

IT GOVERNANCE AND BUSINESS CORPORATE STRATEGY – BASED ON EMBEDDING THE PROGRAM AND PROJECT MANAGEMENT WITH THE IT&C VALUE CHAIN

Dr. Mihail Sădeanu

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Abstract: This paper presents the key concepts related to the current process of IT Governance in modern corporations.

The first part addresses the definitions of IT Governance and its life-cycle model, the covered strategic areas and the effective governance management ways, the IT value management for ensuring value delivery, and the IT value chain based on projects and programs together with the organizational value of the IT&C programs and projects.

The second part deals with the IT value chain based on operations, the strategic-factors of success and the services delivery chain, the value chain management and the contribution measurement to the organizational business, with a final presentation of practical applicability of the mobile value chain to the 3G mobile communication services. Recent IT&C and corporate strategic management field references bring an additional support to the paper value.

1.- IT Governance – Definitions, Concepts, and the Life cycle model

The IT&C domain revolution has implicitly lead to more tougher competition constraints at corporate and worldwide deployed business levels [6,7,11,13,14].

Business opportunities need in these directions a continuously improved support with added value from IT&C services or from the specialized organizations in supplying SW applications over the Web, data management services, value added integrated telecommunication services and services over the Web. This is more requested as the new technological opportunities should represent a continuously active part of the strategic business investigations in order to permanently maintain a modern *organizational architecture*.

Organizational Architecture (OA) is defined in modern terms as “*the organizational scheme defining in logical or business terms and in technological terms – the way in which the organization is currently operating, it intends to operate in future and intends to invest in technology in order to transit to this future status*”.

Inside the OA frame, the *Business Technology Optimization (“BTO”)* currently represents the prevalent inner process of large world corporations, acting as a catalyst allowing them to maximize the IT business value, by aligning IT to the targets and goals of the own business, and implicitly leading to cost decrease and risk minimization.

This process, largely known in the present as “*IT Governance*” (ITG), including communications [11, 13] becomes critical for BTO, as it is used by the IT&C executive directors to align their strategic priorities, processes and necessary staff in order to operate the IT&C components in the same way of a business [13].

The *definition of IT Governance* may be done in several ways, the following three paragraphs presenting the most usual worldwide definitions.

1.1.-Definition of the Institute for IT Governance

The definition given by the Institute for IT Governance (www.itgi.org) considers that “*the IT Governance represents the responsibility of the board and the executive management, is an integrant of the corporate governance and consists of the organizational structures and processes and the leadership ensuring that the whole IT component of the organization supports and extends the organization strategies and objectives*”.

Companies with a superior IT Governance may obtain additional profits of around 25% greater than companies with a low governance, given the same strategic objectives. These top performing

companies have an ITG specifically designed for their strategies [3,9] and have accomplished their performances by implementing an efficient ITG as support of the strategic plans.

1.2.-The META Group Consulting Group Definition

The definition given by META Group (www.metagroup.com, respectively www.gartner.com) reveals that “the IT governance represents the principles, processes, personnel and performance metrics which support and provide means for ensuring the freedom of actions/decisions without under-optimizing the organization”.

This definition is less explicit concerning *who* is taking the responsibility for the IT governance, but is more explicit concerning the importance that the staff know what it is expected to do. The mechanism “believe but prove” is also included, in order to supply the reference criteria, the politics and principles allowing the staff to do their tasks consistently with the organization’s direction and strategies.

One of the driving factors for both definitions is the understanding of the rate and the nature of technological changes, as well as the assurance that these changes may be adopted and made to become functionally ones for allowing the organization strategies [6,7].

The IT governance process has a life cycle, the model of which in the META Group conception is given in Fig. 1.

