The Proposed Improvement to Achieve Maturity from Low Impact Program Management Office – Case: PT Angkasa Pura II

Diah Dwi Hapsari[1], Aries F. Firman[2]

[1,2]School of Business Management, Institute Technology Bandung, Indonesia

ABSTRACT: Many Big companies realize the importance of PMO. The word "P" in the PMO can stands as Project, Program or Portfolio, it depends on a company needs. project is establishment of structured process in order to generate particular outputs, program is compilation of several projects while portfolio is compilation of several programs (Tjahjana et al., 2009a). For Angkasa Pura II PMO stands for Program Management, the centralized program management office to take on responsibilities for program related functions and program-related activities.

KEYWORDS: Maturity Components, Project Management, Program Management, Program Management Office, PMO Maturity Level.

INTRODUCTION

PT Angkasa Pura II (APII) is one of Indonesia Airport company under ministry of State own company which manage 20 airports in the west side of Indonesia. The Establishment of PMO is important for company with many programs, especially with complex programs that involve many stakeholders. PMO will act as project or program orchestrator to integrate, consult and solve the bottle necking condition. The objectives of PMO are to drive the change and improve company performance through program or project. The existing impact of PMO in Angkasa Pura II is consider very low caused by several condition in PMO operation components i.e. no formal necessity for project charter, tools variety in Project management plan, no guidance/procedures/standards in project reporting, no software and system for PM, no standard of quality management, no acknowledgement in people success, no communication planning, issues handled in ad-hoc manners and the condition where project issues and risk are not addressed in standard and regular basis.

To overcome this situation Angkasa Pura II need to implement Project Management maturity to transform PMO into better condition. The objectives of the paper are to define the baseline maturity level of APII and criteria needed by APII to achieve higher maturity level. The main literature of this research are Project Management book of Knowledge 6th (PMI, 2017), Project Management Maturity Model (Crawford, 2015), High Impact PMO-How Agile PMO Deliver value in a complex world (Husser, 2017). Several journal also use to give wider picture of PMO as a bridging tool and the importance of a company to have strong knowledge in project management and interdisciplinary knowledge within organization" (Sandhu & Wikström, 2018)

This research used qualitative methodology with in-vivo and descriptive coding in content analysis (Saldana, 2016). Fish bone or also commonly known as Ishikawa diagram (Bose, 2012), utilize to find the root of problem and the criteria needed by APII to achieve higher maturity level. The Researcher will also propose implementation roadmap to transform APII from Level two as baseline level to Level three 2 as the higher maturity level for AP II.

LITERATURE REVIEW

A. The Theory of Black Label Burger Bottom Bun (Husser, 2017)

Phillipe Husser explain about how relevant the existence of PMO with burger bottom bun. When we order burger with number one quality of meat, the fresher vegetable in town and the most selected seasoning, can you imagine what happen to those number one ingredient without the bun? There will be no burger. The second question how we eat the burger when we exclude the bottom bun? All other layers of ingredient will be fall out, scattered and mesh. PMO role or existence can be describe as the bottom bun, its hold all the projects or program together to ensure the goals achievement. PMO is the essential foundation of complex projects, program or portfolio, imagine how burger without the bottom bun the same as projects without PMO

B. *The PMO Challenge (Husser, 2017)*

Complexity of project always become the challenge for the PMO, the more complex projects/program in one organization the bigger challenge for the PMO. The complexity comes in various form such as below, the main challenge in project management originated from the feature complexity of the projects, programs, portfolio.

