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# PROJECT MANAGEMENT MATURITY ANALYSIS AS A FRAMEWORK TO MOVE FORWARD TO BEST PRACTICES: THE CASE OF GROUP PROJECT MANAGEMENT AT PT. XYZ

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*Abstract— In this globalization era, good capability in project management is necessary for every telecommunication service provider to win the competition. PT. XYZ is trying to improve its way in project management to be able to compete and be the number 1 Telecommunication service provider in Indonesia and to do that the Top Management is focusing in Asset Management. The questions in this research are : How do the improvement taken right now align with Group PPM's Strategic Plan ? and What are the impact from current group PPM's positions to its strategic plan? This research is based on Quantitative approach using OPM3 to calculate degree of maturity, and Qualitative approach to find the root cause in asset management. From calculation and data analysis, Group PM's actions is align with its strategic plan but its strategic plan is partially achieved because the implementation is not running as expected and there are root cause that has not been answered yet. The impact is, its strategic plan not running as expected and there is a delay possibility. This research recommends: Recommendation / solution from Root Cause Analysis, First priority and second priority from the OPM3 framework, Recommendation to complete Best Practices, and Time Frame to accomplish all Best Practices.*

*Keywords: Root Cause, Project Management, OPM3 (Organizational Project Management Maturity Model)*

## I. INTRODUCTION

PT XYZ as one of the leading company in telecommunication has a dream to be the number 1 telecommunication service provider in Indonesia. Under CEO there are 6 Directorate and Group PM is under Directorate of Technology. This journal is focusing only in Group PM Scope of Work, which is the Project Execution and Project Closing.

Group PM's Vision is "To fulfill Company Business requirement in form delivering successful (within scope, within budget, within schedule and within technical specification) Network Infrastructure Projects using proper project management methodology". And Group PM's Mission is "To be competent project management resources to support Indosat's business by delivering project result as per project plan" by focusing in People, Process and Tools. The Mission will be cascaded to strategic plan where it

is divided into 3 phase, Explore phase in year 2011, Improvement phase in year 2012 and Enhancement phase in year 2013. Under Group PM there are 6 Divisions, which consists of 5 Division in Field Implementation (later will be called as project Implementer Division) and 1 Div to Support Project Implementer (later will be called as Project Assurance Division)

Top Management of PT XYZ is focusing in Asset Management and of course Group PM has a major role in asset management due to its responsibility in Project Execution. So in Project Execution, Group PM need to achieve its vision and mission through its strategic plan by focusing in asset management.

## II. BUSINESS ISSUE EXPLORATION

### A. Problem Statement

Two main focus in Asset Management are excess purchase of asset and long lead time period from project completed to asset recording. Excess purchase of asset meaning XYZ has excess asset still in warehouse or not in used, yet installed asset (live equipment) can generates income for XYZ. It means XYZ has to spend money for maintain unused equipment (not installed) and for warehousing. Long period time from project completed to asset recording meaning that there is delay in asset recording. Example asset from PO year 2007 already On Service in 2007 or 2008 but it might be recorded in year 2009 and even 2010. So the asset value in XYZ financial statement not really describe XYZ real condition where those asset already On Service 1 or 2 years before the asset recording. If there is a modernization projects, the asset value still big yet, it might be already obsolete.

In managing projects Group PPM need to focus in Asset Management and Improve its capability in Project Management to deliver successful network infrastructure projects (as stated in Group PM's Vision Mission and cascaded to Strategic Plan)

### B. Research Question and Objective

The research questions are How do the improvement taken right now align with Group

PPM's Strategic Plan ? and What are the impact from current group PPM's positions to its strategic plan?

Based on those questions, the objective / output of the research are : Recommendation / solution from Root Cause Analysis, First priority and second priority from the OPM3 framework, Recommendation to complete Best Practice and Time Frame to accomplish all Best Practices.

