

Roles and Responsibilities to Success of IT Project in an Organization

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Abstract—Many IT projects come to failure because of having technical approach, focusing on the final product and lack of proper attention to strategic alignment. Project management models quite often have technical management view [4], [8], [13], [14]. These models focus greatly on the finalization of the project product and the delivery of the product to the customer. However, many project problems are due to lack of attention to the needs and capabilities of the organizations or disregarding how to deploy and use the product in the organization. In this regard, in the current research we are trying to present a solution with the purpose of raising the value of the project in an organization. This way, the project outputs will be properly deployed in the organization. Therefore, a comprehensive model is presented which takes into account the whole processes from initial step of project definition to the deployment of the final outputs in the organization and then the definition of all roles and responsibilities to put the model into practice. Taking into account the opinions of experts and project managers, to prove the performance of the model, the project problems were recognized and based on the model, categorized and analyzed. And at the end it is made clear that ignoring the proper definition of the project and not having a proper understanding of the expected value on the one hand and not supervising the emerged value in the process of production and installment are among the most important factors that bring a project to failure.

Keywords—IT Governance, Project Model, Roles and Responsibilities of Project

I. INTRODUCTION

THE initiation and definition of a project depend, to a great extent, on the roles and responsibilities defined in it. Defining and assigning functions and default roles, executing and supervising these roles are necessary factors for the progress of a project. In the models and strategies proposed for project management, diverse roles which are necessary to execute a project are usually highlighted. Most often than not, these roles are focused on the responsibilities of the project internal team to produce the project product [1], [3], [15], [18]. However, using Information Technology, this research intends to explicate the key roles necessary to deploy the delivery of the project in an organization. Such roles and responsibilities are defined to realize the expected value of the project deliveries. They, also, ensure the success of the deliveries. The assurance is based on and is formed by the project value.

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II. LITERATURE REVIEW

This project makes use of the Integrated Project Governance Model. Based on this Model, it is intended to define the roles and responsibilities necessary to acquire the expected value of a project. Based on IT Governance approach, IT projects need to be in line with the organization. The efficiency of IT projects depends on attention to key aspects of IT Governance [19]. By efficiency we mean the capability to derive the desired outcomes from the project while making sure that the project is align with organization's priorities regarding business strategies. To find out the problems that may occur when a project is under deployment, a series of analytical and statistical studies have taken place [17]. In this research we will study key axis of IT Governance as a way to solve such problems.

III. RESEARCH MODEL DESCRIPTION

A. Research Model

In the following, you can see the Model used in this project. This Model has been formed and presented in the previous stages of the research [2]. This model tries to use IT Governance in project management. And by separating different stages of a project, this model ensures the Governance of project deliveries. In this model, project governance is presented in three processes. These processes include planning, operating and evaluating. The key concepts of IT Governance are mapped in these three processes which are illustrated in Fig.2.

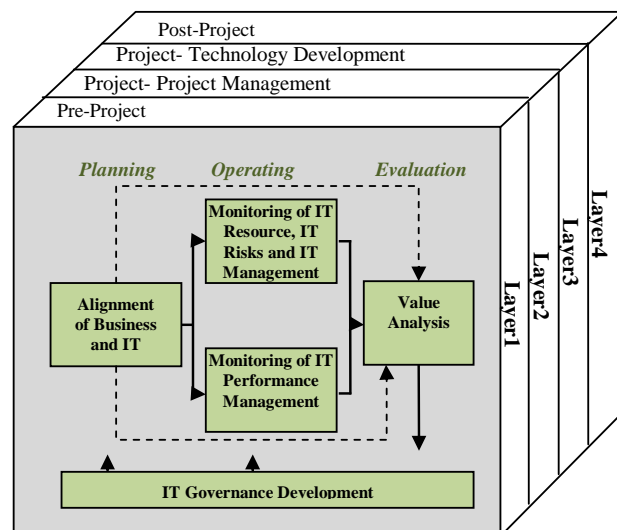


Fig. 2 Research model- The Integrated IT governance model necessary for the success of the project

These three processes are mentioned in the framework of Integrated IT Governance[1]. In this framework, three processes are defined for Governance. 1) The first stage is planning for Governance including the goals of business progress, executive policies, the sponsors, targets, goals, and the standards of judgment. 2) The second stage concerns deployment Governance Including the organization of Governance Committee and the related processes. And the last stage is 3) The control of Governance including the deployment of functions, continuous support of governance processes, and trying to overcome the problems and improve performance. These 3 layers will help us to categorize the factors that lead a project to success. And also this 3 layers will help us to study every group of activities separately. This categorization considers all project activity and increases the comprehensiveness of the research model.