- The numbers of variable involve in the programs/projects i.e. the number of stakeholders either from internal or external company. From the internal there are the sponsor, the manager or leader, the PMO itself and project team members;
- irregular manners of interaction between variables, the relation of one variable to another variable may vary within one projects/program/portfolio to another and it became challenge for PMO to define the pattern.
- Unalterable prodigy, the challenge on complex project/program is when it already executes halfway and company realize it not suitable with company condition in need to be stop, we cannot go back to previous condition and this may cause chaotic situation

C. *PMO Responsibilities (Tjahjana et al., 2009b)*

PMO may varies between one company to other company it is of course customize following the condition of the company itself, how many projects or program they have and the degree of complexity of the project but the acrivities perform in the role of PMO generally are the same, even though the condition or structure for PMO in every organization is different one to another but in general the activities they are performing is the same includes coordinating resource, generate reports, coordination within stakeholders, monitoring and evaluation, giving recommendation to management and become the centre of Knowledge Management in the company.

D. *The Benefit of PMO (Tjahjana et al., 2009b)(Kwak & Dai, 2000)*

The benefit of PMO is vary in a company, several effective PMO may achieve 70-80% of stated benefit but most of them only get 50% even lower because many companies do not have clear understanding of the role of PMO itself while to make PMO work sufficient the company need to understand the role of PMO itself. To create a strong PMO the first thing a company needs to do is to have obvious understanding of PMO. PMO in an organization can act as central organizer, facilitate accurate communication among stakeholders, giving high level monitoring guarantee, and solve the bottle necking in project. PMO also have the benefit of providing consistent assistance on the projects.

E. *The Objectives of PMO (PMI, 2017)*

PMBOK has clearly state the transforming one company could achieve through program. A project or program should have transition company from current position to future better position. With the objectives of project and program as part of transformation the existence of PMO is to ensure the transition happened as targeted. The main purpose of PMO existence in company is to support organization's strategies in achieving its vision and mission, within company plan and PMO plan should be fit one another.

F. *PMO Maturity Level*

The evolution of Project Management in one organization typically lags behind any other capabilities within the company. A company only paid attention to PMO when there are critical condition that need PMO *(Crawford, 2015, p. 3)*. This condition often make Project Management system in the company are not In place to support the need to practicing PM. With this condition the value of maturity assessment is needed. PMO Maturity level is a tool used to deal with the challenge faced by PMO.

When organization now their position for example a company in the level 2 of maturity, what is the most important things to know and what specific action should be taken to moved forward and be better. With PMO Maturity level organization has a vision and is moving to improve the capability of Project Management with exactly targeted efforts. Improving project management is like taking small step not giant leap. To reach the level 5 sometimes not needed because company will having more significant benefit from repeatable process level(Crawford, 2015).

Level-1 initial process: There are Recognition that project management process be found in the company, but no established practices and standard, individual project managers not held specific accountability by any process standards.

Level-2 Structured process and standards: Many projects management process found in the company, but not considered as organizational standards, documentation exist in basic process, management support the implementation of project management, but no consistent understanding, involvement & organizational mandate to comply to all the projects.

Level-3 Organizational standards and institutional process: All Project Management process are in place and establish organizational standards, the process involved client and internal customers as active and intact members, almost all project uses the process with no exception. process and standards have been institutionalized by management. The process needs to be able to tailored to project characteristic, process cannot be applied equally to all projects considering different characteristic

Level-4 Manage Process: Project are managed with consideration as how they performed in the pass and what is expected in the future, management used efficiency and effectiveness metric to make decisions regarding projects and understand how the decision can affect others projects. Project information being integrated with other company information to give better information to management in making decision. Process is in place and being used actively to improve project management activities. To improved PM process, standards, and documentation,

Level-5: Lesson learned are regularly examined and used. Organization focuses not only on managing project effectively but also on continuous improvement.

METHODOLOGY, DATA COLLECTION & ANALYSIS

A. Methodology

The research methodology is qualitative research *where "the data collected particularly in the researcher's setting, data analysis develop inductively from specific general terms and the researcher create interpretation of the significance of the data"* (Cresswell & Cresswell, 2018, p. 43). Data use in this research include primary and secondary data.