C. Scope and Limitation of The Research

Scope of the research is to find Root Cause through brainstorming, calculate Group PPM's degree of maturity using OPM3 High Level Self Assessment and give recommendation using the framework which provided in OPM3. Socialization is conducted prior to the questionnaire

This research limited only in Improvement refer to OPM3 Framework, only in Group PPM at PT. XYZ, Respondent / participants are from internal and external of Group PM, Respondents / participants are in Manager level (Minimum), High Level Recommendation and No Financial Analysis.

III. BUSINESS SOLUTION

A. Methodology and Conceptual Framework

This research was based on mixed methods, Quantitative and Qualitative research. Quantitative research is used to calculate the degree of maturity using questioners which provided by OPM3 and Qualitative research is used to determine root cause, priority, strategic plan using interview and brainstorming.

Conceptual Framework of this research is started from Asset Management which highlighted by Top Management illustrated and Group PM's Vision Mission and then finding the Root Cause in Asset management through brainstorming and assessing Group PM maturity using OPM3. The result from Root Cause Analysis and Maturity will reveal the true Root Cause and Group PM current position and after that of course there will be recommendations. The output and recommendations already explained previously. The diagram of conceptual framework is illustrated below:

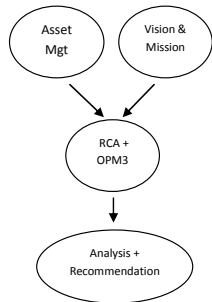


Figure 1. Conceptual Framework

B. Data Collection and Respondent Profile

To minimize error in answering the questions and based on OPM3 cycle Respondents for this survey limited only for level Manager and above (Manager

and Division Head), A Socialization session prior to Questionnaire (performed door to door, person by person), An interview to each of respondent to make sure they understand the questions and how to fill in the questionnaire, The questioners will be distributed to related Groups such as Group NP&E, NOM, Procurement, Accounting, Quality & Surveillance, PDO / President Director Office and SOX. The Questioners was distributed in Hard Copy and will be collected either through assigned Questioners Pool or manually collected door to door.

C. Finding the Root Cause

From brainstorming and discussion in meetings, Root Cause in Asset Management are :

Table 1. Root Cause

| No | Findings  | Root Cause          |   |
|----|---|---------------------|---|
|    |   | Category            | Root Cause  |
| 1  | Excessive purchased asset/equipments due to constant changes in commercial plans, amendment to the scope of work during the project, and lack of monitoring of the assets in the warehouses. (currently the uninstal import equipments cannot be returned to vendors) | Process             | a. No Dept in Group PPM in handling Business Process (Processes, Procedures, Policies, MOR, SLA, Remedial)<br>b. Not Clear Matrix of Responsibility in updating database (Planning, Project, NOM), will cause difficulties for :<br>- Group Planning in planning current / next year roll out due to no reliable database<br>- Fixed Asset team to review asset                                   |
|    |   | People              | a. Not Clear Matrix of Responsibility in information distribution, stakeholders management will cause poor communications among divisions/stakeholders<br>b. Non TurnKey Policy will cause difficulties in managing thousands of sites / asset management   |
|    |   | Procedures / Policy | a. No Dept to handle Business process to enforce business process implementation, re-engineering (within Group) and also coordinate with BPD and SOX team<br>b. Policy to handover excess material stated in contract / Non TurnKey Policy<br>c. Poor Job handover will cause some information not clearly distributed in job rotation<br>d. No PIC/Dept to handle Network Inventory in Group PPM |
|    |   | Tools / System      | a. No Clear Matrix of Responsibility in updating and maintain database<br>b. Different asset recording among systems/database   |
| 2  | Long period/Lead time of administration from project completed to recording (it took more than 3 months in average) due to lack of commitments from vendors and respective groups.  | Process             | a. Long process in Indosat due to bureaucracy<br>b. No SLA commitment stated in Contract between isat and vendor  |
|    |   | People              | a. Lack of human resource due to non turnkey policy<br>b. No continuous remedial in asset management  |
|    |   | Procedures / Policy | a. Bureaucracy<br>b. Poor Job Handover  |
|    |   | Tools / System      | System not integrated   |

