Asia Pacific Journal of Advanced Business and Social Studies
ISBN (eBook): 978 0 9943656 7 5 | ISSN : 2205-6033
Year: 2023, Volume: 8, Issue: 1

PROPOSED PERFORMANCE MANAGEMENT SYSTEMS TO FACE COMPETITION IN THE VESSEL CHARTER MARKET IN THE OIL AND GAS INDUSTRY (OFFSHORE) CASE STUDY: PT. TGM

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Abstract

Rising in global oil prices has affected all activities in Indonesian oil and gas industry; onshore and offshore. Massive attempts to enhance production in offshore field significantly affect sectors that support all operations and production activities, such as shipping industry.
This research proposed a Performance Management Systems (PMS) with an original and a new approach focused on performance appraisal at PT TGM that have not established an integrated performance appraisal system. This study examined the vision, mission, and strategy of the company. SWOT was used to evaluate the business environment's condition to obtain the company's optimal strategy. Literature research employing a combination of the Balance Score Card approach and a Knowledge-Based Performance Management System (KPBMS) as a framework, along with owner interviews and brainstorming, generates performance indicators that are divided into four categories of performance perspective (financial, customer satisfaction, internal business processes, learning & growth). The Analytic Hierarchy Process (AHP) was used to support the development of an effective performance system since it could explain multiple relevant dimensions of organisational performance together with the essential aspects within a comprehensive framework. The finding of this research demonstrates a dynamic Performance Management System (PMS) to facilitate the expectations of corporate executives. In addition to measuring the company's performance, the PMS proposal is anticipated to provide an overview of its business strategy roadmap in preparation for its IPO in 2025. The annual performance evaluation will focus on each stage specified in the Performance Management System. This paper presents an original and novel approach to designing and benchmarking of PMS for the shipping industry environment.

***Keywords*:** Performance Management System, the Balance Scorecard, Knowledge-Based Performance Management System (KPBMS), SWOT, Analytic Hierarchy Process (AHP).

1. Introduction And Purpose

Rising in global oil prices has affected all activities in Indonesian oil and gas industry; onshore and offshore. Massive efforts to increase production in offshore field will undoubtedly have a significant effect on the sector that supports all operations and production activities. The shipping industry is one of the supporting sectors in offshore upstream oil and gas activities, and this industry typically contributes by providing boat rental services to support offshore oil and gas operations. According to Liliana V. P (2016), shipping companies continue to face a challenging economic environment with volatile freight rates, stricter regulations, and increased

competition. Due to the developments mentioned above, shipping companies recognise the necessity for business management with the appropriate strategy to fulfill the challenges posed by Indonesia's offshore oil and gas operations. According to Ellitan (2003), technology encourages organisations and companies to enhance their performance to gain a competitive advantage. Competitive advantage refers to an organisation's attempts to compete and achieve its objectives with distinction (Porter, 1985). As a competitive advantage, the planned strategy involves quantifiable estimates for the objectives desired by each company. Businesses prioritising quality management become more competitive due to greater performance excellence (Lee, 2002). In order to compete in the market, organisations must understand consumer wants and give satisfaction. Lorange (2009) describes the backdrop of international shipping and the management capacities of a change agent in the shipping business. Comprehensive firm performance monitoring is essential for business transformation to be sustainable. Shipping businesses engaged in offshore oil and gas operations, as other industrial sectors, utilise financial indicators to measure and evaluate performance. Kaplan (1983) and Copper et al. (1992) illustrate the drawbacks of measuring performance management systems based on financial factors, including lack of relevance, trailing indicators, short-termism, inflexibility, does not drive improvement, and cost distortion. Financial and non-financial indicators were considered when designing a performance management framework for selecting and implementing measures. Several widely known performance management system frameworks that integrate financial and non-financial aspects include: SMART (Cross & Lynch, 1989), Performance Measurement Questionary (Dixon et al., 1990), Performance for World Class. Manufacturing (Maskell, 1991), Quantum Performance Measurement Model (Hronec, 1993), The Balanced Score Card (Kaplan & Norton, 1996), Performance Prims (Neely & Adams, 1999), ISO series, Baldrige Criteria (U.S Department of Commerce, 1987), and Knowledge Based Performance Management System (KPBMS) (Wibisono, 2006). According to Armstrong, Bar, and Baron (2004), performance management emphasises recognition, constructive feedback, personal development, and career prospects. This research aimed to identify critical performance indicators that executives can use at a shipping company (case study) that supports offshore oil and gas operations. The discussion is carried out in the company through literature studies and secondary data collection. According to Liliana V. P (2016), a successful approach to excellence for an organisation is to view performance appraisal as a strategic tool and to integrate the company's Mission, Vision, and Values into its performance management systems. The selection of a performance management system framework integrated with the Analytic Hierarchy Process (AHP) is carried out in this paper to propose a performance management system that can be implemented in the research subject's companies. AHP, a multi-criteria decision-making (MCDM) technique, is used to determine the weights for key performance indicators (KPI) aligned with the company's vision and Mission. The proposed leading performance indicators are expected to improve the performance measurement system, allowing companies to become more competitive in carrying out a line of business operation in shipping services for offshore oil field activities.

2. Literature review

2.1 The Balanced Score Card

The Balanced Scorecard (BSC) by Kaplan and Norton (1992) translates vision and strategy into a coherent set of measures in four balanced perspectives to provide corporate executives with a comprehensive view by complementing financial measures with additional metrics that measure performance in various areas. These areas include operational customer satisfaction measures, internal procedures, and organisational innovation and improvement activities. The Balanced Scorecard equips companies with the elements necessary to transition from the old-financial paradigm to a new model that delivers a holistic perspective of company performance. In its implementation, the BSC can also coordinate the decisions and activities of each function; thus,

it becomes a continuous attempt to achieve the company's goals of achieving accountability and enhancing services.

