

MANAGEMENT PLANNING FOR FUEL OIL AND LUBRICANTS TO SUPPORT INDONESIAN NAVY DUTIES

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ABSTRAK

Fuel Oil and Lubricants in the Indonesian Armed Forces environment has a strategic role as a source of energy and fuel to drive the Main Equipment or Equipment Equipment (Alpal) to ensure the implementation of the development and use of TNI forces. This fuel oil is used as a supply to support daily activities. As an element of basic needs in supporting the training and operational activities of Navy personnel, Satbek Denma Mabelsal, an agency under Denma Mabelsal, carries out BMP management active Mabelsal environment. Satbek Denma Mabelsal has applied e-Ranjen in supporting the Government's program, namely the e-BBM, in carrying out the agency and effectiveness of BMP management. Using the SWOT, Borda successfully identified obtaining the identification of factors, priority strategies and roadmaps in implementing fuel and lubrication management in the MoD, Indonesian Armed Force in general and Indonesian Navy in particular.

1. INTRODUCTION

To support the main duties of the Navy Headquarters, each Work Unit under the Navy Headquarters carries out operational activities that often use transportation tools and mobility mobilization participation in activities and exercises. This transportation cannot be separated from using fuel oil and lubricants or BMP consisting of MT-88, HSD, and Pertamina and sharing various vehicle lubricating oils. BMP must be distributed and reported on its use by units of supplies periodically, whether daily, monthly, quarterly or annually. In the organizational structure of the Navy based on the Decree of the Chief of Staff of the Navy, no. Kep/1843/I/2018,, dated June 4, 2018, which is stated in the reference manual for the norms for the provision of fuel oil and lubricants within the Navy, it is regulated the amount of fuel blindness fulfilment based on the type and type of vehicle and its acquisition in a matter of per day.

To support these regulations, the distribution and administration of fuel oil must be in line with that have rules Based on the Decree of the Commander of the TNI Number Kep/962/XII/2020 dated November 7, 2020, concerning Guidelines for the Implementation of Fuel Oil and Lubricant Management within the Indonesian National Army as stated in the implementation manual of procedures for managing fuel oil in the TNI environment, fuel has a very strategic role because the main elements are used as energy and fuel sources to drive the main tool abbreviated as alat or equipment abbreviated as types of equipment to ensure the implementation of the construction and use of TNI forces, so that the needs of fuel, facilities, infrastructure, facilities, services and other completeness needed to improve the smooth

distribution of BMP must be made and compiled properly.

In the early stages of building an e-Ranjen support tool, it costs more than the Existing ranjen card. Still, compared to the potential benefits obtained, a gap will appear that identifies that e-ranjen is more profitable than the existing ranjen card, so e-ranjen is very feasible to develop. However, so far, the distribution process using this method is still not optimal due to factors that affect the service mechanism and supporting device factors that are not optimal. In addition, of the three SPBTs owned by Denma Mabelsal, only the central SPBT has applied the e-Ranjen. So this makes the service process considered less effective and efficient in its operation. Of course, this requires optimization of existing processes so that improvements can be made to facilitate the distribution process and service to users. Therefore, the author intends to model these problems in this paper using a SWOT analysis method, namely analyzing strengths, weaknesses, opportunities, and threats, to get conceptual policy strategies. These policy strategies are weighted using the Borda Method to give weight to predetermined plans and get selected strategy priorities.

2. LITERATURE REVIEW

In a 2017 study conducted by Fahmy Zulkifli on "Analysis Effectivity of Employee Training Abroad (Studies at P.T. Pertamina Trans Continental branch Surabaya)", using the SWOT Analysis SWOT method (strengths, weaknesses, opportunities, and threats). The results of the analysis and discussion carried out by P.T. Pertamina Trans Kontinental implement a marketing mix marketing strategy using the main principles of the parent company, namely Reborn,

Revitalization, and Expansion. P.T. Pertamina Trans Kontinental has several opportunities, including the demographic and economic situation of the Indonesian state, the increase in oil exploration activities to offshore areas directly, and PTK taking advantage of its position as a subsidiary of P.T. Pertamina, the strong government support.

In the 2018 research that Arslan Ayub carried out, Adeel Razzaq, Muhammad Salman Aslam, and Hanan Iftekhhar with the title "A Conceptual Framework on Evaluating Swot Analysis as The Mediator in Strategic Marketing Planning Through Marketing Intelligence", The results of this study help marketing managers to understand the importance of marketing intelligence and pre-employment evaluation for effective strategic marketing planning, in the 2019 research that Ahmad Fauzi has carried out with the title "SWOT Analyst Management Strategy at P.T. Pertamina Persero" using the Swot method. The results of this study are the results of the survey maintaining dominance in the Indonesian market. Strategies can be used starting with improving internal human resources, consumer trust, and product quality.

