;
- Evaluating the effectiveness of provided ICT services (monitoring both the cost and revenues of ICT services);
- Preparing an effective system of data collection for evaluating corporate informatics services.

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