

Assessment Phase of The Information Technology System (Case Study: PT. PLN of West Java and Banten)

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ABSTRACT

Problem assessment is an important issue in improving organizational function. Assessment is used to make good decisions for the management. Making a decision will only run fast and can provide accurate results; if supported by a number of facts or information needed. Facts and information were obtained through assessment. PT PLN of West Java and Banten to maintain and increase revenue and improve service to customers will require revamping the system through a phase of Information Technology Assessment. Assessment phase of the evaluation system for measuring the competence and capabilities of information technology and systems management currently has 3 objectives: 1. Information Gathering about the management concerns/strategic business plan; 2. Score/Health Check on the technological aspects, such as technology; Infrastructure Architecture and applications; Organization; functions and duties; 3. Production of documents on the current situation and a high level of information about 'gap analysis' with best practices. Assessment of results of research through this phase are: 1. As many as 52 percent of users say that the alignment between strategic business information technology with strategic business enterprise; 2. the average staff technical expertise in hardware and operating systems and network, can be considered sufficient; 3. As many as 15 percent of IT personnel agree that the application system at PT. PLN of West Java and Banten meet the criteria for aspects of Information Architecture; Development and Maintenance of Software Applications and procedures; Maintenance Technology Infrastructure; Security System; user training; Data Management; Facilities and Operations.

Keywords

Assessment phase; information gathering; 'gap analysis'; best practices; strategic business.

1. INTRODUCTION

Great attention of the management of IT today is very reasonable because IT is the spearhead of the company to achieve success. To achieve success through IT, the company generally has spent a lot of cost either as an investment and for operations. However, the performance of IT is sometimes still not optimal for one reason or another. Because IT is a complex system and its components are interlinked with each other then, the company experienced constraint factors should be analyzed carefully and in detail. From the analysis of current IT capabilities and then will be compared with the capabilities expected by Management or with the general standards applicable (best practice) it will get 'gap' that needs to be improved or added. Project Management in IT Assement activity is conducted on business applications, technical architecture and IT organization at PT. PLN West Java and Banten.

To improve the system usually takes 3 steps:

1. To review (assessment) of the IT system is now
2. Making IT Master Plan / Blueprint
3. Making changes to the system (Reengineering).

Objectives to be achieved at the assessment phase there is:

1. Gathering information about management concerns strategic business plan.
2. Assessment health check on all aspects of technology such as
 - a. Architecture technology infrastructure and applications
 - b. Organization functions and duties
 - c. Process
 - d. IT Service and Infrastructure Management
 - e. Applications now and constraints
3. Produce documents about the current situation and the high level of information about the gap with best practice.

2. ANALYSIS METHOD

2.1 Implementation Phase Analysis

The first phase resulted in a gap analysis between current conditions with best practice (Figure 1), while in the second phase will be creating a target operating model (Figure 2).

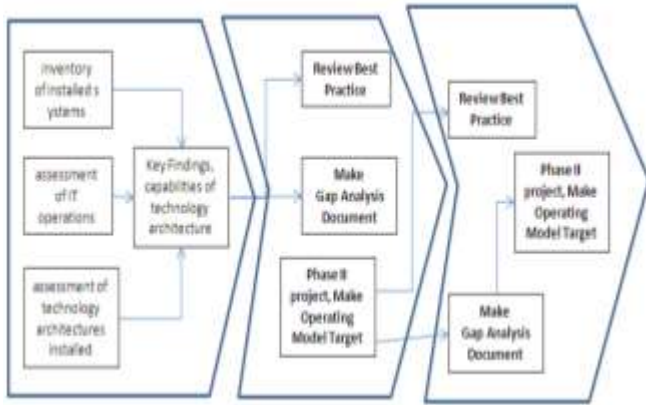


Figure 1: Implementation phase

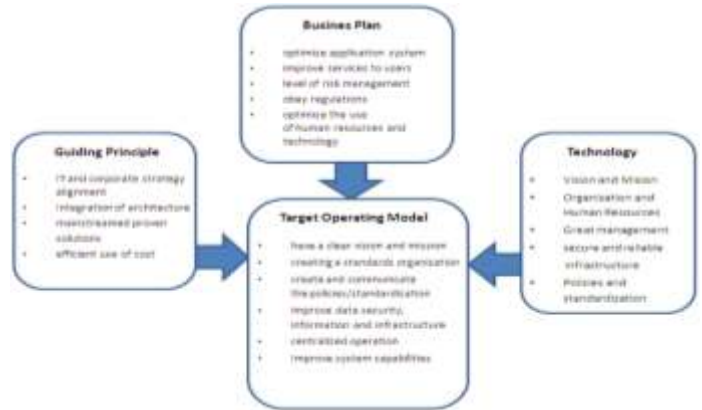


Figure 2: Target operating model

2.2 The Model Proposed

As we understand that the role of IT increasingly required that companies not only be reactive but part of supporting a "Proactive Business Enabler" which is the part that can support and provide inputs for the company. To obtain optimal results and have a legitimate basis and generally accepted, we present a solution based on several references in the form of model proposed for the change in industrial organization that can support the vision and mission of the company described as follows:

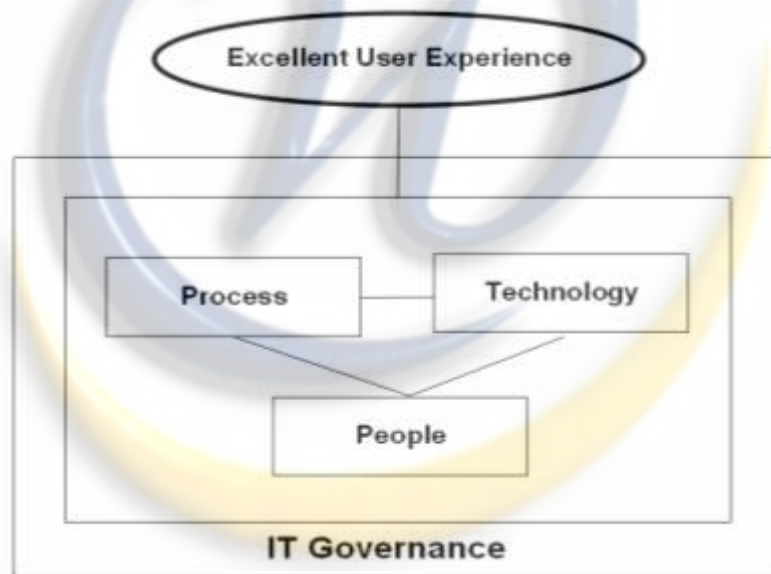


Figure 3: Key components for changes

The three interrelated components that must run in the IT environment with rules and a certain way called the IT Governance. IT governance must also be in line with Corporate Governance at the enterprise level.

Figure 3, describe the linkage components that affect organizational change, namely:

1. Process: *Development Process, Deployment Process, Support and Delivery Process.*
2. Technology: *Infrastructure & Application in General*
3. People: *Organization Structure & Function Role.*

2.3 Instruments and Data Collection Techniques

Instruments and data collection techniques used were questionnaire. Components of the questionnaire used can be described in table 1 below:

Table 1: Components questionnaire

Questioner	Description
Q1-Corporate Strategic Plan Questionnaire	This questionnaire aims to get input from the Top Level Management of the Corporate Strategic Plan, particularly to serve the IT Plan in PT. PLN West Java and Banten.
Q2-IT Executive Questionnaire	This questionnaire aims to obtain early feedback from management PT. PLN West Java on infrastructure and information technology facilities are installed in an effort to improve towards world-class information technology systems. <i>Question about 'Alignment, Enablement, Delivery / Support and Monitoring and Evaluation' at the level of IT Executive.</i>
Q3- IT Personnel Questionnaire	This questionnaire aims to get input from IT personnel on information technology capability of PT. PLN. <i>Question about 'Alignment, Enablement, Delivery / Support and Monitoring and Evaluation' at the level of IT staff.</i>
Q4-Business Executive Questionnaire	Following questionnaire aims to obtain early feedback on comprehension Leadership and Management PT. PLN West Java on the ability of Information Technology companies today. <i>Question about 'Alignment, Enablement, Delivery / Support and Monitoring and Evaluation' at the Commerce Manager.</i>
Q5-Business User Questionnaire	This questionnaire aims to gather feedback from system users about the capabilities of information technology PT. PLN. <i>Question about 'Alignment, Enablement, Delivery / Support and Monitoring and Evaluation' at the level of DM Commerce.</i>
Q6-Infrastructure Questionnaire (Data Center)	This questionnaire aims to get input from the head of the Data Centre About the Data Centre. <i>The question of facilities such as Data Centre, design, Power, AC, Fire Safety, Security, Access, Vendor Access, Audit, etc.</i>
Q7-Infrastructure Questionnaire (Network)	This questionnaire aims to get input from the director or the Network Manager of Network. <i>The question of tissue that covers the design, WAN Transport, WAN Availability, SLA, Wireless, Network Operational, Network Security, Network Management, and Cost.</i>
Q7A-Infrastructure Questionnaire (Network) advanced	This questionnaire aims to get input from the director or the Network Management and Outsourced <i>The question of tissue that covers Topologies, Communication Protocols, Applications, Network Documentation, Procedures, reporting, etc.</i>
Q8-IT Capability Questionnaire	This questionnaire aims to get input from IT personnel about technical ability, managerial, functions and Interpersonil. <i>Questions raised include the problem:</i> <ul style="list-style-type: none"> • IT personnel demographics •concerning technical applications such as the ability to design, create, analyze performance to operate the application. • Programming Skills • Expertise in the field of Data Base • Expertise in System Architecture • Expertise run Operating Systems • Expertise run Hardware • Expertise in Communications Technology • Managerial capability of Planning and Resource allocator, Change Management, Project Management, Quality Management, Customer Support • Functional Skills in PLN Applications Leadership Skills (Leadership), Communication and Problem Analysis
Q9A : Governance Questionnaire (Organizations, IT Management & Policy/Standard/Procedure)	This questionnaire aims to gather feedback on the organization, IT Management and Policy / Standard that is in PT. PLN West Java and Banten. <i>Specific questions for the development of applications on organizational structure, functions and duties of the organization and its sub-organizations, performance plan and KPIs, IT Management, IT Strategy, People Management, Project Management, Policy, Standard and Procedure, Compliance Aspects, Financial Management, Resiliency.</i> <i>Specific questions for the planning and Infrastructure Support regarding organizational structure, functions and duties of the organization and its sub-organizations, performance plan and KPIs, IT Management, IT Strategy, People Management, Project Management, Policy, Standard and Procedure, Compliance Aspects, Financial Management, IT Operations, Infrastructure Security, Asset Management, Resilience.</i>
Q10 : Application Questionnaire	This questionnaire aims to gather feedback about the capabilities of the CM @ X application that is used in PT. PLN West Java and Banten. <i>Questions about Information Architecture such as classification and data access policy, creation and maintenance of applications and user participation, Requirement Specification, Maintenance Technology Infrastructure, Development and maintenance procedures, Application Security, Education and Training to the user, Data Management (Back-up/Restore, etc.), Facilities Management and Operation Management.</i>

3. ANALYSIS RESULT

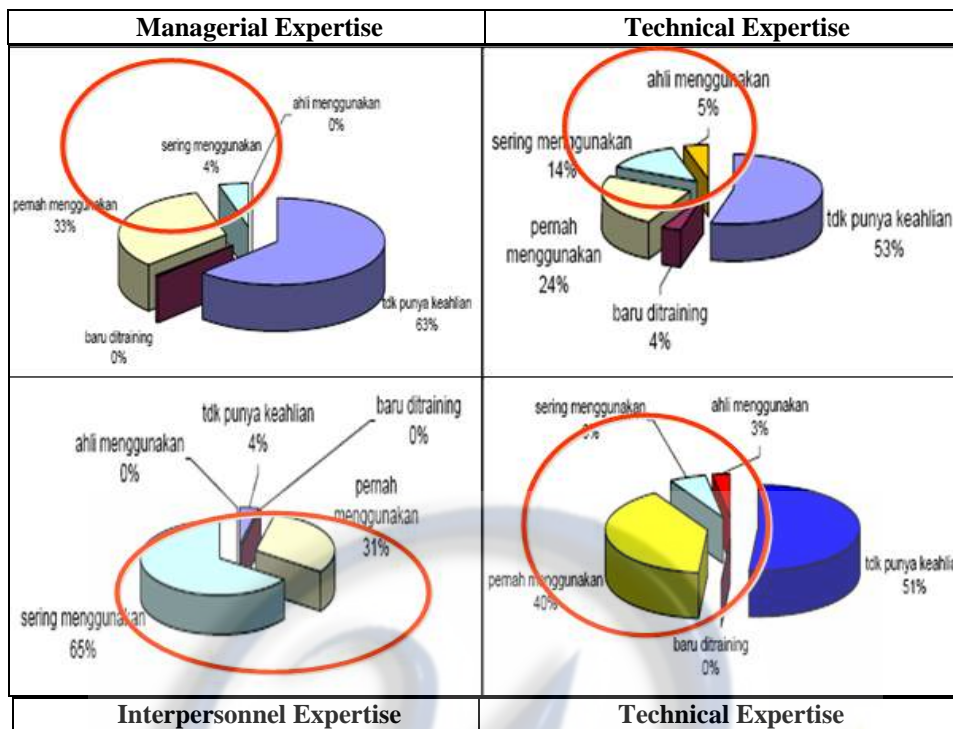


Figure 4: IT Capabilities

Based on the results of the questionnaire, the capabilities of IT personnel:

- As much as 37% of IT personnel have the managerial expertise.
- As much as 47% of IT personnel have the technical expertise
- Almost all IT personnel have the talent to become managers.
- As much as 49% Naturalife Greenworld IT personnel the ability to understand business processes at each service PLN.