B. Research Layers

We will use the value governance life cycle to form the layers of the proposed model. Life cycle of Governance in an organization is consisted of three parts [1], [10] that showed in Fig. 3.



Fig. 3 Value Governance Life Cycle in PM

The roles and responsibilities defined in this research are established based on these three processes. In this regard, in the first stage, Pre-project, ideas are received, evaluated, described and prioritized based on the expected value. In the second stage, Project, a team project design, develop and deploy a system. And in the third stage, Post-project, the defined values are achieved and an evaluation will take place to compare the achieved values versus business case. In every stage, different roles should be established ensure the execution of the related stage in the project.

Based on the standard of project management PMBOK [1], there are two general procedures in the project which involve 1) The procedures related to project management and 2) The procedures related to develop of final product. So we divided the layer Project to these two different sorts of activities.

IV. ANALYTICAL RESULTS OF THE MODEL

A. The Questionnaire

To prove the performance of this model, a series of questions were asked from the executive managers and projects managers. The questions were prepared based on model elements [1] and their resources [6], [7], [9], [11], [12], [16], [19]. Based on IT Governance these questions were intended to realize the factors that bring about the failure of a project. The capabilities of this model in realizing the failure factors are as the following:

- 1-Proper mapping between failure factors and key concepts of IT Governance
- 2-Taking the problems of a project into consideration; both before the initialization of the project and after the submission of the project to the organization.
- 3-Recognizing the problems which are not so far taken into account or which are not properly delineated.

B. The Analytical Results of each Layers.

The results of the questions asked from the experts are presented in the table2. As you can see, the results are presented one by one based on the separation of layers as well as the key concepts of IT Governance.

TABLE I

THE ANALYTICAL RESULTS OF THE MODEL ASKED EXPERTS

Failure Factors :

Stage	Failure Factors
Pre-Project	<ul style="list-style-type: none"> - The changing of goals without consideration to strategies - The lack of transparency of the expectations - The necessity of the presence of stakeholder in planning processes - Being unaware of the subsequent changing in organization and their evaluation
Project Management	<ul style="list-style-type: none"> - Unrealistic assessments - Lack of proper attention to the critical weak points that exist in the managerial skills - Assigning improper roles to the staff - Poor quality management - Not performing the policies and ways of risk management - Incapability in recognizing the problems - Poor planning
Technology Development	<ul style="list-style-type: none"> - Failure in designing - Lack of experience in designing and planning - Incapability in recognizing technical problems - Not executing the policies and procedures of risk management - Poor quality management
Post-Project	<ul style="list-style-type: none"> - There is no clear plan for making use of the outputs - The chief manager of the organization should properly supervise the project to make sure that the progress of the project is in accordance with the goals - The managers of the organization are not quite aware of the practical changes that have occurred in business.

C. Outcomes

To get the best result from the framework, it is necessary to pay close attention to the point that the explication of the obligations and successful factors at each stage become meaningful only when the four layers co-exist. Otherwise, the factors in each stage are dislocated, take other states and definitely take different priorities. For example, if in the stage of corporate governance, we do not clearly define the purposes and goals, in the subsequent stage and in the process of executing the project the changes will increase. And this will cause diverse problems in the process of the project process.

In fact, based on the experts' opinions which are established based on the obligations of the model, it is made clear that, the above-mentioned model has a high capacity to recognize the key factors that lead a project to success. The model has also succeeded to present a proper and accurate classification. Overall, it is proved that two high priority issues are the evaluation of performance and value creation.