2.2 A Knowledge-Based Performance Management System (KBPMS)

A Knowledge-Based Performance Management System is proposed by Wibisono (2006). This paradigm for performance management is an evolution of BSC, Performance Prism, and MBNQA. This is due to the fact that the KBPMS blends design simplicity with a concentration on BSC-Prism performance on stakeholders and clarity on the direction of MBNQA performance metrics. The KBPMS has both a strategic and operational structure. There are two modules in the strategic structure: the company's Environmental Perspective and Business Results. The enterprise environment module describes the specific operating environment of a business, whereas the business results perspective module analyses financial and non-financial performance. In the operational structure portion, two modules are developed: the Internal Process Perspective and the Resource Capability Perspective. Within each module, sub-modules and performance variables are included. Figure 1 depicts the KBPMS design procedure.

2.3 Analytic Hierarchy Process (AHP)

A measurement theory based on pairwise comparisons relies on expert judgement to obtain a priority scale. Saaty developed AHP in the 1970s to address military resource allocation and planning. In its implementation, AHP simplifies complex decisions to a series of pairwise comparisons and subsequently synthesises the results. AHP reveals both the subjective and objective aspects of a decision. The identification process of the decision hierarchy determines AHP's key to success. Establishing a hierarchical structure is to acquire a more objective approach on all decision elements and to recognise their interrelationships. AHP contains at least three levels of hierarchy: the problem's overarching objective is at the top, followed by criteria that determine alternatives and competing alternatives (decision alternatives). AHP combines strategies that help determine the consistency of evaluations for decision-making, decreasing bias in decision-making (Thomas L. Saaty, 2016).

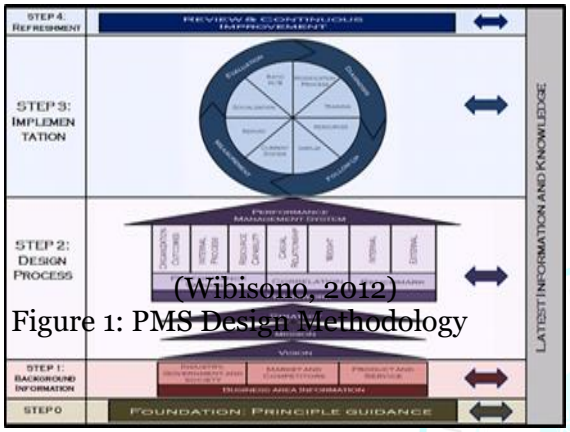
2.4 Integrating a performance management framework using AHP to evaluate Performance

Based on several research findings, the performance management framework provides a sufficient effort to assist organisations in evaluating Performance. However, the performance management framework has limitations in that it is more of a tool that describes a performance perspective without determining the perspective and weight of indicators. AHP is adapted to support in developing a sound performance system since it can explain numerous relevant dimensions of organisational performance and the relative importance of interests within a comprehensive framework. AHP is a promising solution for overcoming the limitations of performance management systems since it can be utilised to prioritise and aggregate performance information based on several criteria. AHP can be utilised to determine weights when evaluating system performance. This study proposes a combination of AHP and a performance management framework in developing a performance management system for a shipping firm engaged in offshore oil and gas operations to preserve business continuity.

2. Methodology

The study analysed and evaluated the literature to identify supporting theories for detecting Performance management challenges. A case study on a shipping company that supports offshore oil and gas operations in Indonesia was used to collect data. Using internal data, the data was obtained through semi-structured interviews with company executives and stakeholders. The board of directors was selected as interviewees since they are the population of individuals in charge of achieving the company's performance targets. The interview includes

a performance perspective proposed in the framework of the performance management system. The company's internal and external business conditions were evaluated using SWOT and TOWS analysis during the analysis stage. Furthermore, future strategic plans are developed to achieve the company's potential Performance. Selecting a performance management system framework model tailored to the company's conditions and requirements is the first step in PMS design. This approach can be carried out by conducting a broad-scope analysis of the company's vision and Mission, and the direction and targets to be achieved. Analytical Hierarchy Process (AHP) was used to select relevant variables by identifying degrees of importance and assigning weights to them. Figure 2 depicts the framework used in this study, which begins with identifying a problem in one of the shipping company cases, and then moves on to define research objectives, data collection, data analysis, performance management system design, conclusions, and recommendations.



(Wibisono, 2012)

Figure 1: PMS Design Methodology

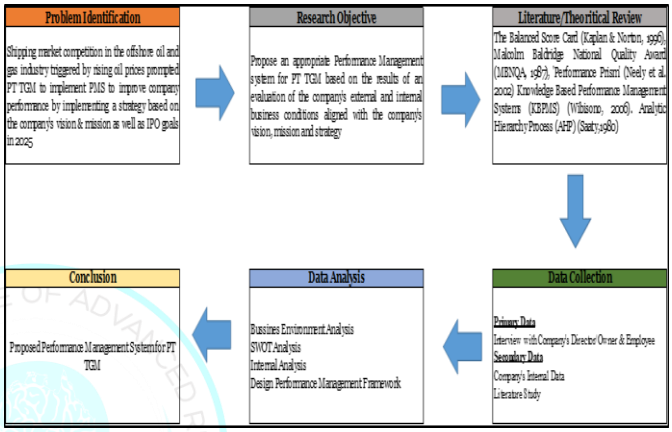


Figure 2. Research framework

3. Analysis

4.1 Overview of the Indonesian Shipping Industry

The national maritime sector was under tremendous strain during the pandemic, and uncertainty overshadowed this. Although the offshore shipping and oil and gas industry were put under duress in the early days of the pandemic due to a drop in global oil prices, they are now gradually improving in conjunction with rising economic activity, which has bolstered fuel demand. The rising need for vessels for offshore oil and gas operations, in tandem with the current high oil prices, is one of the indicators of the shipping industry's bright future. Indonesia's marine and shipping industry need to enhance its ship capacity by up to 4.6 times from current levels to support Indonesia Gold 2045. Fulfilling ship capacity requirements, rejuvenating boats, speeding investment in the shipping industry sector, improving access to banking funding for the domestic shipping industry, and boosting the capacity of local shipyards are all hurdles in achieving this. The application of the cabotage principle is under Presidential Instruction 5/2005 and Law No. 17 of 2008, which stipulate that domestic sea transportation activities must be carried out by national sea transportation companies using Indonesian-flagged vessels and crewed by Indonesian crew members (ABK), thereby benefiting national shipping companies. Nowadays, the primary policy directions for national sea transportation for 2020-2024 are being formulated, including the realisation of competitive domestic maritime logistics, connectivity with international services, and attempts to develop international hub ports and sea highway supporting ports. On the other hand, the government is attempting to strengthen the national maritime fleet as part of the logistics system. The economy, knowledge and skills, technological capabilities, and regulations are six critical points of attempts to strengthen the maritime fleet.

