



IMPLEMENTING IT GOVERNANCE TO LEVERAGE IS/IT VALUE IN AN ORGANIZATION CASE STUDY MIS DEPARTMENT OF PT. XYZ

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Abstract

The objective Of this research is to know what is the indicator of good performance, what are the CSF, KPI & KGI for? how do we measure and compare both of them? The Methodology used for this research is based on a framework released by IT Governance Institute but it is being modified (minor changes) for a certain purpose. Based on our analysis the average IT Maturity level of fourteen IT processes at MIS Department PT. XYZ is 2.83 higher than the result from the ISACA survey among 47 US company only 2.62. The IT management of PT. XYZ should not make themselves satisfied with this result, as a multinational company, they have to aware of improvement regarding their IT governance. Our research also provided & equipped with a set action plan & methodology for management to achieve a better IT Maturity Level. There are some recommendations for the IT management to achieve the better namely: 1. IT Maturity Level Management have to perform continuous improvement, especially for some IT process such as DS1 (Define Service Level) the lowest maturity rating, DS4 (Ensure Continuous Services) the second lowest maturity rating, PO9 (Assess Risk) & PO10 (Manage Project) the third-lowest maturity rating. 2. Management also has to consider for doing the full step methodology in the next assessment. 3. Management have to consider for develop performance measurement tools, this tools will help management to manage IT resources & process for aligning with the business objective

INTRODUCTION

The use of IT potentially becomes the major driver of economic wealth in this 21st century. While IT has already become critical to enterprise success, IT provides the opportunities to obtain competitive advantages and offers a means for increasing productivity, so that IT will do all these even more in the future. Leveraging IT has successfully transformed the enterprise to create value-added products and services to become a universal business competency.

IT is fundamental for managing enterprise resources, dealing with suppliers and customers, and enabling increasingly global and dematerialized transactions. IT also is key for recording and disseminating business knowledge. An ever-larger percentage of the market value of enterprises has transitioned from the tangible (inventory, facilities, etc.) to the intangible (information, knowledge, expertise, reputation, trust, patents, etc.).

Many of these assets have revolved around the use of IT. Moreover, a firm is inherently fragile if its value emanates more from conceptual, as distinct from physical, assets. Good IT governance, therefore, is critical in supporting and enabling an enterprise's goals. While IT is fundamental for sustaining in what may be unglamorous, IT has been taken for granted

Business operations, it is very essential to grow and innovate the business. Those with a strict commercial focus may challenge the latter but should be aware that the unwillingness to innovate the limits of the prospects of achieving future goals and long-term sustainability.

IT also carries risks. It is clear that in these days of doing business on a global scale around the clock, system and network downtime has become too far costly for any enterprises to afford. In some industries, IT is a necessary competitive resource to differentiate and provide a competitive advantage while in many others it determines survival, not just prosperity. The economy- networked has brought more efficient markets, enabled the streamlining of the processes, and optimized the supply chains. It also created new technology, business risks, new information, and resilience requirements. These new requirements and the risks have become the mandate for the management of IT to be more effective and transparent.

By using IT now so intrinsic and pervasive within enterprises, governance needs to pay special attention to IT, reviewing how strongly the enterprise relies on IT and how critical IT is for the execution of the business strategy, since 1. IT is critical in supporting and enabling enterprise goals. 2. IT is strategic to the business (growth and innovation). 3. Due diligence is increasingly required relative to the IT implications of Mergers and acquisitions.

METHODS

The Methodology used for this research is based on a framework released by IT Governance Institute but it is being modified (minor changes) for this thesis. On a high level, the methodology is divided into 4 phases which started by identifying the Company's needs. Then it is followed by envisioning by solution, plan the solution, and implement the solution phase. As the corrective action, there will be feedback as the input for the first phase if the subsequent process will be performed in the following years.