For analysing the qualitative data author used coding method which combining the in vivo and descriptive coding in order to achieve the goals of the research as mention in the book by J. Saldana titled The Coding Manual for qualitative research " If needed, you can promote new or hybrid coding methods or adapt existing schemes, modified to suit the peculiar needs and disciplinary concerns of your research "(Saldana, 2016, p. 75)

In vivo coding use as the main method in this research where author take key words from what stated by interview respondent, *"code in qualitative research is the majority a short words, or short phrase or suggestive attribute to one portion of language stand or visual sign"* (Saldana, 2016, p. 4). Some keywords from in vivo coding being process to make sure it gets clearer meaning. The coding method only applied for primary data and literature review, secondary data use in this research only as strengthened factors for coding result.

B. Data Collection

Primary data collection in this research are get through depth interview method with selected respondent from internal Angkasa Pura II. Respondent are chosen based on strategic management process which are planning – implementation – evaluation
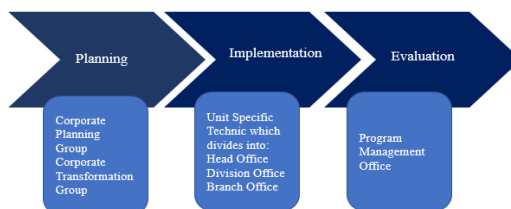

Figure 1. PMO Supply Chain Process

C. Respondent profiling

The respondent is chosen based on their interaction with PMO operation in order to get full view and completed information on how those people that represent function which close relation to PMO opinion and view on PMO. *"the though behind qualitative research is purposely select participants or sites that will best help the researcher understand the problem and research question" (Cresswell & Cresswell, 2018, p. 297).* The respondent consists of nine employees of APII which divide into three group of respondents that are planning group, PMO group and User group. Respondent selection was carried out considering several matters:

the position in the company (VP, AVP, Program Controller), The age distribution (20-30, 30-40, and 40-50), Working experience (10-15 years, 16-20 years, 20-above years) and the structure (CEO Office, Division Office and Branch office). With these selection criteria author anticipates to get full view of PMO supply chain information.

D. Expertise Interview

Expert Interview is held to strengthening the output interview analysis it is the part of data analysis and triangulation process. The purpose of expertise interview is to strengthen the factors and criteria explain and mention by respondent and to get better analysis result. The reason on choosing CEO Angkasa Pura Sarana Digital to give expert opinion is based on his experience in research, business, projects and even academics.

E. Interview Questions

Interview question consist of six main question that aim to answer the research question and objectives at the end of data analysis. Consist of the criteria of high impact PMO, the most important criteria, PMO current position, things need to be improved, and PMO positioning in the company.

F. Data Interpretation and analysis

Figure 2. Data Interpretation & analysis steps

Data interpretation and analysis steps:

1. Interview are put into recording to ensure all information are used and as interview evident. The interview recording then transfer into transcript;
2. Interview transcript are direct language of participants which being used(Saldana, 2016, p. 71) or word by word conveyed by respondent which transfer into the text. In transcript the statement of interview is used without any modification on the statement;
3. In-vivo and description coding are used to analyse the transcript. Code in qualitative research is most frequently a word or short phrase that symbolically stipulate a summative, prominent, essence-capturing, and/or powerful attribute for a portion of language based or visual data (Saldana, 2016, p. 4).
4. This research use hybrid coding method which in-vivo codes as the main coding method used for the interview transcript, the interview transcript author gets 43 codes. Descriptive coding used for field notes, documents, journal, books (Saldana, 2016, p. 72). The main data used in descriptive coding is PMBOK 6th edition comprise the ten-knowledge area of project management as the framework: Project Integration management, Project scope management, project schedule Management, Project Quality Management, Project Resource Management, Project Communication Management, Project Risk Management, Project Procurement Management, Project Stakeholder Management.
5. Mind map is a diagram for reflecting, task words, concepts, or items related to and organized around a central construct or point using a non-linear graphical layout that allows the user to develop an intuitive framework around a central structure (mindmapping.com). The 43 codes from in-vivo coding put as sub-sub categories and used as central construction where descriptive codes sourced from PMBOK framework organized around the in-vivo coding to develop mind mapping.