In a 2020 study by Toman Sony Tambunan titled "SWOT Analysis for Tourism Development Strategy of Samosir Regency" with the SWOT Analysis Swot method (strengths, weaknesses, opportunities, and threats). The research results in increased human resources in supporting the Samosir district to become a tourist attraction are very lacking. There needs to be an increase become its attraction in the 2021 Research conducted by Achmad Gunawan, Ahmad Hidayatullah and Abdurrahim Hidayat with the title "Development of e-Sport and the gaming industry using SWOT analysis" using the SWOT Analysis SWOT research method (strengths, weaknesses, opportunities, and threats). The research resulted in an enormous opportunity for esports and the gaming industry. For the gaming industry, a strong economic policy structure must be built that can maximize the potential for welfare without hindering the development of esports and the gaming industry itself in the 2021 Research conducted by Sulasih, Weni Novandari, Suliyanto, Fera Agus Dwiyaningsih with the title "SWOT Analysis to Determine a Creative Economic Development Strategy During the Covid-19 Pandemic" using SWOT Analysis (strengths, weaknesses, opportunities, and threats). This research resulted in strategies implemented, namely increasing production, bookkeeping and skills training for employees, product quality, and promotion using various social media. In the 2022 research conducted by Irda, Reni Yuliviona, Elfitra Azliyanti, and Dahliana Kamener with the title "SWOT Analysis of Padang City MSMEs in the Pandemic Era Covid-19" using the SWOT method (*strengths, weaknesses, opportunities, and threats*). The results of the analysis and discussions that have been carried out improve product quality to anticipate competitors from within other provinces and regions by implementing encouraging business stability and participating in banking programs to improve creative business.

3. MATERIALS AND METHODS

3.1. Strategy Management Theory

George R. Terry, in the book Principles of Management (Sukarna, 2011: 3), also states that management is *accomplishing predetermined objectives through other people's efforts, or management is the achievement of goals that have been set through or together the actions of others*. Strategy management can be defined as the art and science of formulating, implementing, and evaluating cross-functional decisions that enable an organization to achieve its goals. Historically, the main benefits of strategic management have helped organizations develop better strategies by using a more systematic, logical and rational approach to strategy choice. (Istiqomah, 2017)

In another opinion, strategy management is a set of managerial decisions and actions that determine performance in the long term. Development strategy management includes environmental observation, strategy formulation (strategic or long-term planning), strategy implementation, and evaluation and control. Development strategy management emphasizes observing and evaluating ecological opportunities and threats by looking at strengths and weaknesses. (Hunger & Wheelen, 2010)

Management is essential for any individual or group activity in the organization to achieve the desired goals. Management is process-oriented, which means that management requires human resources, knowledge, and skills for activities to be more effective or can produce actions in achieving success. Therefore, the non-organization will be successful if it does not use good management. Based on the above understanding, I believe that what is meant by management is the science of regulating processes to achieve predetermined goals to achieve appropriate results.

Strategy management can be defined as the art and science of formulating, implementing, and evaluating cross-functional decisions that allow an organization to achieve its goals. This definition implies strategic management focuses on integrating management, marketing, finance/ accountability, production/ operations, research and development, and information systems to achieve organizational success. The term strategic management in this text is synonymous with strategic planning. Strategy management is a set of managerial decisions and actions that determine the long-term performance of an enterprise. The strategy includes scanning the environment (both external and internal), strategy formulation (strategic or long-term planning), strategy implementation, and evaluation and control. Therefore, strategic management research emphasizes monitoring and evaluating external opportunities and threats, considering the company's strengths and weaknesses.

The goal of strategic management is to capitalize on and create new and different opportunities for tomorrow; Long-term planning, on the contrary, tries to optimize for tomorrow's trend today. The strategic plan results from difficult managerial choices among many good alternatives. It signals a commitment to a particular market, policy, procedure, and operation instead of another action program.

Strategic management has evolved, and its primary value is helping organizations operate successfully in dynamic and complex environments. Companies have become less bureaucratic and more flexible to be competitive in a dynamic environment. In a stable environment like the one in the past, a competitive strategy simply involves defining a competitive position and then maintaining it.