Considering the scope of this study only providing the Company with a recommendation (set of the action plan), we left the implementation phase to the Company's management. However, we mention the complete steps here in this chapter to give a guideline of the required steps if the subsequent assessment will be conducted in the future by the Company's internal auditor. Details on each activity performed in this research methodology will be described as follows :

Phase 1 - Identify Needs The start of an IT governance implementation project indicates that the need for IT governance has been recognized.

Phase 2 - the road map envisions the solutions and is composed of three steps.

Phase 3 - the road map identifies the prior and feasible improvement initiatives and translates them into justifiable projects compliant with original business value and risk drivers.

Phase 4 - As the improvement plan rolls out, governed by established project and change management methodologies, the sustainability of the delivery of the desired business results is guaranteed by :

The feedback and lessons learned, provided by the post- implementation review The monitoring of the improvements on the corporate performance and IT balanced scorecards

DISCUSSION

A. PO1 Define Strategic IT Plan

During the assessment we found several key issues that were faced by top management, such as 1) The business value of an IT is not conscious by a user who uses the solution of the IT department. They are most likely to consider that the technology is support only not a thing that can produce the value-added to the business. 2) The IT strategy that has been done sometimes cannot be implemented 100%, because of the business engineering processes which do not run properly.

B. PO3 Define Technology Direction

During the assessment we found several key issues that were faced by top management, Technology direction sometimes is caused by the impact of trend technology that is developed. The impact sometimes is big, such as hardware, software (operating system, programming language, etc), networking devices, etc.

C. PO9 Assess Risk

During the assessment we found one issue that was faced by top management, risk management is not perfectly implemented. The risk management procedures and their policies are only implemented if it is really needed and obviously, it is often implemented only at large-scale projects.

The below constitutes the control objective that must be applied by the MIS department :

1. Business Risk Assessment Management found that the company should establish a systematic risk assessment framework. Such a framework should incorporate a regular assessment of the relevant information risks to the achievement of the business objectives, forming a basis for determining how the risks should be managed to an acceptable level.
2. Risk Assessment Approach. Management should establish a general risk assessment approach that defines the scope and boundaries, the methodology to be adopted for risk assessments, the responsibilities, and the required skills. Management should lead the identification of the risk mitigation solution and be involved in identifying vulnerabilities. Security specialists should lead to threat identification and IT specialists should drive the control selection. The quality of the risk assessments should be ensured by a structured method and skilled risk assessors.
3. The risk assessment approach should focus on the examination of the essential elements of risk and the cause/ effect relationship between them. The essential elements of the risk include tangible and intangible assets, assets value, threats, vulnerabilities, safeguards, consequences, and the likelihood of threat. The risk identification process should include qualitative and where appropriate, quantitative risk ranking and should obtain input from management brainstorming, strategic planning, past audits, and other assessments. The risk assessment should consider business, regulatory, legal, technology, trading partner, and human resources risks.
4. The risk assessment approach should provide for the definition of a risk action plan to ensure that cost-effective controls and security measures mitigate exposure to risks continually. The risk action plan should identify the risk strategy in terms of risk avoidance, mitigation, or acceptance.
5. The risk assessment approach should ensure that the analysis of risk identification information results in a quantitative and/or qualitative measurement of risk to which the examined area is exposed. The risk acceptance capacity of the organization should also be assessed.

D. PO10 Manage Project

The below constitutes the control objective that must be applied by the MIS department :

1) Change Control. Change control is necessary because the project seldom run exactly according to the project management plan. The project management plan, project scope, and other deliverables must be maintained by carefully and continuously managing changes, either by rejecting changes or by approving changes. the change control process is:

- Identifying that change needs to occur or has occurred
- Reviewing and approving requested changes.

- Controlling and updating the scope, the schedule, and the quality requirements based on approved changes, by coordinating changes across the entire projects.
- Documenting the complete impact of requested changes.

