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Enhancing PMO Capabilities through PMO Maturity Level Assessment at PT AtoZ

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ABSTRACT

This study assesses the Project Management Office (PMO) maturity at PT AtoZ, an Indonesian state-owned enterprise, to identify areas for improvement and enhance its contribution to organizational success within a rapidly changing global market. The increasingly complex and dynamic nature of project management necessitates the adoption of best practices and a robust PMO to ensure effective project delivery and strategic alignment. This research aimed to assess the current PMO capabilities at PT AtoZ, identify areas for improvement, and develop an actionable plan to enhance its effectiveness. Utilizing the PMO Maturity Cube model, a mixed-methods approach evaluated PMO functions across strategic, tactical, and operational dimensions. The findings revealed an overall intermediate level of PMO maturity (47.01%), with significant variations across functional areas. While operational functions demonstrated relatively higher maturity, substantial gaps were identified in strategic functions, particularly in advising senior management (scoring 0/4), and tactical functions such as resource allocation and methodology implementation. Key strengths were observed in stakeholder interaction and project documentation management.

In conclusion, while the PMO at PT AtoZ demonstrates some positive aspects, significant improvement is needed, particularly in strategic advisory and tactical project management. A structured action plan, including enhanced training and development, process standardization, and strengthened resource allocation mechanisms, is recommended. This research contributes valuable insights into PMO maturity assessment and improvement within a large, complex organization, highlighting the importance of aligning PMO capabilities with broader organizational strategic objectives. Further research should explore the long-term impact of implementing the proposed recommendations.

KEYWORDS

Project Management Office, PMO Maturity Assessment, PMO Maturity Cube

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1. INTRODUCTION

In today's globalized environment, marked by rapid changes and competitive market dynamics, organizations must continuously transform and adapt to sustain their operational viability and competitive advantage. The ability to effectively navigate these changes constitutes a critical success determinant for any enterprise, particularly within the domain of project management. Projects managed with efficacy and efficiency enhance success rates and create a solid foundation for organizations to anticipate future challenges.

As a result, more and more companies are adopting project management best practices to improve their project success rates. A notable approach that has attracted significant scholarly interest is the establishment of a Project Management Office (PMO). The PMO assumes a central role in strategic project management, enhancing project outcomes and operational efficiency via integrated management frameworks (Matthews & Howell, 2005). This aspect is particularly crucial for enterprises that are focused on growth and innovation. According to Andersen et al. (2007), establishing a PMO may reduce challenges related to time constraints, budget overruns, and unregulated changes in project scope, commonly referred to as scope creep, by as much as 50%.

Given the indispensable function of the PMO in overseeing organizational projects, it is essential that the PMO undergo continuous evolution to augment its capabilities. PT AtoZ, a state-owned enterprise in Indonesia, is resolutely dedicated to improving project performance and achieving strategic objectives, acknowledging the enhancement of PMO competencies as a vital initiative. The enhancement of capabilities at PT AtoZ emphasizes not only the improvement of technical skills but also the fostering of a project-oriented culture throughout the organization.

To achieve this objective, the implementation of a PMO Maturity Assessment emerges as a vital strategic initiative. This assessment is designed to evaluate and enhance the existing capabilities of the PMO, thereby enabling PT AtoZ to optimize project performance and realize its strategic aspirations. The purpose of this study is to examine how PMO Maturity Assessment can be used as a tool to improve PMO capabilities at PT AtoZ and to carry out an action plan that synchronizes PMO capabilities with stakeholder expectations. In an industrial setting that is constantly changing, PT AtoZ's goal is to achieve sustainability, improve project success, and a significant competitive advantage by gaining a comprehensive understanding of the different levels of PMO maturity.

2. LITERATURE REVIEW

The literature review is a crucial component of this scholarly article, aiming to present and critically evaluate previous research pertinent to the topic under discussion. This segment examines various scholarly contributions regarding the Project Management Office (PMO), the challenges it faces, its benefits for organizations, and its influence on project success. By delineating insights from the extant literature, this section establishes a comprehensive framework for comprehending how PMOs operate to enhance organizational capabilities, particularly within an entity such as PT AtoZ.

2.1 Project Management Office

The Project Management Office (PMO) has emerged as a pivotal component in contemporary project management, providing a multitude of advantages to organizations. As the complexity of projects continues to grow, management is becoming increasingly concerned about the risks that are associated with them. These risks include the possibility of delays, excessive spending, and an inability to meet objectives. As reported by the Project Management Institute, an analysis has indicated that approximately \$122 million is squandered for every \$1 billion invested due to inadequate project performance (Desmond, 2015). As a result of this, the establishment of a

project management office (PMO), which incorporates the consolidation of project management responsibilities and makes use of the expertise of the PMO team, becomes an essential component in ensuring the success of the project.

