THE DEVELOPMENT OF STRATEGY OF INDONESIAN NAVAL REPAIRMENT AND MAINTENANCE FACILITY (FASHARKAN) TO SUPPORT THE READINESS OF BATTLESHIPS IN FIRST FLEET COMMAND BY USING TOWS METHOD (CASE STUDY FASHARKAN JAKARTA)

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ABSTRACT

Indonesian Naval Repairment and Maintenance Facility that has location in Jakarta is an organization which has duties and tasks to repair and maintain the KRI. To implement their complexity tasks and fulfill the developing of Naval technology, it needs equipment that requires with high technology and professional personel suitable with their fields. The purpose of this research is to determine the alternative development strategy of Indonesian Naval Repairment and Maintenance Facility Jakarta. This study uses the TOWS analysis method (Treaths Opportunities weaknesses Strengths). TOWS analysis is used to formulate and provide alternatives in the development strategy of Fasharkan Jakarta. Based on the results of the TOWS matrix analysis, the SO Strategy consists of 6 (six) strategic steps, the ST Strategy consists of 6 (six) strategic steps, the WO Strategy consists of 9 (nine) strategy steps and WT strategy consists of 4 (four) steps strategy. Based on weighting are using the EFAS and IFAS matrices, the chosen strategy is the WO Strategy, so that the WO strategy becomes the first alternative. Based on the results of the classification of elements in the WO strategy, there are 5 (five) levels of hierarchical structure. In this hierarchical structure, it can be seen that the sub-strategy (WO5) is at level V. Then the sub-strategies (WO1) and (WO4) are at level IV. At level III, it consists of 4 (four) sub strategy, they are (WO2); (WO6); (WO7); (WO8). At level II, it is named the sub strategy (WO3). At level I sub strategy is (WO9).

Keywords: *Fasharkan Jakarta, Development Strategy, TOWS.*

1. INTRODUCTION

In the report of Global Marine Technology Trends 2030, the power map of countries in the world will have the drastic changes in 2030. Asia will pass North America and Europe in terms of global power, which are grouped into types of potential technology in three major sectors, namely shipping, shipping and utilization. sea space. In this projection, Indonesia is seen as one of the countries that will have an increasing power (emerging power) in 2030. However, a note to note is that Indonesia needs to increase its maritime power, so that it is able to manage the potential and threats that may arise in their territorial waters. (Phillips, 2008).

The TNI Commander has set 11 (eleven) priority programs for 2018 in accordance with government policy commitments and the importance of synchronizing the development of the TNI force title with national development. This policy is in line with the national maritime policy through the concept of Indonesia as a World Maritime Axis which was conveyed by President Joko Widodo at the 9th East Asia Summit (EAS), 13 November 2014. Where the national development agenda will be focused on five main pillars, namely: First, rebuilding Indonesia's maritime culture; Second, protecting marine resources and creating seafood sovereignty by placing fishermen on the main pillar; Third, give priority to infrastructure development and maritime connectivity by building sea tolls, deep seaports, logistics, the shipping industry, and maritime tourism; Fourth, Implementing maritime diplomacy,

through proposals to increase cooperation in the maritime sector and efforts to deal with sources of conflict, such as illegal fishing, violation of sovereignty, territorial disputes, piracy and marine pollution with an emphasis that the sea must unite various nations and countries and not separate; and Fifth, building maritime power as a form of responsibility for maintaining shipping safety and maritime security.

The implementation of the Navy's duties in defending and maintaining sovereignty at sea can be carried out with support for infrastructure and mastery of Naval Technology, especially in the Integrated Fleet Weapon System (SSAT). SSAT readiness and mastery of marine technology greatly affect the implementation of the Navy's duties in defending and maintaining the country's sovereignty, especially at sea. Thus, the readiness of the SSAT, especially the Indonesian Warship Ship (KRI), is a priority to support security at sea (Ahmadi, 2017). With the increasing number of the presence of KRI at sea, it will be able to control the sea area (sea control) and be able to minimize risks and be free from all threats that have been present so that the stability and balance and safety of the sea are maintained.