2) Performance Measurement, Reporting, and Monitoring. The goal of performance measurement, reporting, and monitoring are :

- Report the results to key stakeholders
- Providing information to support status reporting, progress measurement, and forecasting.
- Analyzing, tracking, monitoring project risks to make sure the risk is identified, their status is reported, and that appropriate risk response plans are being executed.

E. AI2 Acquire and Maintain Applications Software

During the assessment we found several key issues that were faced by top management, such as 1) Every day, MIS application support receives more than 100 tickets from users/clients which contains complaints/ bugs. But sometimes not all the tickets contain the bugs which are caused by a technical error, but the users do not quite understand the use of that application. MIS application support also has difficulties to determine the priority scale of those tickets, which one must be finished first. 2) Maintain the application is not an easy job because if a software developer/ software developer is a new hire, he never knows those applications before, and it is difficult to do enhancement because it takes time to learn those applications to do the debugging or testing. Sometimes transfer knowledge and standard documentation from every application are very useful and important in order if the first PIC that ever changed the applications resign from the job, the other one will easily learn those applications faster.

The below constitutes the control objective that must be applied by the MIS department namely 1) Requirement input definition and documentation. Department must have an outstanding documentation mechanism that is standard, from every development or enhancement process of the application. The document must contain the explanation of the application from the structure, algorithm, etc. 2) Processing Requirement Definitions and documentations. The organization's system development life cycle methodology should require that adequate mechanisms exist for defining and documenting the processing requirements for each information system development or modification project. 3) Controllability. The organization's system development life cycle methodology should require that adequate mechanisms for assuring the internal control and security requirements be specified for each information system development or modification project. The methodology should further ensure that the information system is designed to include application controls that guarantee the accuracy, completeness, timeliness, and authorization of inputs, processing, and outputs. Sensitivity assessment should be performed during the initiation of system development or modification. The basic security and internal control aspects of a system to be developed or modified. The basic security and internal control aspects of a system to be developed or modified should be assessed along with the conceptual design of the system to integrate security concepts in the design as early as possible. 4) Output requirements definition and documentation. The organization's system development life cycle methodology should require that adequate mechanisms exist for defining and documenting the output requirements for each information system development or modification project.

F. AI5 Install & Accredite System

During the assessment we found several key issues that were faced by top management, such as 1) When a software developer has submitted the requests to the system administrator to publish it into the production server, a busy system administrator with another job will delay the process to go live because of that queuing up. Therefore there must be outstanding coordination and cooperation between the application support and the system administrator on the implementation phase. 2) When a system administrator doing the publishing by following the steps which have been written in the change control form document which is made by a software developer, although it has followed the steps the document

that has been written did not complete and some phases were missing. Therefore top management must make the software developer discipline to do documentation completely and follow the standards that have been set before.

There are constitutes the control objective that should be applied by the MIS department namely, 1) An implementation plan should be prepared, reviewed, and approved by relevant parties and be used to measure progress. The implementation plan should address site preparation, equipment acquisition, and installation, user training, installation of operating software change, implementation of operating procedures, and conversion. 2) The organization's system development life cycle methodology should require that a post-implementation review of operational information system requirements (e.g., capacity, throughput, etc) be conducted to access whether the users' needs are being met by the system.

G. AI6 Manage Change

During the assessment we found several key issues that were faced by top management, such as 1) When entering the process change management request, the parameter that can differentiate the high or normal priority. This is required to easier authorized maintenance to determine the priority scale which must become the priority. 2) The assessment of the effect of change management is not yet done, so there is a chance that new problems will come after it.

H. DS1 Define Manage Service Level

During the assessment we found several key issues that were faced by top management, such as 1) The service level agreement coordinator & person in charge had been assigned, but the effect and the power of their presence were not maximum, sometimes they had to coordinate with their supervisor /manager who has the sufficient authority to get adequate backup when it is required and needed. 2) There is a gap or differentiation interpretation about service level from point of view of IT management and the user, and IT management itself does not have a clear standard framework about the service level.