The following are service goods offered by shipping firms for offshore oil and gas operations: Drill and exploration ships, Support Vessel, Offshore Production Vessel, and Offshore Construction Vessel.

4.2 Company Profile & Market Position

PT TGM was established in 2014 as an Indonesian shipping business specialising in Offshore Support Vessels (OSV). The company strives to support all types of offshore operating vessels, such as Anchor Handling Tug Supply (AHTS), Accommodation Work Barge (AWB), Offshore Construction Barge (OCB), and Diving Support Vessel (DSV), by providing operational excellence with innovative vessels, competent and skilled personnel, compliance with international systems and standards, and market flexibility balanced by the trust and loyalty of its customers. The company owns four accommodation work barges (AWBs) and five anchor-handling tug and supply vessels (AHTS). There are more than 20 international oil and gas companies, including PERTAMINA's Group, operating offshore Indonesia. The Indonesian government has committed to achieving one million barrels of oil daily and has opened new gas concessions to fulfil domestic requirements. Therefore, there are still opportunities for long-term contracts to sustain this business.

4.3 Data Collection

The data collection process begins with semi-structured interviews with the company's owner, who also serves as the company's director. The interview process centred on gaining a deeper understanding of the company's vision, mission, and strategy, which are the guiding principles for designing a performance management system. These four principles are as follows:

1. Partnership Between Stakeholders - realising the contribution of each party in determining the variables associated with their authority. Stakeholders consist of owners, customers, employees, business partners and suppliers.
2. Employee Empowerment — ensuring employee participation in supporting the performance enhancement of the company. The activities of employees must represent their comprehension of the performance management system.
3. Integrated Performance Improvement — performance management design is expected to involve all elements and relate each variable within a department to the others. The integrated performance will result from an integrated approach from development to implementation in which all employees are involved.
4. Independent Team — developing a performance management system necessitates forming a team with the trust and opportunity to make decisions, manage employees across sections or divisions, and determine which variables should be adopted.

The findings of interviews demonstrate that the company's vision is to *"be a star in offshore support vessel business."* This vision demonstrates the company's ambitions to become known in the maritime sector market for offshore activities over the following three to ten years.
The company's mission is *"To supply standards and services in a dependable, efficient, and adaptable manner and to become the customer's first option in the offshore support vessel industry."* This mission demonstrates the company's existence, which is to be the customer's first choice by providing excellent service. The evaluation results indicate that the company's vision and mission align with its competitive advantage and strategy criteria.
The organisation focuses on three significant components of client pleasure, including *Reliable:* establishing faith in the abilities of the people and assets utilised, *Flexible:* which provides flexibility for long-term consumer loyalty and *Efficient:* carry out the procedure successfully to achieve high efficiency. The organisation is dedicated to providing high-quality assets and excellent customer service by focusing on QHSE (Quality, Health, Safety, and Environment) issues on land and at sea: *Quality* (Ensuring the quality of assets and services fulfils the requirements), *Health* (Maintaining workplace clean and healthy for everyone, including staff), *Safety* (Prioritising the safety of our people, assets, and the environment), and *Environment* (Providing a clean, green, and environmentally friendly atmosphere). When interviewed, the company's director expressed the following values: Excellent (we have to accomplish things effectively and efficiently), Tough (we work hard to finish jobs and solve difficulties), Integrity (we have a sense of belonging to do the best), and Motivation (We continuously learn and work with the knowledge to achieve the target). He also stated that the fleet would be focused on market criteria for *technical difference (low competition), a strong return on investment (tariff vs investment), and low-cost operations*. The company is attempting to develop its capabilities and portfolio to obtain a better achievement for its IPO in 2025. Figure 3 depicts the company's business plan and organisational structure.

A SWOT analysis was performed to achieve these goals. A SWOT analysis is performed to map the company's internal and external conditions to achieve these targets. This process facilitates the creation of a company strategy.

Strength:

(1) Effective market network; the Indonesian oil and gas industry is fragmented and specialised. The company has partnered with eight oil and gas firms whose operational zones are relatively dispersed throughout Indonesia.

(2) Excellent owner and shipyard network; all shipping companies in Indonesia are members of the INSA Association (Indonesian National Ship Owners Association. This company is also a member of the INSA community and serves on the core board. The relationships between companies in offshore sector are excellent, allowing for mutual

discussion and support if chartered vessels are required, and exchanging market information. The relationship with the shipyard is also beneficial in terms of time and cost efficiency when maintenance and repair are required.

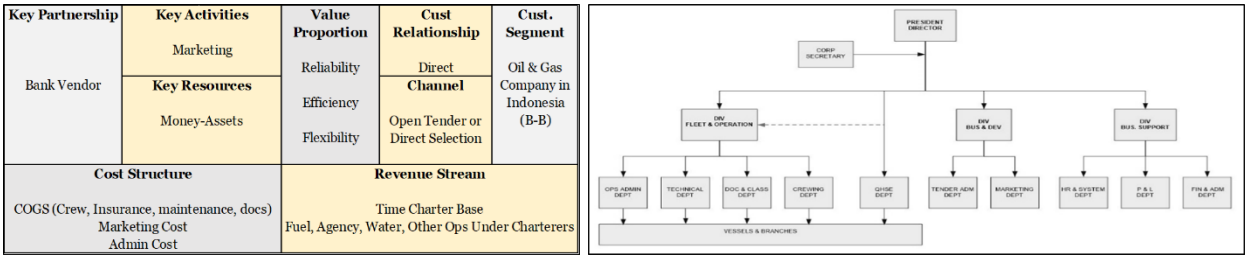


Figure 3. The business model and organizational structure

Weaknesses:

(1) Tight cash flow; adjustments/additions must be made to the company's cash flow to deal with operations during the Covid19 epidemic). *(2) Unoptimal HR performance*; before becoming a contract operator, the company was only a ship owner whose assets were leased by partners. However, since the company is now acting directly as a contract operator, a dependable team is required to provide services under customer requirements.