3.2 SWOT Analysis

SWOT analysis is an acronym or abbreviation of four words, namely strengths, weaknesses, opportunities, and threats. SWOT analysis is one of the methods used to evaluate strengths, weaknesses, opportunities, and threats in business speculation. SWOT analysis is an instrument for identifying various factors formed systematically, which is used to formulate a company's strategy. This analytical approach is based on the logic that can maximize strengths and opportunities while minimizing weaknesses and threats. A SWOT analysis can be applied by analyzing and sorting out the factors affecting the four. Thus, the analysis results can be used for a strategic plan based on the analysis of the company's strategy factors (strengths, weaknesses, opportunities and threats).

Conducting internal factor evaluation (IFE) and External Factor Evaluation (EFE) identification is a decision-making support tool. It can be used to analyze internal conditions and the organizational environment. The IFE matrix is a strategy formulation tool used to summarize and evaluate key strengths and weaknesses in functional business areas and provides a basis for identifying and assessing relationships between those areas (David, 2006). The EFE matrix determines the company's external factors regarding opportunities and threats that are considered important. External data are collected to analyze economic, social, cultural, demographic, environmental, political, governmental, legal, technological, and competitive issues (David, 2006). The steps in compiling the IFE and EFE matrices are 1) Identification of the main external/internal; 2) Set weights and ratings; 3) Use the result so that the SWOT matrix formed can provide information on the internal and external conditions of the organization systematically (Zivkovic, 2015).

The SWOT matrix is used to develop an organizational or corporate strategy that clearly describes the opportunities and threats faced by the organization/company so that it can be adjusted to the strengths and weaknesses of the organization/company. The matrix consists of IFAS

(Internal Factor Analysis Survey) and EFAS (External Factor Analysis Survey). This matrix produces four possible alternative strategies: the S-O, the W-O, the S-T, and the W-T (Rangkuti, 2015).

3.3 Data Sources

In this study, the data sources used by the authors were primary data sources and secondary data. The primary data source is data obtained directly through interviews with 5 (five) experts who are competent in assessing BMP Management in satbek denma Mabelsal. These experts provide some information that will be used as the main data source in the early stages of research development. At the same time, secondary data sources are data obtained directly or through other sources already available 38 before the author conducts research, namely through books, journals and regulations related to research, such as SP2M receipt reports and fuel distribution reports.

3.3 Research Subject

The subject of study is where variables are attached. The subject of study is the place where data for research variables are obtained (Suharsimi, 2010). The subjects in this study were officials and soldiers of the Navy and local Government, namely:

1. BMP Subdisvedcatek Disbekal
2. Kasi Sarpras Subdisbekcatek Disbekal
3. Head of Subdivision of Subdisbekacatek Fuel Disbekal
4. Kasatbek Denma Mabelsal
5. Kaurbektek Satbek Denma Mabelsal

3.4 Research Design

Research design, whether qualitative, quantitative, or mixed methods, applies a plan or proposal to carry out research that involves links between philosophical worldviews, selected research strategies (selected strategies of inquiry), and various specific methods) in the series of studies. Specific methods in the series of research activities include question preparation, data collection, data analysis, interpretation, writing, and validation.

This study is related to the BMP management strategy, which first discusses the concept of Denma Mabelsal's strategic planning in the management of fuel oil and lubricants (BMP) in supporting the task of the Navy. Literature study literature that discusses the planning of BMP management strategies that have occurred becomes material for the next stage of the process, namely the data processing stage.

The researcher provided a questionnaire where the respondents were resource persons and officials of the Head of the Sub-District Head of Bekcatek Disbekal, Kasubsi Bekcatek Disbekal, Kastbek Denma Mabelsal, Kasibektek Denma Mabelsal, and Ka SPBT. The integration of several theoretical concepts and methods is applied to the assessment of threat criteria, Denma Mabelsal's BMP management strategy

integrated with SWOT analysis. Here is the research flowchart.

4. ANALYSIS AND DISCUSSION

4.1 Analysis of Data and Research Results

Respondents to the primary data collection are experts and officers who have competence in their fields and are equipped with official experience, and have a strategic thinking orientation on Liquid Logistics Supplies and Distribution in the Navy Environment with all developments in it. The next stage of this research is data processing in accordance with the SWOT research method. SWOT analysis is used to capture expert perceptions and assessments of internal and external factors in liquid Logistics Supplies and Distribution in the Navy Environment, especially in Satbek Mabelsal. Furthermore, it is continued by carrying out Borda analysis which is used for weighting, which will produce priorities for the Fuel Management Strategy and BMP Satbek Denma Mabelsal in Supporting the Task of the Navy.