D. Group PM actions in Year 2011 – 2012

From year 2011 until now, several actions already taken / on going process such as :

- a. Organizational Re-structurization in April 2011, establish PIC (Expert) in Group PPM to handle Business Process and Dept to handle Network Inventory under Project Assurance Division.
- b. Develop Flow Chart SOX in Fixed Asset Management (re-engineering process) with all related parties, starts from April 2011.
- c. Reduce Lead Time in Project's Documents (Acceptance Certificate) by moving the Good Receipts Process from Procurement Group to Programs & Projects Management Group in sept 2011 .
- d. Established Task Force Team for Asset ex-dismantle in vendor's warehouse to identify all XYZ assets from ex-dismantle which currently stored at vendor's warehouse (Lead by Network Inventory Dept, Project Assurance Division) starts from September 2011.
- e. Develop Geo-Tagging for Remote ATP and Material Tracking, development starts from February 2012 and still on going process.

- f. Develop PMIS, starts from January 2012 and still on going process.
- g. Develop ERP, starts from January 2012 and still on going process.

**E. OPM3 High Level Self Assessment Result**

In general, maturity is defined as “the state or quality of being fully grown or developed”. Model implies a progression or series of steps in a process (Northrup, 2010).

Refer to Project Management Institute, OPM3 second edition, OPM is the systematic management of projects, programs, and portfolios in alignment with the achievement of strategic goals (PMI, 2008). OPM3 is a framework that provides an organization-wide view of portfolio management, program management and project management to support achieving Best Practices within each of these domains (PMI, 2008). In assessing maturity the the first thing to do is conduct a survey using High Level Self Assessment and then continue with Comprehensive Assessment (Comprehensive Assessment require a certified assessor)

This research focusing only in OPM3 High Level Self Assessment which means a survey will be conducted to identify what people perceived about the maturity in its organization, identify the organization’s general position on a continuum of organization project management maturity, which Best Practices in OPM3 are and are not currently demonstrated by the organization. The results of the HLSA give the organization a basis for improvement, a framework in project management. Below is the summary of Best Practice in OPM3:

Table 2. Summary OPM3 Best Practices

|           | Number of Questions |                   |           | Number of Best Practices (BP) |                   |           |
|-----------|---------------------|-------------------|-----------|-------------------------------|-------------------|-----------|
|           | All                 | Outside Group PPM | Group PPM | All                           | Outside Group PPM | Group PPM |
| All       | 125                 | 36                | 89        | 488                           | 144               | 344       |
| Project   | 42                  | 9                 | 33        | 168                           | 36                | 132       |
| Program   | 47                  | 20                | 27        | 188                           | 80                | 108       |
| Portfolio | 14                  | 7                 | 7         | 56                            | 28                | 28        |
| OE        | 21                  | 0                 | 21        | 76                            | 0                 | 76        |

From the High Level Self Assessment, the maturity in Group PM is 36% where maturity in Project Management is 23%, maturity in Program Management is 27%, maturity in Portfolio Management is 7% and the maturity in Organization enablers is 80%. The summary is demonstrated below:

Table 3. Summary Group PM’s Maturity

| Group PPM Overall Maturity = 36% |           |         |         |
|----------------------------------|-----------|---------|---------|
|                                  | Portfolio | Program | Project |
|                                  | 7%        | 27%     | 23%     |
| I                                | 0%        | 0%      | 0%      |
| C                                | 0%        | 3%      | 2%      |
| M                                | 4%        | 7%      | 5%      |
| S                                | 4%        | 17%     | 17%     |
| Organization Enablers = 80%      |           |         |         |

If we take a look from the origin of respondents, the maturity can be summarized below:

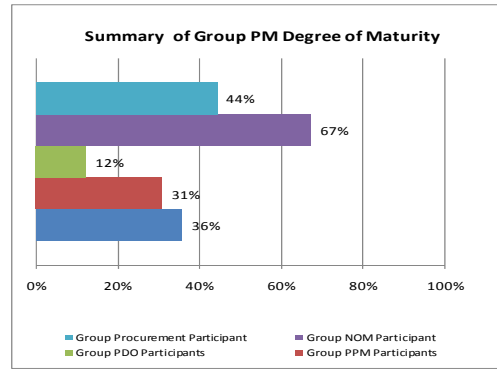


Figure 2. Summary of group PM degree of Maturity

**F. Root Cause Analysis**

Through interview and brainstorming in meetings, several similar cause occurs repeatedly. It indicates that those causes should get high attention and need prompt actions to handle it. Below are the root cause of Excess purchase of asset and Long lead time to asset recording:

*Dept to handle Business Process*

With big volume projects, all personel within Group PM tend to concern only in day to day projects and nobody remind them / give alert about standard processes and about asset management.

*No Clear Matrix of Responsibility*

If matrix of responsibility is not well defined at the beginning, one responsibility might be mixed up with the other and it can be sure that there are many unfinish works, information not well distributed and people might percieved differently.

*Non TurnKey Policy*

Managing big volume projects requires a strong management and competent human resource otherwise troubles will occur and just like snow ball effect it will getting bigger over time.

*Poor Job Handover*

It is very important to ensure the job can be done accordingly otherwise the new person will loose several informations and in the end it is very difficult to acheieve the organization objectives. In this case, poor job handover is very crucial due to the big volume of projects and the dynamic of projects. Everything might get mix up if all the knowledge can not be documented.

*Dept to handle Network Inventory*

Group PM facing the lost, un-monitor material possibility because there is no dept in Group PM to handle tracking / monitoring material.

*Different asset recording among database*

It is ok to have different database as long as they can be integrated and support the project management.

*Bureaucracy*

PT XYZ need to cut bereaucracy to reduce lead time in asset recording.

*System not Integrated*

Having 2 or more systems with different informations, meaning there are informations taken from one system

and the other information taken from the other system. If those systems are not integrated, it will become chaos.

#### *No Clear Contract*

If contract not clearly regulate (especially SLA), then it will impact to many things such as time completion, change request etc.

#### *G. Maturity Analysis*

Based on HLSA calculation above, the participants perceived the maturity in Group PM is 36%, it means participants feel only 36% from total Best Practices have been implemented in Group PM. High degree of maturity in Organization Enablers tell us that Group PM really concern in OPM practice environment and the embrace of project, program and portfolio diciplines. Program Management degree of maturity is bigger than project management, and Portfolio management has the least degree of maturity. It indicates that participants feel the implementation of best practices in program management are bigger than project mangement and it is easier to monitor those projects as a program. The least is Portfolio management. This smallest degree of maturity tell us that Group PM has difficulties in manage all projects and programs as a portfolio. In short, Group PM has a high awareness in OPM , but the low overall degree of maturity shows that the OPM implementation not yet mature/well develop and Group PM need to improve its capability in OPM.

Based on the participants origin Group, there is a quite significant differences in Group PM maturity and the significant maturity differences might be caused by Poor communication among division, different expectations from other Group such as Group PDO / Business Process Division, and Group PM may not manage it's stakeholders properly so their expectation are not delivered as their expected.

Since 2011, Group PPM has taken several actions to overcome findings from auditor and also to improve its capability in project management. Those actions are :

##### *PIC to handle business process*

This action is answering the root cause : No dept to handle business process and No Clear Matrix of Responsibility.

Unfortunately this target has not been achieved yet due to lack of human resource so until now the business process identification and re-engineering still on going process. In accordance to Group PM's strategic plan, this action is answering the root cause, align with strategic plan but explore has not been achieved yet.