Opportunity:

*(1) Promising business prospects; s*ince of Indonesia's situation, which imports oil from overseas to fulfill people's requirements, the oil and gas industry remains promising. Since it takes time to meet domestic needs and reduce imports, the government actively pushes for expedited exploration and development activities. The rise in oil and gas prices has also prompted oil and gas companies to boost production. Of course, this has significantly impacted the offshore shipping company market, and field development and exploration in offshore areas provide the company with a large market.

(2) Low investment; the significant drop in oil prices since 2015 has impacted quite expensive investments made between 2012 and 2014. Since very high rental prices enticed them, numerous offshore companies had to be more cautious in their investments, and numerous went out of business due to an extensive portfolio of assets that could not be used. Throughout 2015-2021, numerous lousy debt assets are sold at low prices. Running until 2021, the price of oil has begun to rise (it has reached USD 80/barrel); however, due to the crisis and pandemic, it is on hold and only slowly rising while other commodities have soared. Steel plate prices have also skyrocketed, making it difficult to build new ships. On the other hand, the purchase of used ships has increased, and there are currently only a few assets available at low prices.

(3) Long-term contract; the market is an essential activity in the offshore business, as outlined in the contract. There are short-term contracts (less than a year), medium-term contracts (1-3 years), and long-term contracts (more than 3 years). The ship type must be selected carefully and under the work program in the coming years. Oil and gas companies are planning activities for exploration and increasing production in response to the rise in oil prices, increasing demand for OSV units. Thus, the program is also aligned with medium and long-term ship contracts.

Threat:

*(1) Global crisis; c*rises can arise abruptly, and Indonesia is one of the nations most susceptible to the global crisis. A significant effect can arise when a worldwide economic crisis occurred since oil and gas demand can decline, oil and gas business liquidity can be interrupted, the currency can weaken, et cetera. Anything might happen that can have an impact on company performance, and the global crisis can be a threat to companies.

(2) *Competitor;* every business has competitors, and the offshore sector has a limited number of players, particularly for specific vessels. There are several ship types whose competition is relatively tight/saturated and must be avoided, while others have little/weak competition and should be considered. Competition with competitors is not always about price; it can also be about technical specifications, availability, and flexibility. Competitors with low-investment assets, competitors with efficient business processes, competitors with excellent and extensive networking, and competitors with fleet availability can all pose a threat to the company. The SWOT strategy analysis is demonstrated in Table 3 below.

	Strength	Weaknesses
Opportunity	S-O Strategy **Improve Profitability and Cash Flow** Securing long-term contracts in markets through leveraging solid customer connections	W-O Strategy **Enhance Asset Management** Using an instalment plan for a moderate purchase or lease-buy and purchasing assets with a fast break-even point and high future value. Increasing the team's speed in analyzing the market and negotiating purchases.
Threat	S-T Strategy **Improving services in response to customer demands** Ensuring vessel dependability, particularly in markets with the low-to-medium competition.	W-T Strategy **Increase business awareness throughout the organization.** Carefully managing equity and cash flow by balancing the asset purchase portfolio with the banking system and bareboat purchase from the owner to lessen the risk of a worldwide crisis,

Table 3. Company Strategy by SWOT Analysis

The SWOT strategy can be classified into two categories:
Strategy-1: Increase Asset Management, Profitability & Cash Flow *(Low total Cost Strategy)*
Strategy-2: Increase Total Customer Satisfaction *(Complete Customer Solution Strategy)*
These will be the company's primary focus and objective in the following years. The discussion continued by exploring the financial perspective of the business, customer satisfaction, internal business processes, learning and growth. The owner stated that the present emphasis of the company is the development of an internal business process perspective. This is based on the company's Director's desire to strengthen assets and internal conditions, which will impact the company's valuation in the face of market demand, with efforts to develop market share as the next priority. The following discussion invited SMEs who were representatives of each function to assist company owners in weighing each perspective on the balanced scorecard. The function representatives are the Heads of Operations and Technical, Business Development, and Business Support. SMEs and company owners were asked to provide views on the four existing perspectives. SMEs and company owners were requested to provide views on the four existing perspectives. The weights will be determined based on pairwise comparisons of the results of the discussions between SMEs and owners. Pairwise comparison data processing calculates the value of the consistency ratio. The consistency ratio is <0.1; thus, the result is valid and acceptable. The variable weights for each perspective will be determined using the same method. The subsequent process is a Focus Group Discussion to obtain performance indicators for each division. Each division contributes indicators based on its internal performance from the previous year, which are adjusted to the literature. During the FGD, brainstorming was carried

out regarding the performance calculation formula that would be implemented in the PMS. Validation of indicators and formulas will be validated using simulations with data from the prior year. Figure 4 depicts the company's strategy map.

4.4 Company Performance Review

PT TGM has been involved in offshore support vessel (OSV) market with its partners since 2014. Companies typically act passively as ship owners who assist partners in contracting with Indonesian oil and gas companies. The Covid-19 pandemic prompted this company to become involved in the offshore oil and gas shipping market. This shift in business steps necessitates more effort from each component of the company. The owner of the company, who also serves as a director, realises the necessity for a system to monitor the company's performance; thus, it remains within the corridor of a strategy based on the vision and mission to attain the 2025 IPO target. The Development of the Performance Measurement System has begun. However, it is limited by numerous factors, including a lack of understanding of HR in PMS development, variable weighting, which remains subjective, and the need for indicators that can measure the company's Performance in an integrated manner. The company and employee performance remain evaluated using indicators of achieving financial targets and customer satisfaction built by each division, so they cannot describe the expected conditions. The company's owner/director views the necessities for a PMS to measure financial and non-financial indicators and is more inclined to implement the Balanced Scorecard. The company's owner believes that by using the PMS, the company will be able to divide the stages in its operating strategy, increasing the company's valuation in preparation for its IPO plan in 2025. As outlined in the Performance Management System, each stage will be the focus of performance evaluation each year. Phase I begins with ensuring customer satisfaction, expanding the fleet and maximizing the use of the existing fleet, increasing cash flow and profit, and improving the company's internal operations *(Introduction & Growth Cycle)***.** Furthermore, Phase 2 will be the company's primary focus for the following two years, during which time it will aggressively increase the market's available market share, armed with the results of the previous strategy stages *(Mature & Decline Cycle)***.**