PMOs provide an array of benefits, encompassing improved resource allocation, uniform project management practices, heightened accountability, enhanced adherence to timelines and budgets, as well as increased productivity and return on investment (ROI) (Faridoon, 2014; Hobbs et al., 2010). PMOs are not without their difficulties, despite the fact that they are established. The enforcement of standardized protocols can occasionally inhibit innovation within organizations (Bettin et al., 2010; Martin et al., 2005). Empirical evidence suggests that although PMOs can markedly elevate project outcomes, their efficacy may fluctuate based on the industry context and the particular project domain (Liu & Yetton, 2007). In sectors such as construction, the distinctive nature and complexity of projects can significantly influence the role of PMOs in contributing to success.

2.2 PMO Benefits

The establishment of Project Management Offices (PMOs) within organizations not only improves operational efficiency but also plays a crucial role in enhancing the outcomes of projects involving those organizations. In accordance with the findings of academic investigations, project management offices (PMOs) perform the function of knowledge repositories, supporting the dissemination of best practices and encouraging collaborative efforts among teams. By enhancing the transparency of project processes, PMOs play a crucial role in risk management and informed decision-making (Faridoon, 2014). A well-organized PMO enables organizations to pursue their strategic objectives, ensuring that projects are appropriately aligned with intended trajectories (Tulembayev et al., 2019). Research indicates that organizations with functional PMOs are likely to experience elevated levels of customer satisfaction and superior implementation results (Alhammadi & Memon, 2020).

2.3 Project Management Office Challenges

In spite of the numerous benefits, project management offices (PMOs) face a number of significant challenges, such as resistance to change and problems associated with standardization. The organization's capacity for innovation may be negatively impacted when management standards are excessively stringent. Anantatmula and Rad (2013) assert that customer satisfaction and the achievement of project objectives should be the primary criteria for evaluating indicators of project success. A major obstacle is the necessity for PMOs to customize their strategies to the specific requirements of the organization and its projects to operate effectively. According to Hobbs and Aubry (2010), the effectiveness of project management offices (PMOs) is tied to the nature of the project as well as the industry sector that is involved. Therefore, in order for organizations to achieve the appropriate levels of project management maturity, they need to devise structures and processes that promote the effectiveness of project management offices (PMOs).

2.4 PMO in Modern Organizations

Within the context of modern organizational structures, Project Management Offices (PMOs) hold a position that is indispensable, particularly in complex and competitive industries such as the construction industry. The increased involvement of PMOs at the executive level in recent years underscores their strategic importance in project management (Hobbs et al., 2010). Through the facilitation of project management methodology standardization, PMOs help organizations manage uncertainty and improve the effectiveness of project processes. PMOs serve a purpose beyond merely putting standard project management procedures into practice; they also help organizations become more flexible in response to changing market conditions and client demands (Ershadi et al., 2021; Hobbs et al., 2010; Sandhu et al., 2019).

A study conducted by the International Project Management Association (IPMA) in 2019 indicated that 40% of firms globally employ PMOs to orchestrate ongoing projects, notwithstanding the potential advantages that may surpass this percentage. PMOs are acknowledged for enhancing the overall execution of projects while optimizing resource allocation and risk management throughout the organization (ESI, 2013). Additionally, the PMO's input in the dissemination of knowledge is critical for the organization's enduring sustainability. PMOs function as repositories for data and information, systematically cataloging knowledge relevant to projects, best practices, and lessons learned, accessible to project teams at any stage. Thus, PMOs not only strengthen existing project management initiatives but also significantly contribute to the development of a valuable organizational memory that promotes future performance improvement (P. Rad & Levin, 2007).

Furthermore, through training and mentoring programs, PMOs have a significant role in developing staff members' project management skills. This is crucial to ensure that project teams are equipped with the requisite skills to navigate complex and dynamic work settings (Korrapati et al., 2007). By nurturing these capabilities, PMOs promote a culture of continuous improvement within organizations that emphasizes results. Hence, PMOs evolve beyond mere executors of project management; they serve as conduits between high-level corporate strategy and operational execution. In scenarios where organizations endeavor to sustain their competitiveness, an effective PMO emerges as essential in achieving competitive advantage and fulfilling broader organizational objectives.

2.5 Maturity Models

It is necessary to take a methodical approach to the ongoing improvement of Project Management Office (PMO) functions in order to align with the expectations of stakeholders and improve the capacity of the Project Management Office (PMO) within an organization. To facilitate such alignment, it is imperative to undertake a thorough assessment of the PMO's maturity level within the organizational context. The evaluation of maturity serves to elucidate the discrepancies between stakeholder expectations and the PMO's operational functionalities, thereby enabling the formulation of a robust and comprehensive action plan.

Maturity models for Project Management Offices (PMOs) are critical tools for evaluating the effectiveness and competence of PMOs in attaining desired project results. Crawford (2006) posits that the maturity level of a PMO reflects its adherence to best practices, the efficiency of its processes, and a clear understanding of its strategic contribution to the overall organizational objectives. Deficiencies in maturity may indicate possible weaknesses in project management, resource allocation, and strategic alignment, potentially leading to missed opportunities and subpar outcomes.