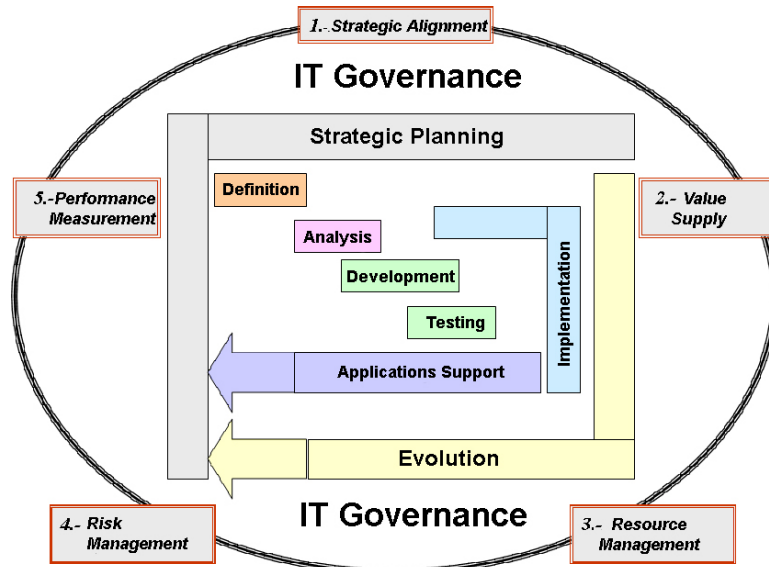


Figure 1: Life cycle model of the IT governance and its strategic domains (META Group)

The IT Governance represents in this way the IT strategic management process, such as this component of the organizational business should add value in a consistent way to its supported business directions, by implementing IT projects, which should be much more feasible, focused on strategic initiatives and with a higher added value for the business, providing rapid benefits with a ROI indicator as high as possible, capable to reduce the daily operation’s costs and finally leading to the competition enhancement.

The IT governance applicability is performed on the *IT governance strategic directions*, described in the followings based on the support of the IT&C activities.

Usually the *cost/benefit analysis*, the *cost/effective analysis* as well as the *cost/benefit model* of the IT&C activities should be initially based upon [6,7]:

- The *ROI* indicator value, the *ROIT* (ROI for an IT investment) indicator, and the *EVA* (Earned Value Analysis) values related to the *investment return rates*.
- *Net profits* obtained by providing IT&C services of high quality, which come to add value to the processes or business supported components.

The process of adding the IT governance value to the business is managed by the business objectives and priorities, starts from the evaluation and requirement consolidation phase for IT support needed by the business, and includes three steps similar to those of a *program or a project deployment*, being centered around the *program and portfolio management*, respectively: *planning, designing/building, and value deployment/operation* [6,7].

1.3.-The OECD Definition for Corporate IT Governance and that of the MIT Sloan School

In 1999, the OECD organization published in their document “OECD Principles for Corporate Governance” the definition of the “*corporate governance*” (CG) as “*providing the structure for determining the organizational objectives and monitoring the performances in order to ensure that objectives are accomplished*”.

There is not any unique model for a good CG, but it should be noted that in many countries and organizations the CG is accomplished at the level of a corporate board, responsible for protecting the stockholders rights as well as those of other interested participants from the stakeholders group (employees, clients, debtors, etc.)

The executive directors team under the direct supervision of the corporate committee keeps in its turn the control of “*key-assets governance*” (KAG)– a concept defined in 2003 at the MIT Sloan School Center for IS Research.

The KAG includes among other components under control, that of the “*corporate key-assets*” (CKA) structure, which includes in its turn all the corporate assets, usually represented by a hierarchical-tree structure with a number of representative levels and sublevels [3].

One of the KAG components is represented by the “*IT assets and all information of the corporate knowledge database*”, while the information includes in its turn the “*IT Governance and specific related mechanisms*” (e.g. resources, technical and functional committees for program and project management, steering committees, budgets, and other assets), this governance being considered the most important.

The IT assets and the knowledge database information, as organizational process assets, include; all the former and current knowledge, information, historical information, lessons learned, processes and their performances, procedures, policies, and all possible digital data pertaining to an e-CRM subsystem, corporate budgets, MIS/ERP subsystems, etc.).