4.5 Designing Performance Management System Framework

In a performance-based management handbook, Artley W defines performance measurement as "continuous monitoring and reporting of programme achievements, particularly progress toward previously defined goals." The type or level of programme activities carried out (processes), the direct products and services produced by a programme (outputs), and/or the consequences of products and services can all be addressed by performance measurements (outcomes). Effective performance measurement will offer data on the degree of performance achieved, achievement of performance targets, customer satisfaction, process control, and continual improvements that must be made. Performance evaluation is a comparison of actual achievement to the aim. Performance measurement is ineffective unless linked to a company's strategic plan. Performance Management uses an information and measurement programme to manage and improve performance. According to Artley W, performance-based management is a systematic approach to improving performance through a continuous process of setting strategic performance goals, measuring performance, collecting, analysing, reviewing, and reporting performance data, and using that data to drive performance improvements. Effective performance management should consider the customer's perspective and conform to the company's vision, mission, and strategy. Measuring an organisation's success can be done by examining its short and long-term accomplishments. This notion promotes the creation of performance measurement models that are not solely based on monetary factors like profit, ROI, ROCE, or EVA. Non-financial metrics are critical factors to evaluate, as outlined in the Balanced Score Card (1992), Prism (2002), Key Performance Indicator Manual (1995), ISO,

MNBQA (1987), and IPMS (2006) frameworks. The table 4 below compares numerous performance measurement concepts. Based on the comparison of several frameworks and interview results, the owner/director is more likely to select a performance measurement method using the Balanced Scorecard concept combined with variables and indicators in the Integrated Performance Measurement System / Knowledge Based Performance Management System (IPMS/KBPMS) framework based on the scope of the problems discussed, since it is more in line with company requirements. Furthermore, the desired variables are chosen and tailored to the company's vision, mission, strategy, and stakeholders' demands regarding the balanced scorecard's four perspectives. In determining variables and indicators, gaps and false alarms are considered. The gap is an error since it fails to measure the variable that should be measured, preventing the management of a crucial variable. False alarms are measurements of variables for which no attention should be required. Translation of the company's strategy into 18 variables spread in each perspective, including:

1. Financial

Profitability; this variable is an essential aspect of measuring a company's profit-making ability. *Maximize Assets & Liquidity*; this variable represents the company's effort to increase the utility of existing fleets to be offered to customers through short-term/short-term contracts. *Asset Investment;* this is the company's effort to strengthen fleet capacity in dealing with consumer demand in the market.

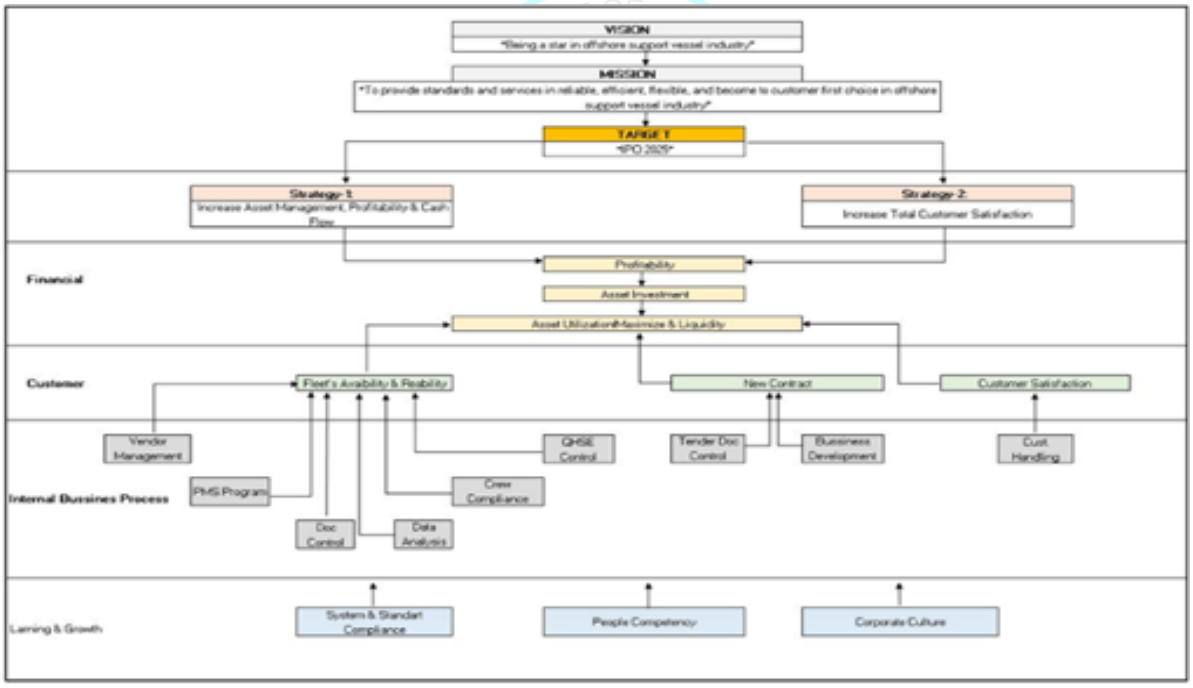


Figure 4. Company's strategy map

Research Aspects	MBNQA	BSC	Performance Prism	IPMS/KBPMS
Design procedure	Clearly stated	Clearly stated	General description	Clearly stated
Formulation of performance variable	7 1-6 Perspective : qualitative 7 Perspective : quantitative	4 General description	5 Detailed of each variable	3 and 9 sub perspectives Detailed of each variable and interrelated
Current performance management system consideration	Yes	No	No	Yes
Usefulness in terms of implementation	Services, Education and Business	Various types of industries	Various types of industries	Various types of industries
Reasons for selection of variables	Stated clearly of each perspective	Stated clearly of each perspective	Stated clearly of each perspective	Stated clearly of each perspective
"Knowledge-Based" Approach	No	No	No	Yes
Relationship research and priorities for improvement method	Implicit from the score assigned to a	No correlation	No correlation	Correlation analysis, AHP, Gap analysis
Relationship between variables	No	Described in a framework of perspectives	Clearly distinguished	Factor Analysis, Correlation Analysis, AHP

Table 4. PMS Framewor k Comparison

2. Customer Satisfaction

Fleet Reliability and Availability; these are the steps the company undertakes to provide reliable service in response to consumer operational demands. *New Contract;* The Company's effort in seeking cooperation opportunities with existing and new customers. *Ccustomers satisfaction level;* reflects the company's efforts to ensure that the offered services are satisfactory to consumers as stakeholders.