The PMO maturity assessment is meticulously designed to systematically evaluate the effectiveness and capabilities of the PMO. By comparing the PMO to recognized best practices, this evaluation process helps to uncover both the PMO's strengths and weaknesses and highlights areas that require improvement. According to Kerzner (2017b), the evaluation typically includes a variety of methodologies, including but not limited to surveys, interviews, document reviews, and process analyses.

The following are some of the significant benefits that can be obtained from carrying out a PMO maturity assessment (Drmcnatty, 2024; Ferreira & Pereira, 2015; Fransisca, 2022; PMOadvisory, 2024):

Enhanced Project Performance: Addressing identified deficiencies in processes and practices directly contributes to the enhancement of project success rates, the reduction of costs, and the enhancement of quality while also contributing to improving overall project performance.

Optimized Resource Allocation: The improvement of resource allocation fosters greater

efficiency and productivity within the organization. **Strategic Alignment:** Ensuring that initiatives align with the organization's strategic objectives enhances the return on investment (ROI) associated with project activities. **A Culture of Continuous Improvement:** The assessment helps to foster a culture of continuous learning and improvement within the framework of the project management office (PMO). **Data-Informed Decision Making:** The evaluation provides insightful information about PMO performance, which helps with evidence-based decision-making.

2.6 Models of PMO Maturity

A variety of models exist for the assessment of PMO maturity, each possessing distinct strengths and weaknesses, thus necessitating a context-sensitive selection process. Prominent maturity models include:

Project Management Office Maturity Model (PMOMM): Formulated by Stroe et al. (2016), this model employs knowledge areas derived from the PMBOK guide as a structural framework, with an additional emphasis on information technology. It evaluates PMO maturity based on compliance with best practices concerning accuracy, timeliness, and accessibility of information. Pinto et al. (2010) introduced **the PMO Maturity Cube**, a three-dimensional framework that takes into account the PMO's maturity levels (Basic, Intermediate, and Advanced), approach (strategic, tactical, and operational), and scope (project, departmental, and organizational). It offers a comprehensive evaluation of the PMO's operational methodologies and strategic implications. In 2013, **the PMI's OPM3** was created to measure organizational maturity in three areas: projects, programs, and portfolios. It does this by evaluating adherence to respective best practices. The model employs a standardized scoring system and provides guidance through a four-stage improvement process (standardize, measure, control, improve). The 2006 work by Hill presents the **Competency Continuum Model (CCM)**, categorizing PMOs into five key maturity stages: Project Office, Basic PMO, Standard PMO, Advanced PMO, and Center of Excellence. It concentrates on the progressive enhancement of capabilities and functionalities to address the evolving demands of project management.

Table 1. PMO Maturity Methods Comparison

| Key Functions of PMO | PMOMM | PMO Maturity Cube | OPM3 | CCM |
|-----------------------------|--|--|--|---|
| Maturity Levels | Not explicitly defined; comparison to best practices | 3 levels: Basic, Intermediate, Advanced | 4 levels: Standardize, Measure, Control, Improve | 5 levels: Project Office, Basic PMO, Standard PMO, Advanced PMO, Center of Excellence |
| Assessment Method | 6 PMBOK Knowledge Areas + 1 Information System Area; process analysis within each area | Scope (Project, Departmental, Enterprise), Approach (Strategic, Tactical, Operational), Function | Best practices assessment across Portfolio, Program, and Project domains | Assessment of PMO capabilities at each level |
| Objectives | Measure maturity for each knowledge area | Measure maturity for each approach (strategic, tactical, operational) | Identify gaps in best practice implementation across domains | Determine current PMO level |
| Suggestions for Enhancement | Process improvement within each knowledge area | Improvement aligned with target level for each approach | Improvement aligned with missing best practices in each domain | Advancement to the next PMO level |

Source: (Veronika, 2024)

In the case study concerning PT AtoZ, the PMO Maturity Cube has been recognized as the framework for assessing PMO maturity. This selection is based on its all-encompassing methodology, which evaluates PMO maturity using three crucial factors: functional services, approach, and scope. The PMO Maturity Cube is congruent with the objectives of PT AtoZ, thereby facilitating the identification of strengths and weaknesses inherent in the current PMO functions and promoting the formulation of efficacious improvement strategies. This methodical evaluation is anticipated to augment PMO capabilities and, as a result, enhance project success metrics within the organization.

This comprehensive review of the literature emphasizes the critical role that PMOs play and the importance of maturity models in enhancing their ability to support organizational and project success. By capitalizing on these models, PT AtoZ has the potential to strategically refine its PMO functions to not only meet but also surpass stakeholder expectations, thereby attaining a sustainable competitive advantage.