A. Preliminary PMO Maturity Assessment

The self-assessment of PMO in APII goals is to have baseline level as starting point for APII to move forward to targeted level of maturity. The assessment delivered using components maturity in ten area of Project Management Knowledge and the result checked based on coding, mind mapping, root analysis, internal document and tacit knowledge.

Table 1. Maturity self-assessment

Knowledge Area	Components	Existing Condition	Reference	Coding	Maturity Level
	Main				
Project Integration Management	Project Charter Development	1. There is no formal necessity for project charter 2. Project Charter is developed with no format rules	Interview PMBOK	Sub category -	Level 1 Level 1
	Project Management Plan Development	1. Project management plan varies 2. Develop using WBS as tools with basic milestone	Interview Interview	Procedures WBS	Level 1 Level 1
	Project Execution	Formal direction written in RKAP, direction on BOD meetings, formal letters	SOP PMO, RKAP, meeting minutes Interview	Project output Project outcomes Performance reports	Level 2
	Monitoring & Controlling Project Work	Works result monitored regularly in formal manners	SOP Monitoring Day, BOD-BOC Reports Interview	Project output	Level 2
	Integrated Change Control	Changes are communicated formal way	Internal letters Interview	Integration Bottle necking consultant	Level 2
	Project or Phase Closure	Final product delivery formally	Internal letters, PMO email Interview	Performance report	Level 2
	Special: (Project Management Office)	AP II formally has PMO in their structure, defined communicated throughout organization	PMO Job Profile		Level 3
	Project Support	PMO give scheduling assistant and developing scope	SOP Monitoring & Evaluation, WBS Form Interview	Procedures	Level 3
	Consulting & Mentoring	PMO is giving project consulting in scheduling and scope	WBS Form Interview	Project Consultant	Level 2
	Process & Standards	Basic PM standard, not organizational standards, apply to all project monitored by PMO	SOP Monitoring & Evaluation Interview	Procedures	Level 2
	Training	Training for project managers is carried out based on request	Training schedule Interview	Project Management	Level 2

	Project Management	Guidance on project management available to individual based on request	Interview	Project Management Procedures	Level 1
	Project Management software tools	There is no software in project management, PM plan develop manually using WBS as tools	SOP WBS		Level 1
Scope Management	Scope Management Planning	Scope management plan no exist	SOP WBS Interview	Project Consultant Work authority	Level 1
	Requirements Collection	Undocumented business collection	PMBOK	Internal Process	Level 1
	Scope Definition	Project scope part of WBS	WBS document Interview	Project Consultant	Level 1
	Work Breakdown Structure	Standard WBS exist	WBS document Interview	Project orchestrator Project consultant Bottle necking	Level 2
	Scope Validation	Method to validating project are exist and consistently applied to all project	Project Evident, SOP Monitoring & Evaluation Interview	Monitoring Evaluation Performance reports	Level 2
	Scope Change Control	Standard template exists to monitored and evaluated projects	WBS document. Reports Interview	Authority	Level 2
Time Management	Time Management Planning	Time management plan exist as part of WBS	WBS document Interview	Authority Consultant Orchestrator	Level 2
	Activity definition	Activities define in WBS but the defining method depends on the experience and knowledge of project manager	WBS documents SOP WBS Interview	Technical competency Project management	Level 2
	Activity Sequencing	Basic document for sequencing activities using WBS	WBS documents Interview	Managing projects Authority Technical competency	Level 2
	Activity resource estimation	Activities are defined and but resources define in ad-hoc manners	WBS document, SOP WBS Interview	Technical Consultant Orchestrator Performance	Level 1
	Activity duration estimation	No standard	Transcript	Procedures Policy System	Level 1