3. Internal Business Process is separated into three groups:

Vendor Management, PMS Program, Doc Control, Data analysis, Crew Compliance, QHSSE Control; An internal performance enhancement to preserve customer satisfaction by providing reliable service from reporting, troubleshooting, availability of spare parts, availability of competent crew, and programme execution excellent ship unit maintenance to prevent non-productive time. *Tender Doc Control;* A performance in guaranteeing the strategy to acquire contract opportunities. *Business Development, Customer Handling;* A performance in viewing business development through approaches to existing customers and new opportunities.

4. Learning & Growth

System and Standard Compliance; Ffulfil company performance standards under rules and stakeholder demands, *People Competency;* Improve employees' abilities; thus, they actively contribute to accomplishing company objectives. *Corporate Culture;* An effort to carry out activities based on the existing culture as a company's characteristic.

Subsequently, with each division, brainstorm to discover the contribution of indicators for each variable. Each function contributes to each variable that will be discussed before being set as a performance measurement parameter when setting indicators. There are 57 indications of 18 variables obtained. Several indicators in the measurement method have a value greater than the maximum achievement (> 100%) as a form of praise for achieving this aim. These are factors that have a substantial impact on the business following the company's vision and goal. Figure 5

depicts a variable for each perspective and its weighting based on the results of AHP-processed interviews and one example of pairwise comparison for four perspectives. In the final step of brainstorming, a simulation was run for validation using company data from financial reports and previous year's consumer and worker satisfaction surveys. The simulation compares the owner/desired director's target for the current year and the continuous improvement plan to the prior year's realisation data. This approach employed quantitative data. Figure 6 depicts a comparison of targets and actual achievements on the internal business process perspective. Due to data limitations, this paper has not included the validation process by benchmarking. Validation of the proposed model using the benchmarking method to other parties in the same sector can provide an overview of the company's most significant accomplishments and identify best practice targets.

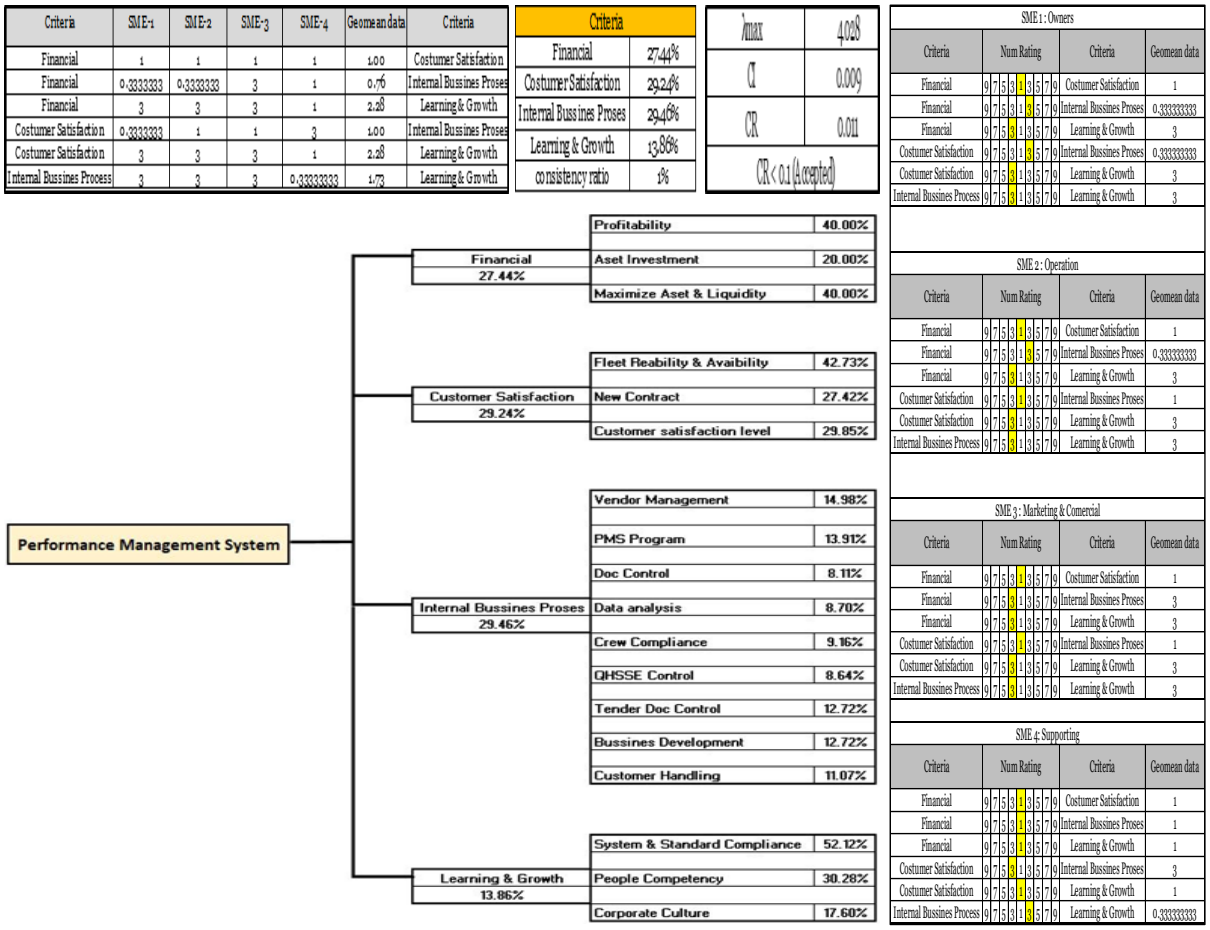


Figure 7 depicts four perspectives, 18 variables, and 57 indicators, as well as the PMS model

validation results using internal company data. It demonstrates that 57 performance indicators from each perspective and 18 variables provide an overview of the company's performance achievement of 98.15%. Here is the formula for calculating performance; *(1)* MIN (Realization/Target, 100%) Max Score 100%, (2) MIN(Realization/Target, 110%) Max Score 110%, (3) MIN ((target + (target - Realization))/target) x 100%, 110%) Max Score 100%, (4) MIN ((target + (target - Realization))/target) x 100%, 110%) Max Score 110%.