Table 2: Personnel expertise

Question	Average Value	Position
Application Development	2.29	>
Database Management System	2.43	>
Architecture	1.86	<
Programming	2.00	=
Hardware	2.14	>
Operating System	2.86	>
Network	2.43	>
Managerial	1.29	<
Functional	1.86	<
Interpersonal	2.43	>

Description:

0 = Not Have Expertise, 1 = New detrainning, 2 = Never Use 3 = Frequently Use, 4 = Expert Using.

Based on questions regarding personal skills:

- The ability of application development is characterized by expertise (Application Development and DBMS) that can be categorized enough that have value > 2 (Have to frequent use.)
- Expertise in the design is still lacking because of perceived expertise in the field of Architecture in value below 2.
- To have sufficient programming skills
- The average technical expertise on hardware, operating system and network may be considered adequate with an average value above 2.
- managerial capability still perceived less
- Interpersonal Skills (ability to work together) enough

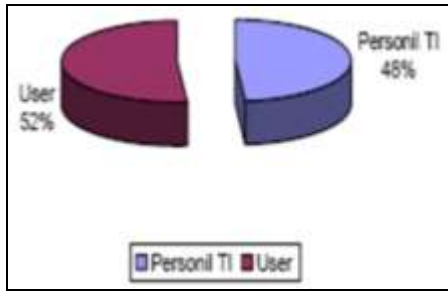


Figure 5: IT alignment



Figure 6: Application system capabilities

Analysis of the IT Alignment (figure 5):

- As much as 52% of users said the alignment between strategic business IT with strategic business enterprise.
- In general, PLN's current IT can support business goals PLN in the future.
- Need to socialization of the Top Management of the IT strategic plan to lower level.
- Need to improve the process of monitoring & evaluation of jobs in the IT Sector on an ongoing basis.

Analysis of the Capabilities Application System (figure 6):

- The aspects analyzed include information architecture, development and maintenance software Application and procedures, maintenance technology infrastructure, security system, training users, data management, facilities and operations.
- 15% agree that IT personnel in the application system PT. PLN West Java and Banten meet the criteria above aspects.
- Development and maintenance of data dictionary is not standard.
- The right of access is set up with clear, but implementation is still not firmly on the ground.
- Process development and maintenance of software applications in general is quite good.
- Maintenance of the technology infrastructure has not been done routinely.
- The procedures and manuals already exist but are rarely updated regularly.
- Security system still felt less.
- Media backup data on each of the UPJ, but still there is not in accordance with the standard Office / IT.
- Jobs requests from the user is set by the SOP.