	Schedule development	Basic guidelines for scheduling using WBS	WBS document Interview	Managing Authority Consultant	Level 2
	Schedule Control	Schedule are control using WBS as guideline	WBS document Interview	Authority Structure	Level 2
	Schedule integration	Schedule integration available to several related projects only	WBS document Interview	Integration Authority	Level 2
Cost Management	Cost Management Planning	Cost management on project exist triggered by pandemic covid-19 and an organizational document	Annual Budget Plan document		Level 2
	Cost estimating	Some cost standards are established	Annual Budget Plan documents		Level 2
	Budget determination	Common practice is established	Annual Budget committee		Level 2
	Cost control	No cost report	Annual Budget Plan, BOD Meeting Minutes		Level 2
Quality Management	Main				
	Quality Management Planning	There is no standard of quality management	SOP Interview	Project Management Output Outcomes	Level 1
	Quality Assurance	There are no practices standard	Interview	Procedures Project Management	Level 1
	Quality Control	No quality control in PM	SOP Monitoring & Evaluation		Level 1
	Special interest: Management oversight				
	Awareness and support	Basic tools provide by management	PMAO Application Interview	Technical Leadership Authority	Level 2
	involvement	Management encourages project performance reports	PMO Reports Interview	Performance Report Leadership Authority	Level 2
Human Resources Management	HR Management Planning	Defining number of people in project in the budget plan	Budget plan report Interview	Strong structure Experience Knowledge management Capabilities Resource allocation	Level 2

	Project Team Acquisition	Ad-hoc process to define resource allocation	BOD Meeting minutes Interview	Strong structure Experience Knowledge management Capabilities Resource allocation	Level1
	Project Team Development	Team development develop in ad-hoc manners	Team Decree documents Interview	Strong structure Experience Knowledge management Capabilities Resource allocation	Level 1
	Project Team Management	No team development standards	Transcript	Strong structure Experience Knowledge management Capabilities Resource allocation	Level 1
	Special interest components: Professional Development Management				
	Individual PM Knowledge	Some individuals recognized by knowing more than others	Talent Management system Transcript	Knowledge Management Competency Lesson Learned	Level 1
	Individual PM Experience & Competence	There is no acknowledge in people success	Transcript	Knowledge Management Competency Lesson Learned	Level 1
	Corporate initiatives for	No corporate recognition on individual achievement	Awards system decree		Level 1
	PM Development				
Communication Management	Communication management planning	No standard for communication planning	transcript	Communication skill Communication channel	Level 1
	Information distribution	Communication manages in ad-hoc manners	transcript	Communication skill Communication channel	Level 1

International Journal of Current Science Research and Review

ISSN: 2581-8341

Volume 05 Issue 01 January 2022

DOI: 10.47191/ijcsrr/V5-i1-32, Impact Factor: 5.825

IJCSRR @ 2022

www.ijcsrr.org

	Communication control	Performance reporting include issues only project status	Reports Transcript	Communication skill Communication channel	Level 1
	Issues tracking management	Issues handle on ad-hoc basis	BOD Meeting minutes, internal letters Transcript	Lesson Learned Knowledge Management	Level 1
Risk Management	Risk Management planning	Development of RM part of PM on large projects	Risk reports Transcript	Evaluation Performance Output Outcomes	Level 2
	Risk Identification	Risk identification has been documented for large projects	Risk Reports Transcript	Evaluation Performance Output Outcomes	Level 2
	Qualitative Risk analysis	Standard methodology on risk analysis applied for large projects	Risk Reports Transcript	Evaluation Performance Output Outcomes	Level 2
	Quantitative Risk analysis	Standard methodology on risk analysis applied for large projects	Risk Report		Level 2
	Risk Control	Risk management plan develop by assigned unit not project team	Job profile Risk Unit Tacit Transcript	Evaluation Performance Output Outcomes	Level 2
	Risk Documentation	Historical data about risk being documented	Reports Transcript	Performance Output	Level 2
Procurement and Vendor Management	Procurement management planning	Procurement process are determined but result is control by project owner not project manager	BOD Decree Transcript	Communication channel	Level 2
	Procurement requisition and solicitation	Scope approval and change are issued part of TOR	TOR Transcript	Communication channel Technical	Level 2
	Procurement control and vendor management	Vendors give regular reports to program owner	Progress reports Transcript	Communication channel Technical	Level 2
	Procurement Closure	Formal acceptance	Acceptance letter Transcript	Communication channel Technical	Level 2
Project Stakeholder Management	Stakeholder identification	APII has standard in stakeholder engagement in general not specific for particular project its cover all stakeholders	Stakeholder engagement guidance (SEG) Transcript	Communication channel Leadership	Level 2