Under these structures vision, the authors [3] define the ITG as being “*the operational framework specification of accounting and decision rights, in order to promote the desired behavior in IT utilization*”.

In this way, ITG should address through the operational framework the resolutions to the following three main issues:

1. Which are the decisions to be taken in order to ensure an effective management and a more efficient IT utilization ?
2. Who should take these decisions ?
3. How these decisions will be applied and monitored ?

By answering in a practical way to these questions, ITG reaches to reflect the principles of the extended corporate governance ,while it concentrates on the IT strategic management [6,7], its support

through ITG appliance over the specific strategic areas, and consequently the IT&C utilization in order to reach the performance goals at the corporate level.

2.-The IT Governance strategic domains and the effective management of the CGO governance by CIO

2.1 The ITG strategic domains

They represent strategic directions (Fig. 1) for practical and effective appliance of ITG by the *Chief Information Officer* (CIO) and the implied IT&C managers [6,7,8,12,13,14]. The most remarkable strategic directions are considered to be the following six [1,15,16,17].

1.-*Strategic alignment*, focused on the support and the stable assurance of connexion between the business and the IT&C strategic plans, as well as on the IT operations alignment to the organizational ones.

2.-*Value delivery*, refers to the *execution of the value proposition* during its delivery cycle, and ensuring the fact that the IT provides the promised benefits according to corporate strategy. The continuous IT value delivery supposes an IT value management process, described in the next subchapter.

3.-*Resource management*, refers to the optimal investments in the IT&C critical resources, as well as to their management: *processes, personnel, applications, infrastructure, data and information*. The essential aspects are related to the optimization of knowledge and infrastructure.

4.-*Risk management*, requests the risk planning, identification, analysis and response planning by the executive management (CEO, CFO, CIO, CTO, CSO), a clear understanding of the organization appetite for risk management and the embedding of the risk management responsibilities in organization.

5.-*IT&C program and project management*, which implicitly supposes the resource and risk management. The ITG is viewed as an implicit support of the program and project management.

6.-*Performance measurement*, monitors and records the strategy implementation, the IT&C project accomplishments, resource utilization, process performances and service delivery, using for this purpose different methodologies like the “balanced scorecard”.

The effective execution of the ITG by the CIO needs outstanding skills and professional experience of the corporate board or the executive directors council including the CIO, while the necessary measures to be taken should include among others the following six major activities [14]:

1. CIO should be accepted as a proactive member of the corporate board or of the executive directors council.
2. One member of the board or of the council should possess specific knowledges about the IT business in this way representing the authority to whom the CIO should report.
3. Setting up a steering committee for supervising and managing the IT&C activities, chaired by the corporate program and project manager or the CIO.
4. The periodic formal education of all the board or executive directors council members in the field of IT&C business.
5. Assignment of a not-executive director, who possess the professional skills corresponding to this domain.
6. CIO should be capable to take on his own responsibility, as being empowered by the CEO, the tasks of the organizational governance (including the ITG) and those of management of the legislation compliance.

It is recommended that in every modern organization the CEO should delegate the daily governance to a chief officer charged with the governance or being compatible with this function - the

Chief Governance Officer (CGO). For this new role the CIO is the most recommended candidate, as he is already responsible for all the automated processes based on the IT&C support of the organization.

Every automated process may be monitored while the assembled reports should confirm the compliance with the standards and laws such as, for example those for information security (Sarbanes-Oxley Act, HIPAA, GLBA, Basel II, etc.).

In case of which the CIO takes up the CGO position role, it is necessary for him to possess:

1. *Monitoring and reporting tools and techniques* related to the internal business processes or to the partnership ones, such as those for: *change and incident management based on configuration management and the integrated change control, all of them pertaining to the project management methodology, the identity management, the availability and operations control, and the compliance management.*
2. *The internal ITG capacity*, of a greatest corporate level importance, such as it should not exist a single point in the monitoring process which might have been compromised by uncontrolled changes in the process automatization.