Code	Internal Bussines Process Indicator
A	Preferred Supplier Relationships
B	Service Level Agreement Achievement
C	Appropriate preventive maintenance plan for critical equipment/processes
D	Best Practice coverage
E	% of documents that are 100 % accurate
F	Average time from modification of a regulation to availability of updated documentation
G	Idea Conversion Rate
H	Accuracy of Forward Provisioning
I	Readiness of the crew with the required skills and meeting customer requirements
J	Safety Incident
K	Occupational Health and Safety Assessment
L	Time to Quote / On Time Quotation Rate

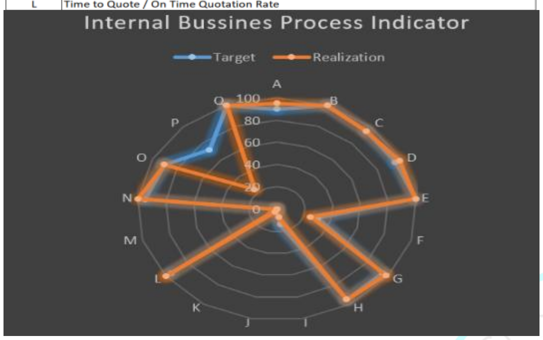


Fig 6. Internal Business Process Performance

PERSPECTIVE		OBJECTIVE		MEASUREMENT	TARGET OUTPUT (Number)	TARGET OUTPUT (Unit)	Realization	Performance (%)	% WP Formula = (11 x 8)
1	2	3	4	5	6	7	9	11	12
I	FINANCE / COMMERCIA 27.44%	F1	**Maximize Aset & Liquidity**						
		1	Asset Utilization & Liquidity	ROI = (EAT / TA) x 100%	5	%	5.00	100%	3.66%
				ROE = (EAT / NW) x 100%	5	%	5.00	100%	3.66%
				ROCE = (EBIT / (TA-CL)) x 100%	5	%	5.00	100%	3.66%
		F2	**Profitability**						
		1	Increase Gross Profit	GP = Average Gross Profit per Vessel per month	50000	USD min	60,000	110%	4.02%
				GP = Average Gross Profit per month (VC)	5	% revenue min	4.80	96%	3.51%
		2	Overhead Cost Control	BO = % of overhead costs to income per month	2	% max	1.00	110%	4.02%
		F3	**Aset Investment**						
		1	Ship / Vessel Investment	Addition to the Number of New Vessels per Year	1	set min	1	100%	2.74%
		2	Realization of Investment Absorption	Achieving investment progress based on physical completion (Acceptance Service or Good Acceptance)) / (Investment withdrawal target) x 100%	100	%	100	100%	2.74%
II	CUSTOMER 29.24%	C1	**Fleet Realbility & Avaibility**						
		1	Reability	Non Prod Time = number of unit failure hours / total operating hours during the contract period	2	% (max)	1	110%	6.87%
		2	Availability	Delivery Unit On time = % of orders delivered to the customer on time in full in a given period	100	%	100	100%	6.25%
		C2	**New Contract**						
		1	Long term contracts within the current year (>1 year)	Number of Long term contract	1	Contract Min	0	0%	0.00%
		2	Value of new customers	Sales revenue generated from new customers as a % of sales turnover in a given period (long/short term contract)	10	%	12	110%	4.41%
		C3	**Customer satisfaction level**						
		1	Customer Satisfaction Index	Customer satisfaction survey (score)	90	points (min)	100	110%	4.80%
		2	Communications with Customer	Average number of communications with stakeholders in a given period	10	freq (min)	10	100%	4.36%
III	INTERNAL PROCESS 29.46%	I1	**Vendor Management**						
		1	Preferred Supplier Relationships	% of suppliers who become 'preferred supplier' because they meet the assessment & evaluation score based on company criteria (Min Score 85)	90	%	95	100%	2.21%
		2	Service Level Agreement Achievement	% of occasions the supplier organisation adheres to the service level agreement in a given period	100	%	100	100%	2.21%
		I2	**PMS Program**						
		1	Appropriate preventive maintenance plan for critical equipment/processes	% of preventive maintenance planning parameters that are 100% accurate	95	%	95	100%	2.05%
		2	Best Practice coverage	% of key processes that are covered by practices that are considered to be best	95	%	98	100%	2.05%
		I3.	**Doc Control**						
		1	Quality and Availability of Documentation required by regulations such as certificates, Minutes, etc	% of documents that are 100 % accurate	100	%	100	100%	1.19%
				Average time from modification of a regulation to availability of updated documentation	30	days (max)	25	105%	1.25%
		I4	**Data analysis**						
		1	Idea Conversion Rate	% of ideas/suggestions implemented/followed up and impacted the company	95	%	98	103%	1.32%
		2	Accuracy of Forward Provisioning	% of forward provisioned materials / parts / resources that are available when required	95	%	95	100%	1.28%
		I5	**Crew Compliance**						
		1	Readiness of the crew with the required skills and meeting customer	Average time required for crew readiness to work	14	days (max)	7	100%	2.70%
		I6	**QHSSE Control**						
		1	Safety Incident	Total Recordable Incident Rate : Number of recorded incident victims Total number of recorded incident victims in all operational areas X 1,000,000 / Total working hours	0.13	rate	0.1	110%	1.40%
		2	Occupational Health and Safety Assessment	Number of hazard inspections/safety programme audits completed versus planned per year	2	/years (min)	3	100%	1.27%
		I7	**Tender Doc Control**						
		1	Time to Quote / On Time Quotation Rate	% of quotations delivered to the customer on the date / time required	95	%	100	100%	1.87%
		2	Accuracy of bid documents at auction	% of rejected bids due to late submission (as a % of total bids over a given period)	0	%	0.0	100%	1.87%
		I8	**Bussines Development**						
		1	Proposal success rate/quotation conversion rate	% of quotations or proposals that are converted into orders	95	%	100	105%	1.97%
		2	Brand Equity / Brand Value	Score of consumer awareness survey / preference	90	points (min)	90	100%	1.87%
		I9	**Customer Handling**						
		1	Quality of Service (Pre & Post Sales)	time to call out / problem resolution - time from fault / complaint report to arrival of solution / problem resolution	72	hours (max)	24	110%	1.79%
		2	Customer Complaint Resolution	% of customer complaints that are resolved to the customer's satisfaction	100	%	100	100%	1.63%
IV	LEARNING & GROWTH 13.86%	L1.	**System & Standard Compliance**						
		1	Standardization System Management (SSM)	Number of ISO refreshment training / Business Process Update	1	freq /year	1	100%	0.83%
		2	Management system audits	Number of audits (external & internal)	2	freq /year	2	100%	2.93%