3. THE COMPANY: PT ATOZ

PT AtoZ, as one of Indonesia's state-owned enterprises (BUMN), has established itself as a backbone in the maritime transport sector. With an extensive network that connects various islands, PT AtoZ plays a pivotal role in enhancing national integrity through efficient ferry services. The organizational structure places the Project Management Office (PMO) in a strategically significant position, reporting directly to the President Director. This positioning underscores the PMO's critical role in supporting both strategic and operational decision-making within the company.

The scope of the PMO at PT AtoZ encompasses planning and managing project-related activities, establishing and implementing project management frameworks, and defining project team structures. Additionally, the PMO is responsible for monitoring and evaluating ongoing projects, ensuring that they are executed in accordance with strategic objectives and organizational plans. Thus, the PMO functions as a vital connector among various elements within the organization, aligning project execution with the overarching goals of the company.

According to the typology of PMOs classified by Giraudo & Monaldi (2015), PT AtoZ's PMO can be categorized as an Enterprise/Corporate PMO. This type emphasizes a broader scope beyond individual project management, focusing on the oversight of a comprehensive project portfolio that aligns project activities with the company's vision and mission. The PMO's involvement in aligning strategic objectives with project execution is critical to ensuring the overall success and sustainability of the organization.

Despite facing various challenges, including those posed by the COVID-19 pandemic, PT AtoZ has demonstrated remarkable resilience and adaptability. The company's recent financial performance highlights the effectiveness of its management strategies and the critical role played by its PMO in both project management and financial goal attainment.

PT AtoZ's ability to maintain strong performance in a competitive market emphasizes the importance of implementing best practices in project management. As such, enhancing PMO capabilities through maturity level assessments is seen as a key strategy to further solidify the company's position within the transport industry and improve future project performance.

This case study of PT AtoZ provides valuable insights into how effectively structured PMOs can drive organizational success, particularly in dynamic sectors where agility and strategic alignment are paramount. The focus on PMO maturity assessment is expected to not only improve project outcomes but also facilitate the alignment of projects with PT AtoZ's strategic vision, contributing to long-term organizational growth and sustainability.

4. RESEARCH PROBLEMS

PT AtoZ plays a vital role in aligning its projects with the overall organizational objectives as an Enterprise Project Management Office (PMO), which greatly advances the business's strategic vision. However, the effectiveness of the PMO in carrying out its responsibilities raises a number of relevant questions that call for an in-depth investigation. The primary inquiry focuses on the extent to which the current status and strategic positioning of the PMO at PT AtoZ meet the needs and expectations of its stakeholders.

A number of follow-up questions are generated by this important research question in an effort to provide a comprehensive understanding of PT AtoZ's PMO maturity and its implications for organizational performance. These inquiries encompass:

What are the prevailing competencies of the PMO at PT AtoZ in relation to established industry best practices? To what degree does the PMO help PT AtoZ achieve its strategic goals and successfully complete projects? According to the PMO Maturity Assessment, which particular areas need improvement? How can a systematic action plan be developed based on the outcomes of the maturity assessment to enhance PMO capabilities?

The execution of a PMO Maturity Assessment is imperative for addressing these inquiries, as it functions as a systematic evaluative tool to assess the PMO's efficacy and competence. This assessment will enable a detailed understanding of the PMO's current status and the facets that necessitate improvement. By elucidating the PMO's strengths and weaknesses, the assessment can inform the formulation of targeted interventions designed to promote continuous enhancement and ensure that the PMO can effectively fulfill its strategic role.

The research questions outlined will provide a framework for examining PT AtoZ's PMO, enabling the company to strengthen its capabilities, achieve higher project success rates, and better meet stakeholder expectations. Through this inquiry, PT AtoZ can fortify its PMO's contribution to overall organizational performance and resilience within a competitive landscape.

5. METHODOLOGY

This research employs a mixed-methods approach, combining quantitative and qualitative techniques to comprehensively assess PMO maturity levels at PT AtoZ. This methodology facilitates the acquisition of rich, detailed data through various approaches, thereby enabling structured analysis that thoroughly summarizes stakeholder perceptions and fundamental PMO functionalities. The methodological framework for this investigation comprises several essential stages:

5.1 Data Collection

Data was gathered using a triangulation strategy to enhance reliability and depth. This involved three primary methods:

1. **Surveys:** A structured online questionnaire was distributed to three stakeholder groups: executive-level (strategic), PMO department (tactical), and project managers (operational). The questionnaire utilized the PMO Maturity Cube model (Pinto, 2010) as its framework, assessing various PMO functions across strategic, tactical, and operational levels. The survey comprised 48 questions for the strategic perspective, 31 questions for the tactical perspective, and 37 questions for the operational perspective. A 1-4 Likert scale was used, ranging from 1 (strongly disagree) to 4 (strongly agree).
2. **Focus Group Discussion (FGD):** A single FGD was conducted to validate survey findings and gather richer qualitative data. The FGD included 4 executives, 3 PMO department members,

and 7 project managers, all with a minimum of 3 years of experience in project management. The FGD lasted 2 hours for tactical and operational perspectives, and 1 hour for the strategic perspective.