4.2 Internal Factor Identification (IFI)

The purpose of the analysis of the internal environment of an organization is aimed at identifying the strengths and weaknesses that exist in an enterprise organization can be said to have strength if internal business resources and processes have the ability (capability) that is able to create distinctive competencies so that an organization will gain an advantage. Identification of internal factors in the strategy to increase the effectiveness of Satbek Denma Mabelsal's ability in fuel and BMP Management which is carried out through interviews/interviews and questionnaires with experts, namely assessing criteria with provision 1. Very Few, 2. A little, 3. Pretty much, 4. Very much. If the value of the criterion is greater/equal to three (≥ 3), then the criterion is strength. If it is smaller than three (< 3), then the criterion is a drawback.

The following is a table showing answers from participants or respondents from interviews with experts regarding the identification of internal factors:

Table 1. Identification of Internal Factors

No	Internal Factor	R1	R2	R3	R4	R5	Weight Mean	Factor
1	Number of SPBT owned by Satbek Denma Mabelsal	4	4	3	3	4	3,57	Strength
2	Ranjen Use Policy has been implemented	3	3	3	4	3	3,18	Strength
3	Unfulfilled DSP Satbek Denma Mabelsal	2	1	2	1	1	1,32	Weakness
4	Not all Satbek members are able to operate the e-Ranjen System	2	1	2	2	1	1,52	Weakness
5	e-BMP policy as a follow-up to e-ranjen	3	3	3	3	4	3,18	Strength
6	e-coupon Usage Policy	3	3	4	3	4	3,37	Strength
7	The application of e-BBM technology in fuel filling can be recorded in real-time	3	3	4	4	3	3,37	Strength
8	Availability of e-ranjen Barcode Sensor	2	2	1	1	2	1,52	Weakness
9	Refueling Needs protocol service	2	2	2	1	1	1,52	Weakness
10	There is no integrated system between SPBT	2	2	2	1	1	1,52	Weakness
11	The e-Ranjen program is more efficient because it is paperless	3	4	3	3	3	3,18	Strength
12	There is an administrative irregularity in the use of Ranjen	2	2	1	2	2	1,74	Weakness
13	The payment method with plong method allows human error to occur	1	2	2	1	1	1,32	Weakness
14	The e-Ranjen program is a step by the Navy to follow technological developments	3	3	3	3	4	3,18	Strength

4.3 External Factor Identification (IFE)

External factors are external factors of the company or organization that can influence internal processes in the organization in determining strategy, direction and policy choices. External factors can be in

the form of opportunities and threats that influence the implementation of e-BMP in the Satbek Denma Mabelsal environment. External identification aims to obtain information about opportunities and threats that can affect the development of a strategy, not only limited to threats to implement the strategy but also in

the form of opportunities that can be utilized to achieve the objectives. The essence of *external* identification is to present complete information about conditions outside the company or organizational environment that can be used as input in the strategic planning process in the application of e-bmp in the Satbek Denma Mabesal environment. Identification of external factors is carried out through interviews / interviews and questionnaires with *experts*, namely assessing criteria

with provision 1. Extremely Threatening Conditions, 2. Threatening conditions, 3. Conditions are favourable, 4. Conditions are favourable. If the value of the criterion is greater/equal to three (≥ 3), then the criterion is an opportunity. If it is smaller than three (< 3), then the criterion is a threat. The following is a table showing answers from participants or respondents from interviews with *experts* regarding the identification of external factors:

Table 2. Identifikasi Faktor Eksternal (IFE)

No	Faktor Eksternal	R1	R2	R3	R4	R5	Bobot rata-rata	Faktor
1	Power Outage from PLN around Satbek Denma Mabesal	1	1	1	3	2	1,43	Threat
2	Implementation of e-ranjen and e-BMP CrewIng Training	4	4	3	3	4	3,57	Opportunity
3	Low Bandwidth quality	1	2	1	1	2	1,32	Threat
4	BMP Management Policy in MoD Environment	3	3	3	3	4	3,18	Opportunity
5	Rapid technological developments demand the use of online application systems	2	2	2	2	2	2,00	Threat
6	Socialization activities from the Air Force Headquarters on e-ranjen	3	3	3	3	4	3,18	Opportunity
7	Refueling not according to procedure	2	1	2	1	2	1,52	Threat
8	Navy Leadership Policy in supporting PMD	4	3	3	4	3	3,37	Opportunity
9	Soaring prices of World crude oil of the Russian-Ukranian war	2	1	1	2	2	1,52	Threat
10	Government Policy to the TNI in limiting the use of fuel	3	3	3	3	4	3,18	Opportunity
11	RFID technology has been applied in the military field	3	3	4	3	3	3,18	Opportunity
12	The e-BBM program requires supporting devices such as Laptops, RFID writers and readers and install good software	2	2	2	1	2	1,74	Threat
13	Navy policy in the implementation of e-Ranjen throughout the Navy Municipality	4	4	4	3	4	3,78	Opportunity
14	The e-Ranjen card can only be used according to the vehicle number.	2	2	2	1	2	1,74	Threat