The development of the Indonesian Navy organization is consisting of three Fleet Commands (Koarmada), which are first fleet command in Jakarta, second in Surabaya and third in Sorong, West Papua. The task of the Fleet Command as an operational Kotama is to carry out maritime intelligence operations tasks in supporting the implementation of marine operations in the context of War Military Operations (OMP) and to carry out Military Operations Other Than War (OMSP) in the form of daily marine operations in its territory according to the policy of the TNI Commander (Asmoro RN, 2018). Meanwhile, as the Guidance Kotama, it has the task of fostering the capabilities and strength of the components of the Integrated Fleet Weapon System (SSAT), fostering maritime warfare, fostering operational readiness to implement OMP and OMSP and fostering maritime potentials to become a defense and security force under Kasal. The Fleet I Command has a working area covering Lantamal I Belawan, Lantamal II Padang, Lantamal III Jakarta, Lantamal IV Tanjung Pinang and Lantamal XII Pontianak. In carrying out its main duties to secure and maintain the integrity of the territorial waters under its jurisdiction. Fasharkan Jakarta has the main task is to assist the Commander of Indonesian Naval Base III in providing maintenance and repairing facilities to the KRI which will carry out repairs in the fields of ship building, docking, electronics, and weapons as well as fostering potential maritime services that are support the main task of Indonesian Naval Base III (Kasal, 2013).

In carrying out its main duties, Fasharkan Jakarta has the function of providing maintenance and repair facilities for KRI who will carry out repairs, maintaining the level of readiness of facilities and infrastructure in the Fasharkan environment so that they are able to accept the burden of maintenance and repair tasks for elements of the Navy, plan maintenance and repair activities at the depot level, medium and emergency repair of the Fleet I Commando equipment and its workshop equipment based on the plan and program of Disharkap Koarmada I in providing maintenance support for KRI. Fasharkan Jakarta is a type A Fasharkan, according to the type "A" Fasharkan has the ability to repair and maintain KRI up to the depot level. However, the current condition of Fasharkan Jakarta's ability is still limited in terms of implementing the repair and maintenance of KRI, because there are several things that still need to be improved and changes in the future, including the condition of existing human resources (HR) both in terms of quality and quantity is still not fulfilled, limited human resources who

have certification, have not been able to carry out repairs up to the depot level. The current docking capability of Fasharkan Jakarta is only capable of docking up to 50 tons and a Slip Way with a capacity of 600 tons, but its current condition is damaged and cannot be used to repair KRI and Fasharkan Jakarta currently does not have a Graving Dock (pool dock) with a capacity of 5000. ton. Besides that, the workshop facilities, safety equipment and supporting transportation equipment are old and still manual, so they are still behind the sea lift technology.

Figure 1. Slipway 50 Tons Fasharkan Jakarta.

Figure 2. Slipway 750 Tons Fasharkan Jakarta.

Fasharkan Jakarta as a supporting component for base facilities is in a strategic location, where the location is the Fleet I base / homebase, which is the berth for the completed KRI / KAL as well as a place to prepare technical

conditions for ships that will carry out operations, in connection with The operational demands and main duties of the KRI, increasing the ability of Fasharkan Jakarta to be very appropriate to get attention in the effort to increase the ability to improve the Fasharkan class A standard To Support the Readiness of Battleship in First Fleet Comand Using the TOWS Method (Case Study Fasharkan Jakarta).

2. MATERIAL AND METHODS

2.1 Strategic Management Concept

Strategic management is a managerial action in making decisions in determining the direction of long-term performance of an organization which includes observations of environmental influences, formulation or planning of a strategy, implementation of evaluation and implementation of the strategy itself (J. David Hunger, 2003). Etymologically, strategy comes from Greek which is derived from the derivative of the word strategos, in the Athenian era of democracy which meant "military commander". However, from the perspective of terminology, experts have different understandings of the meaning of strategy, but basically have a similar meaning or meaning, namely a plan to achieve goals efficiently and effectively (Syahtaria, 2019). According to (Istiqomah, 2017) Strategic management can be defined as the art and science of formulating, implementing, and evaluating cross-functional decisions that enable organizations to achieve their goals. This definition implies that strategic management focuses on integrating management, marketing, finance/accounting, production/ operations, scriptwriting and development, and information systems to achieve organizational success. The term strategic management in this text is used synonymously with the term strategic planning.