	Stakeholder management planning	The process of communicate with stakeholders varies but the method is standardize	SEG Transcript	Communication channel Leadership	Level 2
	Managing stakeholder engagement	Stakeholder relationship strategies are in place but varies	SEG, SEP Reports Transcript	Communication channel Leadership	Level 2

B. Conclusion & Summary

1) Conclusion

Based on the discussion and analysis of the interview result, literature review, expertise opinion and secondary internal data, the author has concluded several points to answer research question:(1) The existing PM Maturity Level in Angkasa Pura II is level two. (2) The criteria needed by AP II to improve PM Maturity are: Strong role in project integration, enabling value creation, giving strategic recommendation to management, involvement in planning phase, become the source of organization knowledge management, strong communication skills, executing orchestrator and project consultant role in the company, become the bottle necking solution, creating good cross function coordination, the team mas must have strong technical knowledge in project management, strong leadership skills and possessed the culture of high learning.

2) Recommendation

Form overall analysis in this research there are four recommendations for APII: (1) To set target indicator based on the criteria as mention in conclusion. The criteria will be used as guidance for PMO to move forward and achieve level 3 PMO Maturity level (2) To follow up this research result with self-assessment of PMO Maturity Level with level three as the target (3) To accelerate achievement of level three maturity level, AP II should initiate PMO Champion Program as the part of Change Management Plan to ensure full participation and awareness of AP II employees (4) Develop implementation roadmap to achieve the maximum target of PM Maturity Level (level 5).

REFERENCES

1. Bose, T. K. (2012). *Application of Fishbone Analysis for Evaluating Supply Chain and Business Process*. https://doi.org/10.5121/ijmvsc.2012.3202
2. Crawford, J. K. (2015). Project Management Maturity Model, Third Eddition. In *Taylor and Francis Group*.
3. Cresswell, J. W., & Cresswell, J. D. (2018). *5th edition Research Design Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed., Vol. 5). SAGE.
4. Husser, P. (2017). *The High Impact PMO How Agile PMO Deliver Value in a complex world*. CreateSpace Independent Publishing Platform.
5. Kwak, Y. H., & Dai, C. X. Y. (2000). *Assesing The Value of PMO*.
6. Monteiro, A., Santos, V., & Varajão, J. (2016). Project Management Office Models - A Review. *Procedia Computer Science*, *100*, 1085–1094. https://doi.org/10.1016/j.procs.2016.09.254
7. PMI. (2017). *Project Management Body of Knowledge* (6th ed.). PM Institue, Inc.
8. Saldana, J. (2016). *The Coding Manual for Qualitative researchers* (J. Seaman (ed.); 3rd ed.). SAGE.
9. Sandhu, M. A., & Wikström, K. (2018). *Benchmarking the strategic roles of the project management office (PMO) when developing business ecosystems*. https://doi.org/10.1108/BIJ-03-2018-0058
10. Tjahjana, L., Dwyer, P., & Habib, M. (2009a). *The Program Management Office Advantage*. AMACOM.
11. Tjahjana, L., Dwyer, P., & Habib, M. (2009b). *The Program Management Office Advantage*. AMACOM.