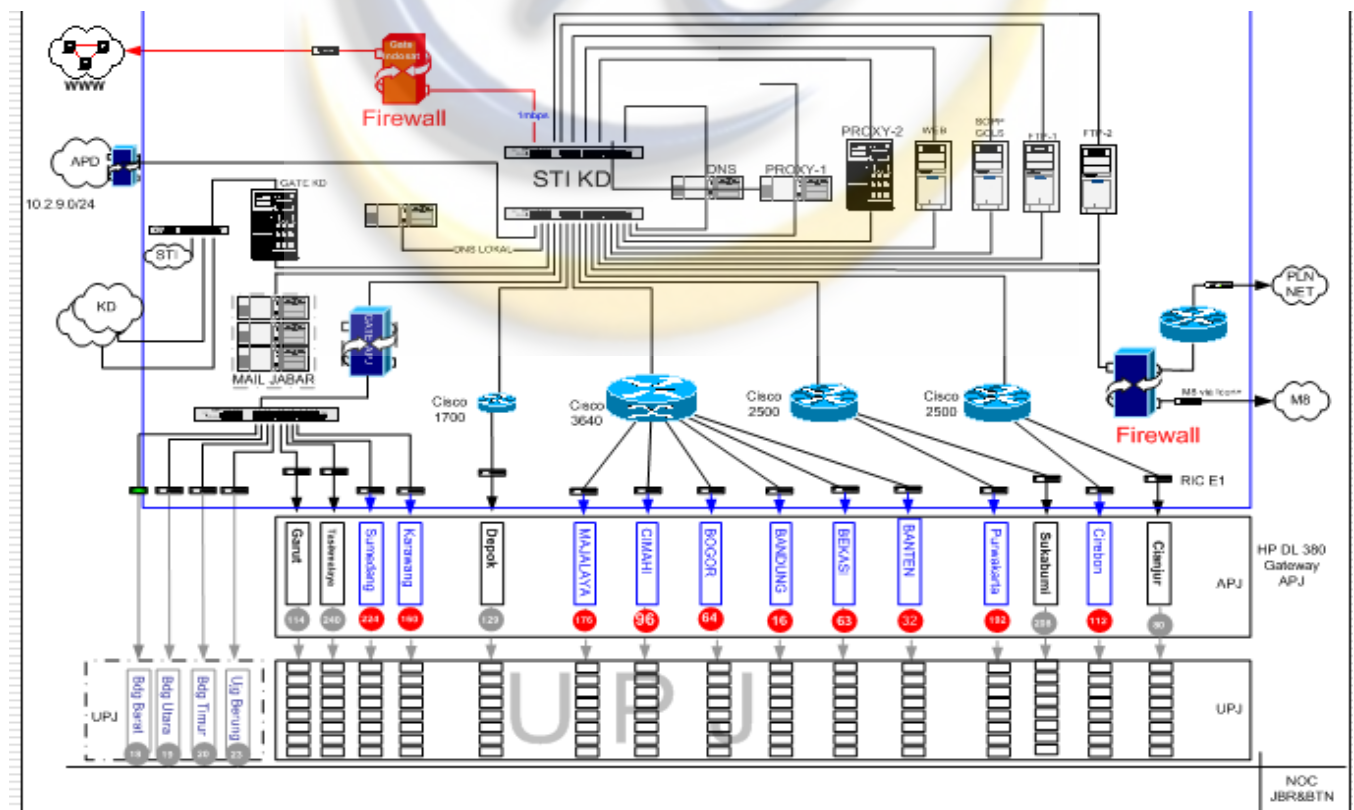


Figure 7 : Distribution office network

Office Network:

- 15 WAN links from the Office of the APJ:
 - ✓ Served by 4 Cisco routers and a LAN Switch
 - ✓ All APJ WAN links to connect to a LAN Switch
 - ✓ Position Firewall is on level APJ
- Connection to the Internet:
 - ✓ Through Indosat network with 1Mbps speed
 - ✓ Using a Firewall
 - ✓ Applications
 - In addition to email Corporate purposes, also for access to the Internet
- Connection to PLN Net
 - ✓ Using a Firewall
- Connection to Banks
 - ✓ Through 3rd Party
 - ✓ PLN Perform File Transfer

4. CONCLUSION

Based on the Assessment of the capabilities of IT staff in mind that technical capability is quite average but not at the expert level, while the average managerial ability is still lacking.

While demand management:

1. IT Systems Having Homogeneous Nature, Standard, Centralized and Secure by:
 - Increasing Capability software applications
 - Consolidating Data from the UPJ to APJ
 - Has a Management Information System
 - Refer to Standard (COBIT)
2. Meeting the governance aspect of the way:
 - Aligning Corporate Strategy and IT
 - Improve Services To Commerce
 - Comply with applicable rules
 - Has the Standard Organization and Process
 - Optimizing Human Resources & Technology.
3. In general, this time all operational activities at the level of UPJ. These activities include customer registration through billing meter reading done at UPJ. Only some of the data / information sent to the levels of APJ and / or to the KD in a batch.
4. Due to the Application and Database Server was still in the UPJ, the need for communication to the APJ or to the KD only for data transfer in batches to the needs of small bandwidth that can be served by dial-up PSTN. For certain UPJ even still wear softcopy delivered and taken directly from / to APJ.
5. Recommendations Follow Up Next
 - Restructuring of the IT organization in accordance with the recommendations at the beginning of this document. This includes several aspects as follows:
 - The division of duties and responsibilities clear and do not overlap
 - Selection of appropriate personnel and have the minimum qualifications required. If deemed necessary, to seek personnel from outside (outsourcing), especially for the type of work that is not critical and are not confidential
 - Application of Change Management (Change Management) to reduce the risk of operational disruption, especially for software applications.
 - Improving the Operational Data Center (procedure backup / restore, capacity planning for servers, Facility Management, SLA with the business) and Help Desk operations.
 - Implementation of Policy on Information Security.

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