##### *Dept to handle Network Inventory & Development of Geo-tagging.*

This action is answering the root cause : No dept to handle network inventory, Different asset recording among database/system, Bereaucracy and System not integrated.

Unfortunately the identification of asset ex dismantle which stored in vendor's warehouse phase 1

not yet finish due to rapid moving of asset ex dismantle. Dept Network Inventory also lead the development of Geo tagging in tracking and monitoring asset through GPS. Based on explanation above, this action is answering the root cause, align with strategic plan but explore has not been achieved yet.

##### *Move GR Process from procurement to project*

This action is answering the root cause "bereaucracy". In implementation, the lead time is decreasing but not significantly due to it only move the process from Group Procurement to Group Project Development. In accordance to Group PM's strategic plan, it is align because identification (explore phase) is finished and the improvement is finished.

##### *Join team in developing Flow Chart SOX*

This action is answering the root cause :No dept to handle business process, No dept to handle network inventory, No Clear matrix of responsibility & SLA and Different asset recording among database/systems.

In establishing this flow chart, all team agree to apply high standard in controll function to ensure asset monitoring and tracking. In implementation, this standard makes people reluctant to do. It might happen due to extreme changing happened without clear guidance. In accordance to Group PM's strategic plan, this action is answering the root cause, align with strategic plan, explore finish but the implementation doesnt works.

##### *Develop PMIS & ERP*

This action is answering the root cause : No Dept to handle Business Process, Bereaucracy, Different asset recording among database and System not integrated.

The purpose of developing new system is automation process, online approval, good monitoring system and of course reduce lead time. This action is answering the root cause, align with strategic plan but the explore and development has not been achieved yet.

In short, Group PM's actions are align with its strategic plan but in terms of time line, it is partially achieved because several actions taken is still in explore & identification phase. So in other words the strategic plan is partially achieved, the implementation is not running as expected and there are root cause that has not been answered yet.

##### *Impact from current position to its strategic plan.*

The maturity result shows a 36% degree of maturity of OPM in Group PPM. It means participants perceived 36% from total 344 Best Practices in OPM have been implemented in Group PPM. Based on Root Cause Analysis and matiruty analysis, Group PPM's current position :

- Not all root cause have been answered
- Several actions still in explore phase
- Several actions not running as expected
- Low degree of maturity, only 36% from total 344 Best Practices have been implemnted
- Poor communication, due to significant differences

In short the impact from Group PPM's current positions to its strategic plan, is Group PPM's Strategic Plan is not running as planned and there is a delay possibility in achieving the target.

**H. Conclusion**

From the discussion above, there are some crucial items forming the final conclusion :

- a. Group PPM's actions are align with its strategic plan but in terms of time line, it is partially achieved because several actions taken is still in explore & identification phase. So in other words the strategic plan is partially achieved, the implementation is not running as expected and there are root cause that has not been answered yet
- b. The impact from Group PPM's current positions to its strategic plan, is Group PPM's Strategic Plan is not running as planned and there is a delay possibility in achieving the target.

**I. Recommendation for Root Cause**

*PIC to handle business process :*

The recommendation is to establish a department in Group PPM under Project Assurance Division to handle business process..

*Dept to handle Network Inventory & Development of Geo-tagging.*

The recommendation is acceleration in developing geo-tagging (integrated with other system) with resource management.

*Move GR Process from procurement to project :*

To have a significant lead time decreasing, the recommendation is to review LOA (Level of Authorization) and propose new LOA to simplify approval process and cut bureaucracy.

*Join team in developing Flow Chart SOX*

The recommendation would be propose team SOX for re-engineering Flow Chart SOX with acceptable standard and align it with Business Process in Group PPM

*Develop PMIS & ERP:*

The recommendation would be Div Project Assurance to accelerate the development of PMIS & ERP through resource management

There are root cause from audit result year 2010 which has not been answered by Group PPM :

- a. Poor Job Handover, To answer this root cause, the recommendation would be : Div Project Assurance to lead the development of Knowledge Management.
- b. No Clear Contract, To answer this root cause, the recommendation would be : Dept Business Process to lead the contract review and alignment between contract and business process.
- c. Turnkey Policy, To answer this root cause, the recommendation would be : Div Project Assurance to have resource management to support project implementation.