3. Document Analysis: Project reports, progress reports, and standard operating procedures were reviewed to assess the PMO's operational effectiveness. The metrics used were derived from a combination of literature review and company documents.

5.2 Data Analysis

Data analysis involved both quantitative and qualitative methods:

1. Quantitative Analysis: Survey data were analyzed using descriptive statistics (e.g., means, standard deviations) to quantify the rating scores for each PMO function. A spider web chart was used to visualize the strengths and weaknesses across the different dimensions of the PMO Maturity Cube.
2. Qualitative Analysis: The FGD data were analyzed using *thematic analysis*, *grounded theory* to identify recurring themes and patterns related to PMO functions and effectiveness. Thematic analysis was also applied to the document analysis data to extract key insights into operational effectiveness.

5.3 Research Instruments

The research employed three instruments:

1. Survey: This instrument, based on the PMO Maturity Cube, measured stakeholder perspectives on PMO maturity and its role in the company across strategic, tactical, and operational levels. The PMO functions were rated on a 1-4 Likert-type scale, where:
 - 1 = The PMO does not provide the service or the function is non-existent. This indicates a complete absence of the specified PMO function or service.
 - 2 = The PMO provides the service or function, but it is incomplete. This suggests that the function exists but is lacking in certain aspects, failing to fully meet expectations.
 - 3 = The PMO provides the service or function which is fairly complete. This indicates that the function is largely complete, fulfilling most of the expected requirements.
 - 4 = The PMO provides the service with a complete function and meets expectations. This represents a fully functioning and effective PMO function that completely meets all expectations.

This scale allowed for a nuanced assessment of the completeness and effectiveness of each PMO function, providing a granular understanding of the PMO's maturity level.

2. Semi-structured Interviews: Structured interviews were conducted with C-level executives at PT AtoZ to gather their perspectives on the PMO. The interview protocol consisted of a pre-determined set of questions designed to explore senior management's expectations and aspirations for both existing and future PMO functions. Specifically, the questions focused on aligning executive-level strategies and the company's vision and mission with the PMO's current and planned activities. This approach ensured consistency and comparability across interviews, allowing for a systematic analysis of senior management's viewpoints on the PMO's role and effectiveness within the organization.

- Document Analysis involved a systematic review of selected project reports and management procedures, chosen to represent a range of project types and complexities undertaken by the PMO over the past [Number] years. This selection ensured a representative sample of the PMO's operational activities.

5.4 Respondents

The research involved a diverse group of respondents from PT AtoZ to ensure a multifaceted understanding of the PMO's effectiveness. Data were collected from four distinct groups, as detailed in Table 2. The inclusion criterion for all respondent groups was a minimum of three years of professional experience, with at least project manager level for relevant roles.

Table 2: Respondents Data

| Respondent Group | Number | Description |
|--------------------|--------|--|
| Project Managers | 5 | Provide insights into project management experiences and methodologies |
| PMO Team Members | 3 | Provide perspectives on PMO processes and encounter challenges. |
| Senior Executives | 2 | Clarify strategic expectations regarding the PMO's role |
| Other Stakeholders | 5 | Collect external and inter-departmental viewpoints. |

This multi-level approach ensured that the study captured a comprehensive range of perspectives, from operational-level experiences to strategic-level expectations, enhancing the richness and reliability of the findings.

5.5 Variables

The study will systematically assess the subsequent functions of the Project Management Office (PMO), each characterized by specific indicators to be measured on a predetermined scale that spans from zero (0) to four (4). A score of zero signifies the complete absence of the function, whereas scores ranging from one to four reflect progressively higher levels of completeness and efficacy as perceived by the stakeholders involved.

Table 3: Research Variables

| Approach | Code | Description |
|----------------------|------|---|
| Strategic Function | S1 | Providing strategic project dashboards |
| | S2 | Supporting project portfolio definition |
| | S3 | Advising top management/directors in decision-making |
| | S4 | Managing project or program benefits |
| | S5 | Overseeing portfolio performance |
| | S6 | Enhancing project management within the organization |
| | S7 | Delivering performance reports on projects/programs to top management/directors |
| Tactical Function | T1 | Providing project management tools and information systems |
| | T2 | Managing resource allocation across projects |
| | T3 | Supplying project management methodologies |
| | T4 | Managing human resources on projects |
| | T5 | Managing a database of lessons learned |
| Operational Function | O1 | Managing projects or programs |
| | O2 | Managing stakeholders involved in projects |
| | O3 | Managing client interactions for projects |
| | O4 | Providing mentorship for project managers |
| | O5 | Monitoring and controlling project performance |
| | O6 | Managing project documentation |

The study intends to produce significant knowledge regarding PMO maturity at PT AtoZ by employing this comprehensive methodological framework. This will enable the creation of targeted action plans that enhance PMO competencies and better align them with stakeholder expectations. The systematic evaluation conducted will not solely enhance the organization's project management proficiency but will also promote enduring strategic congruence with corporate objectives.