2.2 TOWS Analysis Theory

According to Kertajaya, et al (Kertajaya, 2005) The TOWS analysis begins with a study of external factors by conducting a threat-opportunity analysis, followed by a review of the company's internal conditions in the form of strength-weakness. This kind of analysis sequence is based on the fact that in the 1990s environmental change and turbulence became increasingly important, far beyond changes in the internal environment, therefore we have to start from the outside, new to the inside. In other words, we are using an outside-in, not inside-out approach.

When conducting a TOWS analysis, an organization may be trapped by placing too much pressure on internal factors and limiting the identification of threats and opportunities only to those that are in line with the company's capabilities. This does not mean that a company does not need to adapt the external environment to its internal conditions, this is the most important thing that companies must do. By examining all possible threats and opportunities before examining the company's weaknesses and strengths, we will tend to be better able to formulate and carry out the company's strategic steps. The TOWS analysis will provide a future paradigm so that the strategies created can also be used for the future.

The TOWS matrix consists of eight cells. As seen, there are four key factor cells, four strategy factor cells. Four strategy cells, labeled SO, WO, ST, and WT. is developed after solving the four key factor cells, labeled S, W, O, and T. The purpose of each match is to produce an alternative strategy that can be executed, not to choose or determine which one is the best. Therefore, not all strategies developed in the TOWS matrix will be selected for implementation. The TOWS matrix explains that there are four strategies we can develop.

2.3 Research Approach

This research uses quantitative analysis research method because in its implementation it is based on measurement results based on existing variables and also uses questionnaire and interview instruments. According to Bagman and Taylor, qualitative methodology is defined as a research procedure that produces descriptive data in the form of written or spoken words from people and observed behavior. (Taylor, 1975), (whereas the quantitative approach is one that is presented with numbers. This is in accordance with the opinion(Arikunto, 2006) who argues that quantitative research is a research approach that is required to use numbers, starting from data collection, interpretation of the data, and the appearance of the results.

2.4 Research Data Sources

Researchers collect research data sources from primary data sources and secondary data sources. These two data sources are collected in order to provide various information about the data to be analyzed. Based on the research data source, the data collected was divided into 2 (two), namely:

a. Primary research data comes from data collected by the author from the first source or the place where the research object was carried out. Primary data in this study were sourced from Disharkap Koarmada I, Fasharkan Jakarta and KRI First Fleet Command.

b. Secondary research data comes from data that has been previously collected by other researchers, agencies or other sources that have been tested / valid. Secondary data is obtained from literature, articles, journals and sites on the internet with regard to the research conducted.

2.5 Research Subjects

Research resource persons are people who understand about Fasharkan Jakarta. The resource

persons used in this research were those who were directly involved in the research, namely, Kafasharkan Jakarta, Kadisharkap Koarmada I, Kabagren/Fasharkan Jakarta Staff, Head of Jakarta Fasharkan Staff / Head of Fasharkan Jakarta, the Kabeng/Fasharkan Jakarta Staff and Chief Engineering Battleship First Fleet Command.

2.6 Data Collection Technique

Data collection is carried out to obtain the information needed in order to achieve the objectives of a study. In this research, data collection techniques were carried out through observation, interviews and documentation / literature study. Primary data is through observation and interviews (in-depth interviews. Secondary data is obtained from books, documentation and literature studies which are obtained indirectly from the subject or object of research.