**J. Recommendation for Group PM Strategic Plan**

From framework in OPM3, researcher recommends 1st priority and 2nd priority. Best Practices for 1st priority will consider Group PPM Mission : People competency, Process and Tools :

- People Competency : All best practice related to people competency will become 1st priority.
- Process : the 1st priority will focus in asset management, Communication plan and Resource management.
- Tools/System : All best practice related to tools such as PMIS become 1st priority.

Since Group PPM Mission is to implement the right project management methodology, then the 2nd priority would be all best practices excluded from 1st priority.

To implement the recommendation, Group PM to re-define or re-visit its strategic plan. It is very difficult to implement all those practices in such a short time which is until 2013. If we push something yet the human resource is not ready and not well guided, it would be useless. And based on time frame, researcher recommends the strategic plan still define until year 2013 with adjustment in phase.

Below is the recommendation:

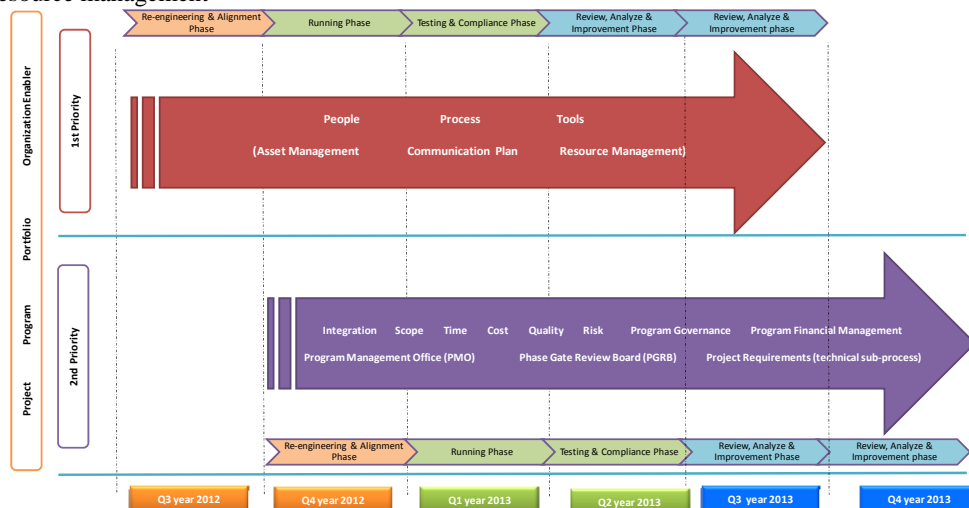


Figure 3. Strategic Plan recommendation

Based on ERP Live target in January 2013, all business process should be finish and align with other process at the end of year 2012. The phase in new strategic plan is :

- Running phase is phase where all business process will be implemented.
- Testing & compliance phase, random sampling to test whether all Divisions are comply with the agreed processes.
- Review, analyze and improvement phase, review and analyze the plus and minus for all processes and re-engineering business process if necessary to overcome the difficulties, issue which happened in the running phase.

With such a short time to guide the implementation it is going to need Change Management Program which include resource management and communication plan and will be lead by Div Project Assurance.

#### IV. IMPLEMENTATION PLAN

Based on data analysis and recommendations in previous chapter, the implementation will be lead by Div. Project Assurance through Change Management Program, supported by Resource Management. Pre-Implementation will be started on June 2012.

Below is the steps in Detail Implementation Plan : :

- Create Dept to handle Business Process
- Business Process Re-engineering & Alignment
- Contract Review, analysis and amendment
- Developing Tools (Geo-tagging, PMIS, ERP)
- Develop Knowledge Management, Resource Management and Change Management.

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