6. RESULTS

The outcomes of this investigation were derived from the examination of data gathered via questionnaires disseminated to participants at PT AtoZ. A comprehensive grasp of the participants' opinions regarding a variety of PMO functions is obtained from this analysis. Furthermore, the results from Focus Group Discussions (FGD) and discussions with managerial personnel validated the numerical data and provided additional perspectives on the advantages and challenges encountered during project implementation.

A spider-web diagram is used to illustrate the measurement results and show the relative positions of each variable under evaluation. This facilitates the identification of the PMO's gaps, weaknesses, and strengths. Areas that achieve high scores on the spider-web diagram demonstrate effective performance, while those with low scores indicate a necessity for enhancement and further development.

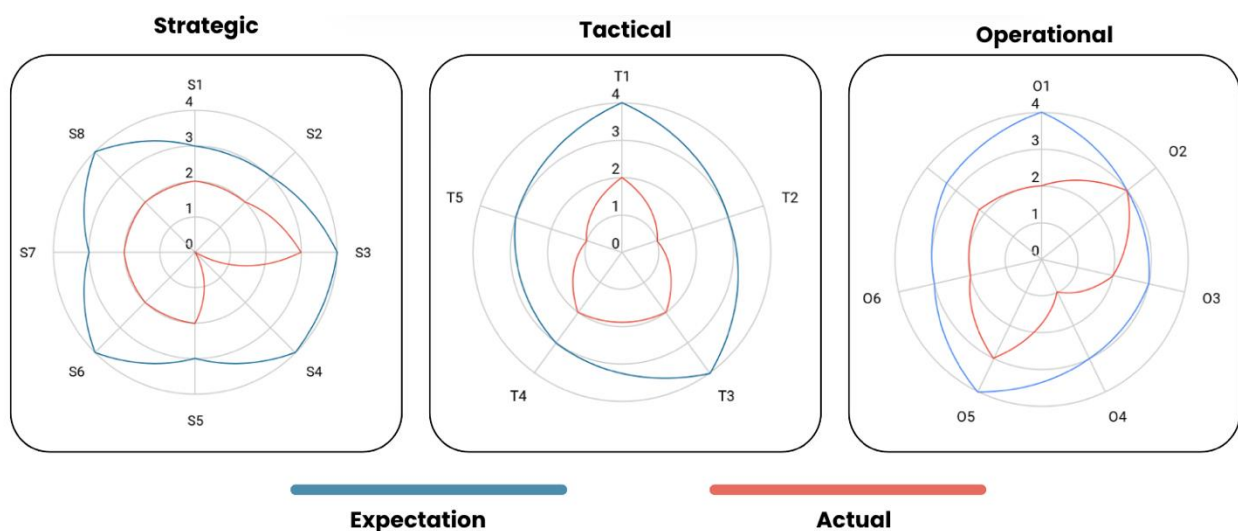


Figure 1: Spider Web Diagram of PMO Functions

Table 3 shows the range of functional capabilities with varying levels of maturity identified by the PMO competencies assessment at PT AtoZ.

Table 3: PMO Maturity Assessment Outcomes

| Function | Expected Score | Actual Score | Maturity Level (against expectations) | Ideal Maturity Level (against overall functions) | Maturity Range |
|-------------------------------|----------------|--------------|--|---|---------------------|
| Strategic | 3.50 | 1.88 | 53.57% | 46.88% | Intermediate |
| Tactical | 3.40 | 1.60 | 47.06% | 40.00% | Intermediate |
| Operational | 3.20 | 2.17 | 67.71% | 54.71% | Intermediate |
| Overall Maturity Level | | | | | Intermediate |

The assessment of PMO competencies at PT AtoZ indicates a range of functional capabilities with varying levels of maturity. The results demonstrate that the PMO currently operates at an **intermediate maturity level**, reflecting both strengths and areas for improvement. Through the utilization of spider-web diagrams, the analysis of various PMO functions—such as providing strategic dashboards, managing project portfolios, and advising top management—revealed the following:

The **strategic** function of the Project Management Office (PMO) exhibits a considerable disparity between actual performance metrics and anticipated outcomes. A maturity score that indicates an intermediate stage indicates that the PMO has implemented some strategic management practices, but it has not yet reached the level of capability necessary to meet the expectations. There is an urgent necessity for improvements in the PMO's involvement in strategic planning and the delivery of advisory assistance to senior management.

Similar to this, the PMO's **tactical** role demonstrates the discrepancy between expected goals and actual performance results, with intermediate maturity levels. Despite the implementation of various management practices, significant opportunities for improvement persist, especially in daily project management and overall supervision. This function requires enhancement to fulfill a more effective role in operational management.