		3	System & Procedure Improvements						
			3.1 Proposed improvements to systems & procedures (1 /div / years)	% proposed improvement of systems & procedures	80	% min	80	100%	0.87%
			3.2 Implementation of system and procedure improvement proposals	% proposed improvement of systems & procedures implemented	90	% min	90	100%	0.87%
			3.3 Follow up on findings	% Follow up on findings	100	%	100	100%	0.87%
			3.4 Monitoring of quality objectives	% Reporting of monthly complaints < the 5th of the following month	100	%	100	100%	0.87%
		L2.	**Corporate Culture**						
		1	Implementation of Corporate Values						
			1.1 Monthly meetings	Number of monthly meeting	12	freq /year	12	100%	0.12%
			1.2 Coordination meetings (every 2 weeks)	Number of Coordination meeting	2	freq /month	2	100%	0.12%
			1.3 Annual meetings	Number of annual meeting	1	freq /year	1	100%	0.12%
			1.4 Family Gatherings	Number of family gathering activity	1	freq /year	1	100%	0.12%
			1.5 Celebration & Award	Implementation of company anniversary celebrations and awards to employees	1	freq /year	1	100%	0.12%
			1.6 Sports Activity (2x /month)	Implementation of joint sports activities	2	freq /month	2	100%	0.12%
		2	Corporate social responsibility	Number of CSR	2	freq /year	2	100%	0.81%
		3	Accountability	% Implementation & follow-up of audit findings	100	%	100	100%	0.81%
		L3.	**People Competency**						
		1	Recruitment						
			1.1 Accuracy of manpower planning	% of required skills available within the organisation	95	% min	100	100%	0.35%
			1.2 Vacancy Fill Speed	Average time required to fill vacancies	30	days max	20	100%	0.35%
			1.3 Quality of recruitment results	% of HR recruited who passed the probationary period	95	% min	100	100%	0.35%
		2	Training						
			2.1 Training Take Up	% of training courses that are fully subscribed	100	%	100	100%	0.35%
			2.2 Availability of Training Courses	% of training courses that match employee's personal requirements	100	%	100	100%	0.35%
			2.3 Employee satisfaction with training programs	% of participants who are satisfied and pass the training	100	%	100	100%	0.35%
		3	HR Handling						
			3.1 Skills Audit	Number of skill audit in given period	1	freq/year	1	100%	0.26%
			3.2 360 degre feed back	% of employees involved in the 360 degree feedback process	100	%	100	100%	0.26%
			3.3 Employee loyalty	% employee turn over per year	5	% max	3	100%	0.26%
			3.4 Employee engagement & satisfaction survey	% of employees who participated in the survey and passed the minimum score	85	% min	100		
		4	Inovation/ improvement						
			4.1 Idea Generation Rate	Number of ideas / suggestions for improvement received monthly	10	freq / month min	10	100%	0.35%
			4.2 Innovation Success Rate	Average number of successful innovations in a given period	20	idea	20	100%	0.35%
			4.3 Technology Implementation Project Performance	% of technology implementation projects that are completed within budget	100	%	100	100%	0.35%
	Total performance achievement								**98.15%**

Figure 7. Validation of the Proposed PMS Model

5. Conclusion

This research proposes a performance management system focusing on the case of PT TGM, one of Indonesia's offshore oil and gas shipping sectors. Nowadays, the company has not implemented PMS in its performance appraisal. Company and employee performance assessment based on indicators of attaining financial targets and customer satisfaction developed by each division; thus, they cannot describe the expected conditions. Companies are developing performance measurement models that encompass all financial and non-financial aspects in response to steps high competition, extensive business prospects triggered by higher oil prices, and alterations in business processes. This is required to answer the requirements and wishes of stakeholders. This research examines the company's vision, mission, strategy, and major plans to perform an IPO in 2025. SWOT analysis was used to determine the organisation's optimal strategy based on the business environment's current state. Based on the research of the literature, interviews, and group discussion, 57 performance indicators were identified and categorised into four performance viewpoint categories (financial, customer satisfaction, internal business processes, learning & growth), with 18 variables serving as sub-perspectives. Variables are determined through brainstorming with the company's owner/director based on the company's requirements and internal data.

The AHP approach was employed to weigh each perspective, variable, and indication based on the findings of interviews with the company's owner/director and representatives from each division. Based on the brainstorming results, the 57 indicators consistently rated as highly significant were utilised to develop models to evaluate company performance. They can also be considered the first step toward developing a competitive benchmarking approach. Validation and simulation were performed by comparing the previous year's internal data to the current year's target and long-term plans for the following period. This study is the initial step in the research plan for developing PMS. This research recommends conducting a more in-depth study to better understand the leading performance indicators by benchmarking with similar companies. This study's proposed PMS is dynamic to facilitate the wishes of corporate executives. In addition to measuring the company's performance, the PMS proposal is intended to provide an overview of the business strategy roadmap to improve the company's valuation in preparation for the IPO plan in 2025. The annual performance evaluation would focus on each stage, as described in the Performance Management System.

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