I. DS4 Ensure Continuous Services

During the assessment we found one key issue that was faced by top management, that is the response to the problem that the user faced is still reactive not proactive. For example, the bugs or errors that were found on the application which is integrated with the ERP systems and workflow systems.

J. DS5 Ensure System Security

The below constitutes the control objective that should be applied by the MIS department namely: 1. IT security administration should ensure that security activity is logged and any indication of imminent security violation is reported immediately to all who may be concerned, internally and externally, and is acted upon on time. 2) Management should ensure that reaccreditation of security (e.g., through "tiger teams") is periodically performed to keep up-to-date the formally approved security level and the acceptance of residual risk. 3) Protection of Electronic Value, Management should protect the continued integrity of all cards or similar physical mechanisms used for authentication or storage of financial or other sensitive information, taking into consideration the related facilities, devices, employees, and validation methods used. 4) Management should establish a computer security incident handling capability to address security incidents by providing a centralized platform with sufficient expertise and equipped with rapid and secure communication facilities. Incident management responsibilities and procedures should be established to ensure an appropriate, effective, and timely response to security incidents.

K. DS10 Manage Problems And Incidents

There are constitutes the control objective that should be implied by MIS department such as 1) The problem management system should provide the for adequate audit trail facilities which allow tracing from incident to underlying cause (e.g., package release or urgent change implementation) and back. It should closely interwork with change management and configuration management. 2) Emergency processing priorities should be established, documented, and approved by appropriate program and IT management.

L. M1 Monitor The Processes

During the assessment we found several key issues that were faced by top management, such as 1) Sometimes, a discipline habit to report every progression of the team is still low, so that the top management has difficulties to monitor about the problems or the issues that happened in the team. 2) A team member who is still evolving in a project, sometimes he or must work multitasking to support the other projects, so the priority scale of the project is still confusing and this is the issue that often happened in the team.

The following below constitutes the control objective that should be implied by MIS department: 1) Assessing Customer Satisfaction, At regular intervals management should measure customer satisfaction regarding the services delivered by the IT function to identify shortfalls in service levels and establish improvement objectives. 2) Services to be delivered by the IT function should be measured (key performance indicator/ or critical success factor) by management and be compared with target levels. Assessment of the IT function should be performed on a continuous basis.

M. Benchmark to ISACA survey

We got the result the maturity rating of the overall IT process at MIS department PT. XYZ is 2.83 (almost 3.0 maturity rating), which means Processes follow a regular pattern (Processes have developed to a stage where different people undertaking the same task follow similar procedures. There is no formal training or communication of standard procedures and responsibility is left to the individual. There is a high degree of reliance on the knowledge of individuals and errors are likely as a result.

We try to benchmark between the assessment company with ISACA survey result, especially with 47 companies in USA (they only got 2.62 maturity rating), our maturity rating is higher (2.83 almost 3.0 maturity rating). In certain IT process, the company had a significant maturity rating than the other company such as PO1, PO3, AI5, AI2. This level should be maintained by management.

CONCLUSION

Based on our analysis the average IT Maturity level of fourteen IT processes at MIS Department PT. XYZ is 2.83 higher than the result from ISACA survey among 47 US company only 2.62. The IT management of PT. XYZ should not make themselves satisfied with this result, as multinational company they have to aware for improving regarding their IT governance. Our research also provided & equipped set action plan & methodology for management to achieve the better IT Maturity Level.

ACKNOWLEDGMENT

Our research was only took fourteen IT process to be evaluated, we have some recommendation for the IT management in order to achieve the better IT Maturity Level : 1. Management have to perform continuous improvement, especially for some IT process such as DS1 (Define Service Level) the lowest maturity rating, DS4 (Ensure Continuous Services) the second lowest maturity rating, PO9 (Assess Risk) & PO10 (Manage Project) the third lowest maturity rating. 2. Management also have to consider for doing the full step methodology in the next assessment. 3. Management have to consider for develop performance measurement tools, this tools will help management to manage IT resources & process for aligning with the business objective

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