With maturity scores reaching intermediate levels, the **operational** functions produce outcomes that are roughly comparable to those of the strategic and tactical functions. Despite this, there is a chance to optimize the management tools used, which would allow the PMO to be more effective in carrying out operational procedures while still concentrating on improving strategies and information systems.

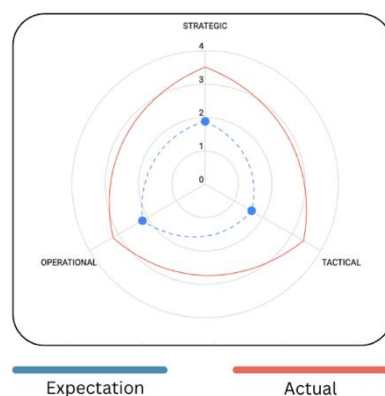


Figure 2: Spider Web Diagram of PMO PT AtoZ

The PMO at PT AtoZ currently holds an **intermediate maturity level** with a score of 47.01%, signaling a gap between high stakeholder expectations and the PMO's actual performance. While the PMO has successfully executed some tasks, significant deficiencies remain, particularly in the strategic and tactical domains. Notably, the function of Advising Top Management/ Directors in Decision Making (S4) reflects a critical gap, scoring 0 against an expected score of 4. This shortfall underscores the PMO's inability to act as a strategic advisor, which is essential for project alignment with organizational goals and effective management decision-making.

In terms of strengths, functions such as stakeholder interaction and project documentation management received higher scores, indicating effective execution and alignment with industry best practices. These areas demonstrate that the PMO is executing these competencies satisfactorily, thereby positively influencing project outcomes and ensuring better communication among all parties involved. However, in the tactical area, several functions demonstrate maturity deficits of up to two levels, with weaknesses highlighted in managing project portfolio definitions

and resource allocation. These deficiencies undermine the PMO's operational effectiveness and hinder its overall contribution to project success.

The assessment of PT AtoZ's PMO revealed a mixed picture regarding its effectiveness in supporting strategic goals and project success. These findings, derived from a combination of survey data (using a questionnaire) and focus group discussions (FGDs), highlight key areas for improvement. Specifically, the spider-web analysis, generated from the quantitative data of the questionnaires, revealed significant discrepancies between expected and actual performance.

1. **Alignment with Strategic Goals:** While the PMO demonstrates potential for advancing organizational objectives, its limited involvement in strategic planning hinders its effectiveness. The spider-web chart, based on the survey responses across strategic, tactical, and operational levels, clearly illustrates a substantial gap between expected and actual performance in providing strategic guidance and supporting portfolio definition. This gap was further substantiated by qualitative insights from the FGDs, which explored the perspectives of executives, PMO team members, and project managers on this issue.
2. **Project Success Rates:** The identified shortcomings in strategic functions, particularly the advisory role, suggest that the PMO's ability to ensure successful project completion is compromised. Although some best practices have been implemented, indicating an intermediate maturity level (as per the survey), the PMO hasn't yet fully optimized its processes to align effectively with organizational goals. This conclusion is supported by both quantitative findings from the questionnaire and qualitative data from FGDs.

To address these gaps, PT AtoZ should implement regular PMO performance assessments and develop a structured improvement plan. Investing in PMO team training and development, leveraging technology, and adhering to industry best practices are crucial steps in enhancing its maturity and ability to contribute more effectively to the company's long-term success. A dual focus on strengthening existing capabilities while addressing these critical weaknesses will better position the PMO to support PT AtoZ's strategic objectives and improve overall project performance.

According to the study's overall findings, PT AtoZ's PMO has the fundamental skills necessary to meet industry standards and successfully support the organization's strategic goals, but much more needs to be done to improve those skills. To make a greater contribution to the accomplishment of PT AtoZ's objectives and the successful completion of projects, the PMO must continuously improve underperforming areas, especially by strengthening advisory capabilities and strategic alignment.

7. DISCUSSION

The PMO Maturity Assessment, utilizing the Pinto et al. (2010) PMO Maturity Cube model, revealed a mixed performance across strategic, tactical, and operational functions. While operational functions demonstrated a relatively higher level of maturity, significant gaps were identified in strategic and tactical functions, particularly the absence of strategic advice to upper management (scoring 0/4). This aligns with research emphasizing the critical advisory role of PMOs in strategic decision-making (Hobbs & Aubry, 2010; Taylor & Mead, 2016), and corroborates findings that highlight the PMO's crucial role as a knowledge bridge (Aubry et al., 2007) facilitating organizational learning and continuous improvement. The lack of strategic influence directly impacts PT AtoZ's ability to proactively align projects with its organizational goals (Tulembayev et al., 2019).