The specific case of the compliance management assumes the utilization of an internal SW tool as a “*manager for compliance*” type, which: should provide the necessary functions for automatic monitoring and table outputs, operating according to the legal recommendations and being utilized for obtaining the competitive advantage [5].

The monitoring is performed by referencing the environment and its variable parameter values, while the results are compared with the values of the *control key-indicators* and those of the *risk key-indicators* and triggered alarms being biased when the established thresholds are reached.

The tables automatically resulted are used for diagnostics and the most deepest understanding of the disfunctionalities causes, as well as for the resolution development and deployment. Also, the tables are used by the auditors for certifying the effectiveness of the internal controls, thus reducing the audit costs and the associated process risks.

This process of *ITG performing* supposes *adding the IT value* based on the evaluation and monitoring the values of the deployed *operation key-success factors*.

3.- IT Value Management integrating the program and project portfolio management

IT Value Management for ensuring the IT value delivery presumes an IT investments alignment to the targets of the new organizational business processes, while a migration of CIO activities, from the tactical to the strategic one of quality and economic-financial analysis, is necessary in order to monitor this economic-financial process.

The new *e-business* revolution processes require permanently and rapidly performed IT&C investments, but the current weight for an organization is about 90% for the continuous operational support of IT&C services, which effectively adds value to the business, and only 10% for innovation, although innovation is required for preserving competitiveness.

Organizations are generally adopting one or several models for analysis of financial indicators, like ROI, ROIT, EVA, FIRR (“*Financial Internal Rate of Return*”) referring to IT&C investments and the achieved value, for which the management process includes a series of key activities, as follows:

1. *Continuous measurement and improvement.* In this direction, a periodical auditing benchmark of the organization is performed, which results may help the IT executives to understand the way in which the organization and competitors use the IT&C costs from the performance point of view. This way ensures that feasible projects supply a provable cost reduction and an improvement of

competitive performances, while investments and value are effectively achieved without massively spent budgets.

2. *Revision of targets set by CBA/CEA analyses*, of time and financial frames for implementing each project of the approved project portfolio by a steering committee for coordinating new projects and the corresponding investments.
3. *“Top-down” competitive analysis of ROIT, EVA, FIRR indicator values*, concerning the IT&C expenditures related to performances.
4. *Evaluation of planned corporate performances*, both financial and not financial ones, compared to those currently achieved in the last year.
5. *Analysis of global IT&C expenses*, respectively the capital and the operational ones (CAPEX + OPEX), of resulted benefits, and of the impact the IT&C investment policy had on the global financial performances of the organization.

As an example, the Alinean company (www.alinean.com) considers five key-stages to be important by representing an adequate support for the *IT value management* [16], as follows:

1.-*Use of electronic financial forms* if there are doubts, which allow to identify and quantify the business value of IT investments and the specific financial return factors, as well as the ad-hoc analysis of the IT&C projects.

2.-*Extensive use of financial analysis done by trustful third parties*, possessing professional capacities and credible assets in order to produce useful models: during the phases of analysis and pre-implementation evaluation of the IT value, of sequencing priorities of the IT&C projects, for evaluation of post-implementation results.

This process is performed on an operational basis, in phases, which validate the benefits of value management for the organization by using a pilot-group of “professional users” and a much more deeper analysis of strategic projects.

3.-*Corporate governance based on deploying at organizational scale of phase-stepped validation* for the IT value management benefits and the acceptance testing performing, closely correlated to change management and capacities for measuring business performances.

4.-*Post-implementation measurements*, used to compare current results with pre-implementation evaluations. This process may be automated by a closed loop system, which integrates different technologies of ITG, as:

- The analytical component of the Business Intelligence process,
- Complementary technologies as:
 - Project Portfolio Management (PPM), and
 - Business Performance Management (BPM).