4.4 Research Discussion

After the weight of each IFAS and EFAS factor including IFAS and EFAS *ratings* in data processing,

the next step is to identify the final value of each IFAS and EFAS matrix by multiplying the initial weight by the rating, along with a table of total weighting calculations.

Tabel 3. IFAS total Factor weighting matrix

NO	Faktor	Code	Wheight	Rating	Score
Strength					
1	Number of SPBT owned by Satbek Denma Mabesal	S1	0,26	4	1,04
2	Ranjen Use Policy has been implemented	S2	0,24	4	0,96
3	e-BMP policy as a follow-up to e-ranjen	S3	0,18	3	0,54
4	e-coupon Usage Policy	S4	0,16	3	0,42
5	The application of e-BBM technology in fuel filling can be recorded in <i>real time</i>	S5	0,08	2	0,16
6	The e-Ranjen program is more efficient because <i>it is paperless</i>	S6	0,06	2	0,12

7	The e-Ranjen program is a step by the Navy in following technological developments	S7	0,03	2	0,06
Total			1	Skor	3,30
Weakness					
1	Unfulfilled DSP Satbek Denma Mabelsal	W1	0,27	4	0,81
2	Not all Satbek members are able to operate the e-Ranjen System	W2	0,19	3	0,57
3	Availability of e-ranjen Barcode Sensor	W3	0,15	3	0,30
4	Refueling Needs protocol service	W4	0,12	2	0,24
5	There is no integrated system between SPBT	W5	0,10	2	0,20
6	There is an administrative irregularity in the use of Ranjen	W6	0,09	2	0,18
7	Payment method with plong method allows <i>human error</i> to occur	W7	0,08	2	0,14
Total			1	Skor	2,71

Tabel 4. Matrik Total weighting Factor EFAS

No	Faktor	Kode	Bobot	Rating	Nilai
Opportunity					
1	Navy Leadership Policy in supporting PMD	O1	0,19	4	0,57
2	Implementation of e-Ranjen and e-BMP Crewing Training	O2	0,17	3	0,51
3	BMP Management Policy in MoD Environment	O3	0,15	3	0,45
4	Socialization activities from the Air Force Headquarters on e-ranjen	O4	0,14	3	0,42
5	Government Policy to the TNI in limiting the use of fuel	O5	0,13	2	0,26
6	RFID technology has been applied in the military field	O6	0,11	2	0,22
7	Navy policy in the implementation of e-Ranjen throughout the Navy Municipality	O7	0,10	2	0,20
Total			1	Skor	2,82
Threat					
1	Power Outage from PLN around Satbek Denma Mabelsal	T1	0,27	4	0,81
2	<i>Bandwidth</i> quality low	T2	0,20	4	0,60
3	Technology development grow fastly	T3	0,15	3	0,45
4	Refueling not according to procedure	T4	0,14	3	0,42
5	Soaring world crude oil prices due to the Russian-Ukranian war	T5	0,13	2	0,26
6	The e-BBM program requires supporting devices such as Laptops, <i>RFID writers and readers and install good software</i>	T6	0,08	2	0,16
7	The e-Ranjen card can only be used according to the vehicle number	T7	0,05	2	0,10
Total			1	Skor	3,27