The intermediate maturity level in tactical functions (resource allocation, methodology implementation) underscores the need for increased standardization and process improvement. Inconsistent methodology application, coupled with limited authority over resource allocation,

hinders efficient project execution, echoing challenges noted in previous research (Bettin et al., 2010; Martin et al., 2005; Singh et al., 2009). A structured approach to process improvement, potentially utilizing OPM3's four-stage process (PMI, 2013), is recommended for enhanced standardization, measurement, control, and improvement. This framework provides a systematic approach to identify gaps, implement changes, and measure progress.

Given PT AtoZ's size, complexity, and dynamic industry, a robust and adaptable PMO is essential. Unlike the transient PMOs discussed by Jacobsson et al. (2013) and Aubry et al. (2011), PT AtoZ requires a permanent, evolving PMO to support its long-term strategic needs. The PMO's function must evolve beyond mere project support to a more strategic, proactive, and advisory role, mirroring the increasing trend toward executive-level PMO establishment (Hobbs & Aubry, 2010) and their involvement in high-value projects (Faridoon, 2014).

Based on the assessment and relevant literature, a systematic action plan should incorporate the following:

1. **Strengthening Strategic Alignment:** Establish formal processes for PMO involvement in strategic planning and decision-making, including regular reporting and consultation with senior management (Khoori & Hamid, 2020). This proactive engagement will improve strategic alignment of projects and allow the PMO to contribute effectively to high-level decision-making processes.
2. **Enhancing Tactical Capabilities:** Implement standardized project management methodologies (e.g., Agile, PMBOK) and provide comprehensive training for project managers (PMI, 2017, 2021). Introduce transparent and objective criteria for resource allocation to ensure efficiency and effectiveness (P. F. Rad & Levin, 2002).
3. **Optimizing Operational Efficiency:** Refine internal processes and tools to enhance resource allocation, monitoring, reporting, and documentation management (Pemsel & Wiewiora, 2013). The utilization of integrated information systems can significantly improve visibility and control (Stroe et al., 2016).
4. **Capacity Building:** Invest in continuous professional development for PMO staff, focusing on strategic thinking, communication, and advanced project management skills (Korrapati et al., 2007). This ensures that the PMO team has the skills and knowledge necessary to implement and maintain these improvements.
5. **Periodic Review and Monitoring:** Regularly reassess PMO maturity using the PMO Maturity Cube or a similar framework to track progress, adapt to changing business needs, and ensure continuous improvement (Kerzner, 2017a).

This structured plan, informed by both the assessment findings and relevant research, provides a roadmap for transforming the PMO at PT AtoZ into a more effective and strategic entity, paving the way for future research to explore the long-term impact of these improvements on project success rates, organizational performance, and stakeholder satisfaction. A longitudinal study would offer valuable insights into the sustainability and effectiveness of the implemented changes, particularly in light of current trends in PMO development and risk-informed approaches to maturity level assessment and enhancement. Further comparative research examining the effectiveness of different PMO maturity models within similar organizational contexts, considering the integration of emerging risk management frameworks, would significantly contribute to the evolving body of knowledge in project management.

8. CONCLUSION

This study investigated the maturity level of the Project Management Office (PMO) at PT AtoZ using the PMO Maturity Cube model, revealing an intermediate level of maturity with significant

variations across strategic, tactical, and operational functions. The findings highlight key strengths in operational areas such as stakeholder management and documentation, demonstrating effective execution of certain PMO functions. However, significant weaknesses were identified, most notably in the PMO's strategic advisory role (scoring 0/4), tactical resource allocation, and the implementation of standardized project management methodologies. These deficiencies represent critical gaps that impede the PMO's ability to fully support PT AtoZ's strategic objectives and optimize project success.

The analysis underscores the need for a systematic action plan to address these weaknesses. This plan should prioritize the development of formal processes for strategic decision-making, the implementation of standardized project management methodologies (such as Agile or PMBOK), and the improvement of resource allocation mechanisms. Furthermore, a robust training and development program for PMO personnel is essential to cultivate the necessary skills and competencies to execute these improvements effectively. Continuous monitoring and reassessment using a suitable maturity model will be critical in tracking progress, adapting to evolving organizational needs, and ensuring long-term sustainability of enhanced PMO capabilities.

The research contributes to the existing literature by providing empirical evidence of the challenges and opportunities associated with PMO maturity assessment and improvement within a large, complex organization in the maritime transport sector. The findings highlight the importance of a holistic approach that considers both the strategic and operational aspects of PMO functions, and the significance of aligning PMO capabilities with the organization's overall strategic goals. Future research could build upon these findings by conducting a longitudinal study to measure the long-term impact of the proposed recommendations and exploring the effectiveness of different maturity models in similar contexts, considering the integration of emerging risk management methodologies. This comprehensive approach to PMO development and evaluation is vital for organizations aiming to enhance project delivery, optimize resource allocation, and ultimately achieve sustainable competitive advantage.

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