2.7 Data Analysis Techniques

Data analysis is intended to find elements or sections that contain smaller categories of research data. In this study, researchers collaborated with sources to obtain patterns that match the object under study. Based on the existing problems, this research method uses the TOWS method. In the TOWS analysis, there are several stages including identifying external and internal factors, then compiling a matrix of external and internal factors and creating a questionnaire. From the results of the questionnaire, it can be concluded about the respondent's assessment of the existing indicators and compiled in a TOWS matrix. Then make an evaluation of external factors and internal factors by giving weight to strategic factors on a scale from 1 (bad) to 9 (good). Weighting of the group of factors and internal and external strategic factors through the pairwise comparison method. In developing alternative strategies, the TOWS matrix is used to help match strengths and opportunities (SO

strategy), strengths and threats (ST strategy), opportunities and weaknesses (WO strategy) and weaknesses and threats (WT strategy).

2.8 Research Flowchart

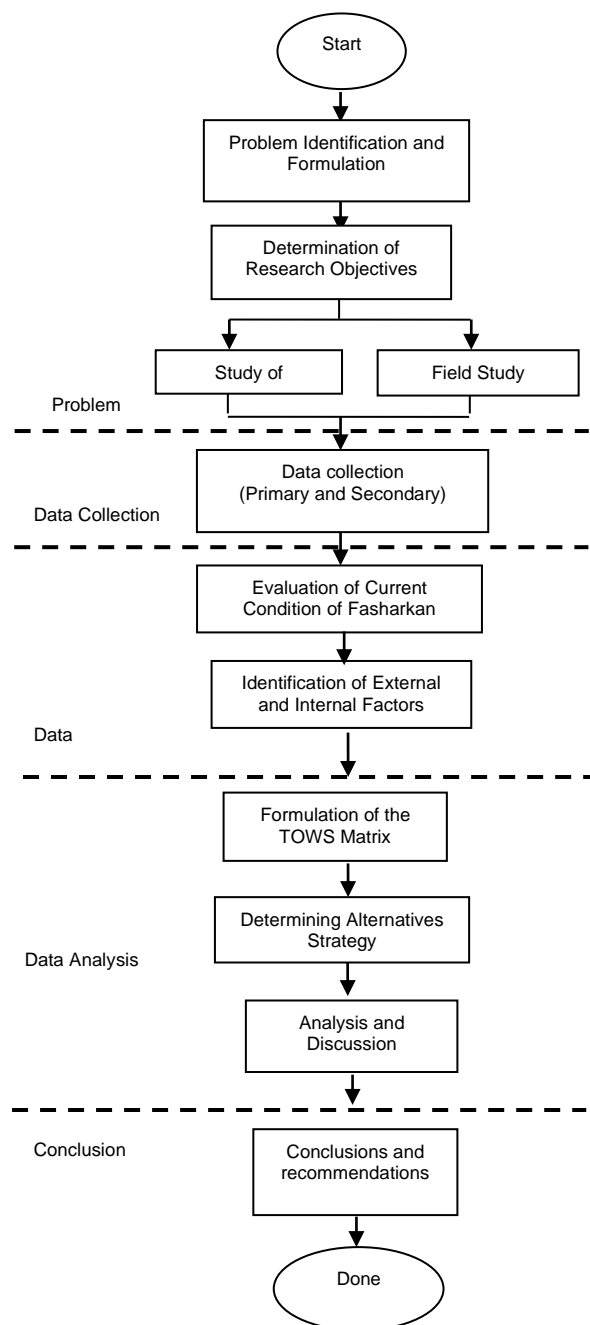An outline of all research activities is depicted in a flowchart as in Figure 3.

Figure 3. Research Flowchart

2.9 TOWS Matrix

From the identification of internal and external factors, the next step is to formulate

strategic factors by combining internal and external factors to determine the alternative development strategy for Fassharkan Jakarta. The strategy formulation and results are obtained from the TOWS matrix. The TOWS matrix illustrates how external factors, namely the opportunities and threats faced by the organization, are aligned with internal factors, namely the strengths and weaknesses of the organization.