This integrated method of a “*full life cycle*” for the IT&C investments covers the phases of project selection and approval, project deployment, and automated measurement of the post-implementation value, along the whole life cycle of the project result (product, service, etc.).

5.-*Service Level Agreements (“SLA”) for IT value management*. By consistently measurements of the estimated values of projects, both the and the sellers identify the value opportunity, assign responsibilities and share their benefits and cost losses based on the SLA agreements (e.g. indicators for: cases/hour, calls/hour, mean time to solve at limit value level, according to objective standards).

It can be said the more the capacity of value management evolves, the more the IT performance measurements concentrate on the business value instead of that of metrics (operationally defined).

4.-The IT value chain based on programs and projects, the organizational value of the IT&C programs and projects

Adding the IT value to the organizational business process when a new IT&C program or project should be implemented, requests to the executive directors council for coordinating the organization's IT activities to prove the value of the IT&C programs and/or projects earlier to perform any kind of investigation, based on the IT&C value management process.

In this way, during the *IT&C value management process* deployment it is necessary to conceive and to install at organizational level a *Value Management Office/Center (VMO/VMC)*.

The *goal of the VMOVOC* consists in revision, analysis, and communicating the IT&C proposed project and/or programs in the specific way for a detailed analysis based on the ROI/ROIT/EVA values estimation, as well as of the way in which at least the ROI indicator is correlated to the earned value along a project or program deployment.

For this purpose, there are specifically used the *Earned Value Management (EVM)* and the EVA.

In order to provide a real value, the IT&C projects should be aligned to and to support the goal, scopes, business objectives, and the organization mission, such as the goal of an IT&C project becomes a real measure of its success called the *IT&C project organizational value*, which should be at least measurable.

The EVA and the EVM framework techniques together with the definition and understanding of a typical IT&C project/program goal, and together with a good planning and cost estimation, allow a sufficiently accurate measurement of the organizational value and, as a consequence, that of project impact achievements.

The IT value chain is based on a specific model [2,4,5,6,7], which looks to identify the most critical organizational requirements for information in the organizational goal accomplishment and the appliance of a corresponding organizational strategy, based on the services provided through the IT&C infrastructure by a MIS/ERP integrated management information system.

The IT&C provided services, the IT&C infrastructure and the integrated management information systems are representing the results of the typical IT&C project or program deployment.

Taking into account these considerations one can define the *IT value chain based on projects and/or programs*, through the "waterfall" type triad frame, with forward and backward links, and represented by three entities:

1. The organization goal/scope
2. The organization strategy
3. The organizational value of the IT&C programs and projects

These three entities are defined in a descendent order and they are supporting themselves in an ascending order, thus resulting very clear the way in which the target or the organizational value measure of a project or a program success is vertically aligned to the organization strategy and goal

The EVA and EVM analyses, continuously performed along and by the end of the project/program life cycle, allow: a permanent comparison with what has been initially estimated as a measurable organizational value possible to be reached, a measurable degree if the project/program was successfully accomplished and if it brought a new added value.

Similar to the projects and programs, the IT&C operations and the implied service processes are successfully finalized if the *success factors* of the respective processes are permanently evaluated and monitored in a such way to allow the existence of a benefit balance of their values.

Current organizations consider the *shortest time for the market management* through the *e-marketing* process, in the client vision, as well the *aggregated and convergent work* of the personnel for resource development in the efficiency vision of the respective industry. All these bring their contribution to the *success factors of the operations* deployed through the *IT&C infrastructure management* and through the framework of the MIS/ERP and e-CRM systems.

The success factors of the IT&C operations deployed by the organizations which provide the ISP/ASP/WASP, of the *Value Added Services (VAS)* type, through fixed and mobile communications,

both Web-centered as well as through the incumbent telecommunication networks, represent a *value chain for the IT&C business processes*.

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