V.EXPLICATION OF THE FUNCTIONS AND PRIORITIES SEPARATELY

A. Roles Architecture

Based on the analyzed results in the above-mentioned model and the required obligations, it is necessary to define a range of roles and responsibilities. Based on IT Governance, it is essential to have the following structure to execute IT-Governance-driven architecture [5] that showed in Fig. 5:

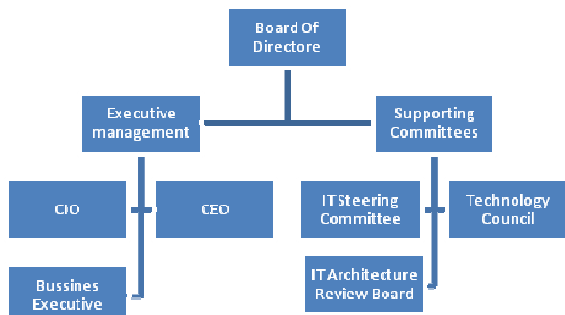


Fig. 5 Structure to execute IT- Governance-driven architecture

Such architecture becomes the basis to define the suggestive roles. To define such roles more accurately, the following points are also taken into account:

1. They are within the framework of the project rather than the high-level planning.
2. They are separately defined for each stage.
3. We should pay close attention to the governance of the project deliveries.
4. The priority goes with value creation and performance evaluation.
5. In this research, the basic project management responsibilities are not at the focal point.
6. Defining the responsibilities of those who benefit from the project was the focus of attention.

The roles, which are selected, based on the model, are shoed in Fig.7:

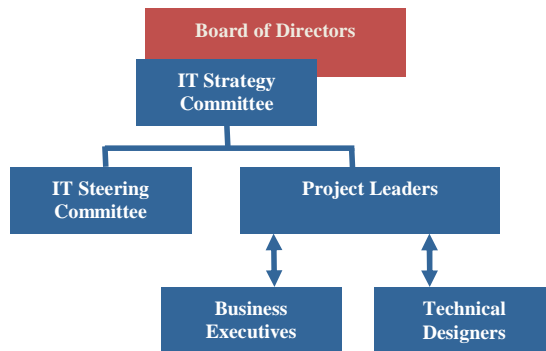


Fig. 7:Roles of the Research Model.

B. Responsibility

The related responsibilities are mentioned in the Table 3. These responsibilities, which are necessary for responding to the needs of the model, are derived from IT Governance concepts [5]. However, the approach of improving the value and evaluating the performance is given high priority.

C. Comprehensive Responsibilities

To show the comprehensiveness of the responsibilities, the aforementioned problems related to the project are mapped with these responsibilities. The following table summarizes this mapping:

TABLE III
MAPPING BETWEEN RESPONSIBILITIES AND PROJECT PROBLEMS

Failure Factors at This Stage:		IT Strategy Committee	IT Steering Committee	Project Leader	Business Executives	Technology
Project Management	All	Med	High	High	High	Med
Technology Development	All	Low	Med	High	Med	High
Post-Project	All	Med	High	Med	High	Med