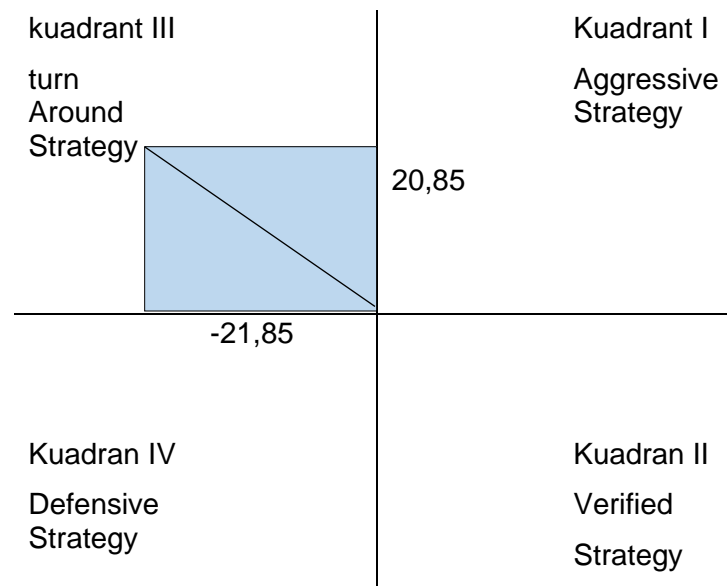
After obtaining the results of the calculation of external and internal factor scores, it will then calculate the total weighting, so that the right strategy can be determined for the development of e-Ranjen in Satbek

Denma Mabelsal. The weighting can be seen in the table below:

1. X axis = (Strength value – Weakness value)
2. Y-axis = (Opportunity value – Threat value)

Table 5. Quadrant Calculation Table

Internal (X)	Value	Eksternal (Y)	Value
Strengths	24,55	Opportunities	47,8
Weakness	46,4	Threats	26,95
Nilai X	-21,85	Nilai Y	20,85



Gambar 2. Kuadrant Matrix SWOT

After the value on the X axis (-21.85) and the value on the Y axis (20.85) are found, then the next step is to determine the position of the value in quadrant 3, which is to support the turn around strategy. Here is a picture of the matrix diagram analysis. Based on the results of the IFAS-EFAS interaction, the alternative strategy that gets the highest weight is Weakness–Opportunity (WO) or is in Quadrant III as shown in Figure 2. The position of intersection in Quadrant III identified favorable conditions for using the Turn Around Strategy. The Turn Around strategy is a strategy to maximize the strength factors in anticipating the threat that exists in Satbek Denma Mabelsal.

The results of the IFAS-EFAS interaction resulted in an alternative strategy that received the highest weight was Weakness–Opportunity (WO) as shown in figure 4.3. This can be translated as a strategy that takes advantage of opportunities to overcome weaknesses. The formulation of the strategy is obtained through a combination of factors of S, W, O, and T elements, the result is obtained that the management of BMP in Satbek Denma Mabelsal is in the position of quadrant III or implements the Weakness Opportunity (WO) strategy. The following is the result of a combination of strategies that include:

WO1 Carry out e-Ranjen and e-BMP training to all members of Satbek Denma Mabelsal, so that all satbek members can operate e-Ranjen and e-BMP to support the task of managing ranjen and BMP in the Mabelsal environment.

WO2 Equips RFID sensors for e-Ranjen and e-BMP in implementing BMP management policies in the Kemhan environment. WO3 Meets DSP Satbek denma Mabelsal to support the Navy's task in implementing BMP management policies in the Kemhan environment.

WO4 Integrates all existing SPBT within the TNI Headquarters to support the government's policy to monitor restrictions on fuel use in the TNI environment. WO5 Manages the fuel needs of the protocol optimally so as not to cause swelling of fuel needs.

4.5 Borda Method

Based on the formulation of the Fuel and Lubricant Management Strategy (BMP) in the Satbek Denma Mabelsal environment, weighting is then carried out for the selection of priorities from strategies obtained through strategy ranking from interviews and questionnaires by experts using the Borda Method. Here are the results of the analysis through the Borda Method for weighting strategies .

Table 6. Strategy W – O (Weakness – Opportunity)

Code	Weakness	Opportunity	Strategies
W.O. 1	W1, W2, W3	O1	Equipping RFID sensors for e-Ranjen and e-BMP in carrying out BMP management policies in the Kemhan environment
W.O. 2	W2	O1, O2, O3	Carry out e-Ranjen and e-BMP training to all members of Satbek Denma Mabelsal, so that all satbek members can operate e-Ranjen and e-

			BMP to support the task of managing ranjen and BMP in the Mabesal environment.
WO 3	W3	O3	Carry out e-Ranjen and e-BMP training to all members of Satbek Denma Mabesal, so that all satbek members can operate e-Ranjen and e-BMP to support the task of managing ranjen and BMP in the Mabesal environment

In Table 4.13, it is explained that there are three selected strategies and implemented strategy rankings through a Borda questionnaire filled out by experts to obtain strategy priorities. From the results of this strategy, a ranking will be carried out to determine the

priorities of the strategy used by Satbek Denma Mabesal. And here are the results of Borda's questionnaire for strategy ranking as shown in table 7. next:

Table 7. Strategy Priority Questionnaire Results

No	Strategy	Code	Sort Assessment Expert				
			XP 1	XP 2	XP 3	XP 4	XP 5
1	Equipping RFID sensors for e-Ranjen and e-BMP in carrying out BMP management policies in the Kemhan environment	W.O. 1	2	2	2	1	2
2	Carry out e-Ranjen and e-BMP training to all members of Satbek Denma Mabesal, so that all satbek members can operate e-Ranjen and e-BMP to support the task of managing ranjen and BMP in the Mabesal environment.	W.O. 2	3	1	3	3	3
3	Fulfilling the DSP Satbek denma Mabesal to support the task of the Navy in implementing BMP management policies in the Kemhan environment	W.O. 3	1	3	1	2	1

Table 8. Calculation of Strategy Priority Weights

No	Strategy	Ranking Strategy			
		1	2	3	
1	Equipping RFID sensors for e-Ranjen and e-BMP in carrying out BMP management policies in the Kemhan environment	1	4		5
2	Carry out e-Ranjen and e-BMP training to all members of Satbek Denma Mabesal, so that all satbek members can operate e-Ranjen and e-BMP to support the task of managing ranjen and BMP in the Mabesal environment.	1		4	5
3	Fulfilling the DSP Satbek denma Mabesal to support the task of the Navy in implementing BMP management policies in the Kemhan environment	3	1	1	5

Based on the results of the calculation of the priority weight of the strategy in table 8, the next step is

to normalize by multiplying each frequency by (n-1) as in the calculation of the table below:

Table 9. Calculation of Strategy Priority Weights

No	Strategy	Ranking Strategy			Value
		1	2	3	
1	Equipping RFID sensors for e-Ranjen and e-BMP in carrying out BMP management policies in the Kemhan environment	3	8	0	11
2	Carry out e-Ranjen and e-BMP training to all members of Satbek Denma Mabesal, so that all satbek members can operate e-Ranjen and e-BMP	3	0	4	7

	to support the task of managing ranjen and BMP in the Mabasal environment.				
3	Fulfilling the DSP Satbek denma Mabasal to support the task of the Navy in implementing BMP management policies in the Kemhan environment	9	2	1	12
Wheight		15	10	5	30

Based on the results of the weight calculation above, it can be seen that the highest strategic ranking is by fulfilling the Satbek and Mabasal DSP to support the Navy's task in implementing BMP management policies in the Kemhan environment. In the second order, namely by equipping RFID sensors for e-Ranjen and e-BMP in carrying out BMP management policies in the Kemhan environment. And in the last order, namely Carrying out e-Ranjen and e-BMP training to all members of Satbek Denma Mabasal, so that all satbek members can operate e-Ranjen and e-BMP to support the task of managing ranjen and BMP in the Mabasal environment.

4.6 ISM method

This sub-chapter, it is carried out to determine the mapping of fuel management strategies in the environment of the Navy headquarters. The first thing that is carried out is the identification of elements that need to be researched. In this study, these elements

were obtained from the results of determining strategies in the SWOT analysis.

In mapping using the ISM method, there are several procedures including as described below: Parameter identification Elements that must be considered for relationship identification, obtained through surveys, or expert interviews. Development of Structural Self Interaction Matrix (SSIM) The development of an interpretive structural model begins with the preparation of an interaction matrix. A matrix is arranged based on the results of the questionnaire. Relationships between parameters symbolized by

V: The relationship of the E_i element to E_j , not vice versa

A: The relationship of the E_j element to E_i , not the other way around

X: Interrelation relationship between E_i and E_j (it can be the other way around)

O: Indicates that E_i and E_j are not related For later it is poured in the form of a matrix, as below.

Table 1 Matrix VAXO Questionare

NO	Strategi	WO1	WO2	WO3	WO4	WO5
WO1	Meets DSP Satbek Denma		V	O	X	O
WO2	Meets DSP Satbek Denma	A		V	X	O
WO3	Carry out e-Ranjen training	O	A		X	O
WO4	Integrating the entire SPBT	X	X	X		X
WO5	managing the needs of the BBM protocol	O	O	O	X	

After getting the results from the table above, (y) is written as the x and y axes as in the table below: the calculation of *Dependent (x)* and *Driven Power*

Table 10 Result of the Variable X dan Y

Alternatif Strategi	Dependent (Y)	Driven (X)
WO1	2	2
WO2	2	2
WO3	1	1
WO4	4	4
WO5	1	1