TABLE II

ROLES AND RESPONSIBILITY RELEVANT TO THE RESEARCH MODEL AND ITS ESSENTIALS

	Strategic Alignment Value	Value Delivery IT	Resource Management	Risk Management	Performance Management
IT Strategy Committee	<ul style="list-style-type: none"> Follow the decisions of the board of directors Provide strategy direction and the alignment of IT project deliveries and the business Issue high-level policy guidance Verify the imperative high-level policies to steer the projects 	<ul style="list-style-type: none"> Oversee the delivery of value from IT project to the enterprise Ascertain that management has put processes and practices in place that ensure Project delivers provable value to the business 	<ul style="list-style-type: none"> Oversee the aggregate funding of IT project at the enterprise level Ensure IT Project budgets represent a balance of risk and benefit and that budgets are acceptable Ensure that roles critical for driving maximum value from IT are appropriately defined and staffed 	<ul style="list-style-type: none"> Ascertain that management has resources in place to ensure proper management of IT risks Making sure of the existence of project sources for the proper risk management 	<ul style="list-style-type: none"> Verify IT strategy compliance by project deliveries Review the measurement of IT project performance and the contribution of IT project deliveries to the business Work with the executive to define and monitor high-level project deliveries performance
IT Steering Committee	<ul style="list-style-type: none"> Define project priorities Assess strategic fit of project Plan and proposal Perform portfolio reviews for continuing strategic relevance Coordination with CIO to observe the high level IT decisions 	<ul style="list-style-type: none"> Review, approve and fund initiatives, assessing how they improve business processes Ensure identification of all costs and fulfillment of cost/benefit analysis Clarify and demonstrate the value of IT Proactively seek ways to increase IT value contribution Establish strong IT project management disciplines 	<ul style="list-style-type: none"> Balance investments between supporting and progress the projects Monitor how management determines what IT resources are needed to achieve high-level goals Ensure the organization is in the best position to capitalize on its information and knowledge Provide Project infrastructures that facilitate creation and sharing of business information at optimal cost 	<ul style="list-style-type: none"> Ensure all projects have a project risk management component Act as sponsor of the control, risk and governance framework Make key IT governance decisions 	<ul style="list-style-type: none"> Define project success measures Monitor and direct key IT governance processes The coordination of the current project with other projects
Project Leader	<ul style="list-style-type: none"> Work with the executive to define and monitor high-level project deliveries performance Follow IT standards and policies 	<ul style="list-style-type: none"> Properly define and find the project value 	<ul style="list-style-type: none"> Make use architectures and technology Make sure that sources are adequately assigned. 	<ul style="list-style-type: none"> Implement an IT control framework Ensure that roles critical for managing IT risks are appropriately defined and staffed 	<ul style="list-style-type: none"> Ensure the day-to-day management and verification of IT processes and controls Present performance reports to IT steering committee
Business Executives	<ul style="list-style-type: none"> Understand the enterprise's IT organization, infrastructure and capabilities Act as sponsor for major IT projects Cascade goals of IT project down into the organization Mediate between imperatives of the business and technology 	<ul style="list-style-type: none"> Approve and control service levels Act as customer for available project delivery Assess and publish operational benefits of owned IT investments Manage business and executive expectations relative to project 	<ul style="list-style-type: none"> Allocate business resources required to ensure effective IT governance over projects and operations Set up organizational structures and responsibilities that facilitate IT project deliveries deployment 	<ul style="list-style-type: none"> Provide business impact assessments to the enterprise risk management process Coordination with CEO to respond to risks related to the project outputs and deployment 	<ul style="list-style-type: none"> Sign off on the IT balanced scorecard Monitor service levels Provide priorities for addressing IT performance problems and corrective actions Obtain assurance of the performance, control and risks of project
Technology	<ul style="list-style-type: none"> Provide technology guidelines Monitor relevance of latest developments in IT from a business perspective 	<ul style="list-style-type: none"> Consult/advise on the selection of technology within standards Assist in variance review 	<ul style="list-style-type: none"> Advise on infrastructure products Direct technology standards and practices 	<ul style="list-style-type: none"> Ensure vulnerability assessments of new technology occur 	<ul style="list-style-type: none"> Verify compliance with technology standards and guidelines

That High means responsibilities cover more than half main problems, the Med means responsibilities almost cover less than half main problems and the Low means responsibilities cover on normal problems(not main once).

The table illustrated that, the defined roles and responsibilities have covered the whole responses to the problems which are recognized in the project.

VI. CONCLUSION

The results of this research have proved that one of the most important failure factors of a project is the incapability in proper deployment of the project deliveries in the main process of the organization. The proposed model in this research has tried to improve the expected value of a project by clearly focusing on the activities which should take place before and after the execution of a project, aligning with strategies and organization capacities, on the one hand and by categorizing the project activities, based on IT Governance, on the other hand. The roles and responsibilities defined in this project and their mapping with the recognized problems have proved that there is a high capacity in alignment of a project deliveries and organization strategies. This model along with the roles and responsibilities which are defined on the basis of IT Governance concepts, change the approach of a project planning from technical to business. In this regard, the final goal of a project changes from making the product to deployment and use of the product by the organization.

UPCOMING EFFORTS

Following this research, it is necessary to take a deeper look at some factors such as value creation and performance evaluation.

Moreover, it is quite essential to recognize the key influential factors which improve the value and performance. Such essential issues are also applicable on some areas such as risk management and resource management. To see the results of this model in practice, it is suggested to apply the results of the research model in a case study to analyze and prove the performance of the research model.

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