Based on the data above, it can be known that:
a. Sector I (*Autonomous Variable*) consists of variables namely (WO 1), (WO2), (WO3) and (WO5). This sub-strategy is an element that has little dependence on other elements.
b. Sector I II (*linkage variable*) has no variable di sector II and Sector IV (*Independent Variable*) has one variable (WO4).These sub-strategies influence each

other and are influenced by other variables. Furthermore, the classification of the elements of the fuel management sub-strategy in the Mabasal can be classified in three sectors. Laying of these elements based on coordinate points obtained from the results of determining the partition level of the sub-strategy Based on the table above, it can be seen that:

- a. In the Autonomus section there are WO1 and WO5 Strategies.
- b. In the Independent section there is only WO2 which is less influenced by other strategies but affects some strategies.
- c. In the Linkage section there are WO3 and WO4 strategies that greatly affect other strategies.

47. Fuel Management Strategy in the Mabesal Environment

The formulation of the strategy is obtained through a combination of factors of elements S, W, O, and T, the result is obtained that the fuel management strategy is in the position of quadrant III or implements the Weakness Opportunity (WO) strategy. This condition is favorable for the fuel processing strategy in the Mabesal environment, because in terms of external factors, the opportunities that exist are much greater than the threats. After establishing the WO (Weakness–Opportunity) strategy as the strategy with the highest weight, it is necessary to carry out strategy mapping using Interpretative Structural Modelling (ISM) and the formulation of a development strategy Roadmap.

5. CONCLUSIONS

a. Based on the results of the identification of influencing factors in formulating the Denma Mabesal Strategy in the Management of Fuel and Lubricants (BMP) Guna Mendukung Tugas TNI AL telah diperoleh 2 faktor utama yaitu terdiri dari faktor internal (IFAS) consisting of 14 (fourteen) criteria, namely the number of SPBT owned by Satbek Denma Mabesal, Ranjen Use Policy has been implemented, Non-fulfillment of DSP Satbek Denma Mabesal, Not all Satbek members are able to operate the e-Ranjen System, e-BMP policy as a follow-up to e-ranjen, e-coupon use policy, application of e-BBM technology in fuel filling can be recorded in real time, availability of e-ranjen barcode sensors, refueling needs protocol services, There is no integrated system between SPBT, the e-Ranjen Program is more efficient because it is paperless, there is an administrative irregularity in the use of Ranjen, Payment methods with the plong method allow *human error* to occur, the e-Ranjen Program is a step by the Navy in following technological developments and external factors (EFAS) which also consists of 14 (fourteen) criteria, namely Power Outages from PLN around Satbek Denma Mabesal, Implementation of e-ranjen and e-BMP Crewing Training, Low Bandwidth Quality, BMP Management Policy in the Kemhan Environment, Rapid technological developments demand the use of online application systems, Socialization activities from the Air Force Headquarters on e-ranjen, Refueling not in accordance with procedures, Navy Leadership Policy in supporting PMD, Soaring prices of crude oil in the Russian-Ukrainian war, Government Policy to the TNI in limiting the use of fuel, RFID technology has applied in the military field, the e-BBM program requires supporting devices such as laptops, RFID writers and readers and

install good software, Navy policy in the application of e-Ranjen throughout the Navy Municipality, e-Ranjen cards can only be used according to the vehicle number.

b. Based on the results of data processing with SWOT analysis, the formulation of the *Weakness-Opportunity* (WO) strategy with alternative strategy was obtained as follows, namely Fulfilling the DSP Satbek denma Mabesal to support the task of the Navy in implementing BMP management policies in the Kemhan environment. In the second order, namely by equipping RFID sensors for e-Ranjen and e-BMP in carrying out BMP management policies in the Kemhan environment. And in the last order, namely Carrying out e-Ranjen and e-BMP training to all members of Satbek Denma Mabesal, so that all satbek members can operate e-Ranjen and e-BMP to support the task of managing ranjen and BMP in the Mabesal environment.

c. Based on the results of data processing using the Borda and ISM Methods, the following strategy priorities were obtained, namely starting with the fulfillment of DSP members in Satbek Denma Mabesal, to support the implementation of Satbek's duties to manage BMP in the Mabesal environment. The next plan is to carry out training to Satbek Denma Mabesal members so that all members can operate e-Ranjen and e-BMP in the Mabesal environment. Furthermore, it complements the e-Ranjen and e-BMP sensors in the Mabesal environment. then manages the fuel in the Mabesal environment. The latter is to integrate the entire fuel management in the Mabesal environment.

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