From this matrix, four alternative strategies for the development of Fasharkan Jakarta can be generated as shown in Figure 4.
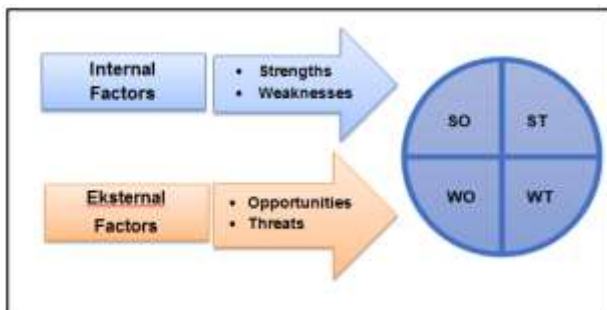

Figure 4. TOWS Matrix Analysis for Strategy Formulation

a. Identifying the factors that affect the internal research objectives of the organization which is also an activity to determine the strength factor variables Strength and weakness that exist. Then identify the external factors which are activities to determine the Opportunities and Threats.

b. Give weight to each factor external and internal they range from 0.0 (not important) to 1.0 (very important). The weight value is obtained from the weighting of the TOWS process which reflects the relative significance of an organizational factor to the research objectives.

c. Rank each factor external and internal factor to show the effectiveness of the current organizational strategy in responding to these factors.

d. Multiplies the weight of each factor external with its ranking to determine the weight score, as well as the internal factors.

e. Add up the average score for each variable to determine the total weight score.

3. RESULT AND DISCUSSION

The results of weighting the criteria and alternative strategies for the development of Fasharkan Jakarta are using weighting from EFAS and IFAS TOWS. In weighting EFAS and IFAS using a questionnaire given to stakeholders in the Jakarta fashion development strategy.

a. Weighting of Internal Factors (IFAS)

After the strengths and weaknesses of the internal factors in the development of Fasaharkan Jakarta are known, then the IFAS weighting is carried out as in the following table:

Table 1. Internal Factor Weighting Table

Internal Factor Criteria	Score	Weight (B)	Rating (R)	B x R
Able to carry out docking up to 700 tons	7.67	0.07	2.83	0.19
Has a dock	7.17	0.06	2.83	0.17
Having human resources who have skills in their fields	7.33	0.06	2.67	0.17
HR has the ability to interact with computers well	7.50	0.06	2.67	0.17
Technology transfer cooperation opens the way to mastering technology	7	0.06	2.67	0.16
The managerial of the organization is quite solid	7.17	0.06	3.33	0.21
The budget comes from APBN funds	7.33	0.06	3.17	0.20
Fasharkan's location is very strategic	7.33	0.06	3.17	0.20
Total Strength	**58.50**	**0.50**	**23.33**	**1.47**

Table 2. Weighting Table Internal Factors

Internal Factor Criteria	Score	Weight (B)	Rating (R)	B x R
Workshop equipment is old or old.	7	0.06	3.5	0.21
Slipway docking capability is limited to 700 tonnes	7.50	0.06	3.33	0.21
There is a lack of human resources at the operator level	7.67	0.07	3	0.20
HR does not have a professional certification	7	0.06	3.33	0.20
Not yet able to carry out repairs to KRI up to the depot level	7.33	0.06	3.33	0.21
The equipment used is still manual	6.67	0.06	3.33	0.19
Do not have welding technology with aluminum and computer systems	7.17	0.06	3.5	0.22
The dependence of the budget on the APBN is still mostly used for personnel expenditure	7.50	0.06	3.33	0.21
Number of Weaknesses	**57.83**	**0.50**	**26.67**	**1.66**
Total	**116.33**	**1**	**50.00**	**3.12**

Based on table 4.10 of the IFAS matrix above, it can be seen that the weight of the internal factor rating, where the weighting is carried out with the aim of knowing how much the factors influence or have an impact on the strategy factor itself. The weighting of the strategic factors in the table is obtained from the total strength score of 1.47 and the total weakness score of 1.66, so that the overall total of internal factors is 3.13. The purpose of this rating is to provide a scale ranging from 4 to 1 based on these factors towards the development of Fasharkan Jakarta to fulfill its main duties. The overall score shows how the development reacts.

b.   Weighting External Factors (EFAS)

After the opportunities and threats to external factors in the development of Fasaharkan Jakarta are known, then the EFAS weighting process is carried out as in the following table:

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Table 3. Weighting Table for External Factors

External Factor Criteria	Score	Weight (B)	Rating (R)	B x R
Government policy in developing the shipping industry as a driving force for the national economy	7.33	0.06	3.17	0.20
The new KRI Procurement Program is domestically produced	7.50	0.06	2.83	0.18
The positive trend in the growth of the national ship fleet is a lot of demand for ship repair	7.00	0.06	2.50	0.15
Economic growth supports an increase in the defense budget	7.17	0.06	2.67	0.16
Having the availability of young human resources at each level	7.50	0.06	2.50	0.16
Uneven distribution of shipyards in certain islands, eastern Indonesia 12%	7.50	0.06	3.17	0.20
The shipbuilding industry is difficult for new players to penetrate (high barrier to industry entry)	7.00	0.06	3.50	0.21
The national defense industry has gradually increased its capabilities	7.50	0.07	3.33	0.23
The existence of technology transfer from developed / friendly countries	7.17	0.07	3.00	0.18
Number of Opportunities	**65,, 67**	**0.56**	**26.67**	**1.67**

Table 4. Weighting Table for External Factors

External Factor Criteria	Score	Weight (B)	Rating (R)	B x R
The policy on banking interest rates is still high	7.17	0.06	3.50	0.22
Defense budget is still below standard (2% of GDP)	7.33	0.06	3.17	0.20
Requires a large budget for software and hardware needs	7.33	0.06	2.67	0.17
Lack of integrity between similar industries in the form of clusters in mutually beneficial cooperation, especially between BUMN and the private sector in the procurement of new vessels and platforms	7.17	0.07	3.50	0.22

	7.50	0.07	3.50	0.23
Still dependent on foreign technology	7.50	0.07	3.50	0.23
Technology transfer is still at 50% scale	6.83	0.06	3.50	0.21
The demands of the development of shipping technology are growing rapidly	7.50	0.07	3.50	0.23
Number of Threats	**50.83**	**0.44**	**23.33**	**1.45**
Total	**116.50**	**1.00**	**50.00**	**3.12**

Based on table 4.11 the EFAS matrix above, it shows that the rating weighting of the external strategy factor for the development of Fasaharkan Jakarta, where the weighting is done with the aim of knowing how much the factors that influence or have an impact on the strategy factor itself. The weighting of the strategic factors in the table is obtained from the total opportunity score of 1.67 and the total threat score of 1.45 so that the overall total of external factors is 3.12. The purpose of this rating is to provide a scale from 4 to 1 based on these factors for the development of fasharkan Jakarta.

From the results of processing the IFE and EFE tables then determining the strategic quadrant position by entering into the weight score table by placing the Strength (S) and Weakness (W) values in the Internal column and the difference in values between (S) and W as the X axis. Opportunity (O) and Treats (T) are placed on the external column and the difference between O and T is the value on the Y axis. In Table 5 we can find that the X-axis value is -0.21 and the Y-axis value is 0.22.

Table 5. Quadrant Processing

Internal (X)	Score	External (Y)	Score
Strength *Weaksness*	1.47 1.66	*Opportunity* *Treats*	**1.67** **1.45**
Score difference	**-0.21**		**0.22**

From the difference in value in table 5 then we enter it in the strategy quadrant to determine the chosen strategy, so that we can analyze what strategy is right to use in problem solving.
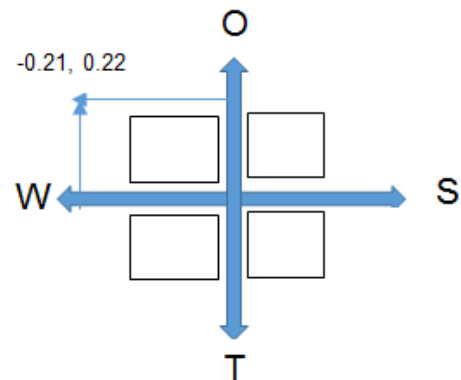

Figure 5. Quadrant strategy

Seeing from the figure, that the position of the strategy lies in the WO quadrant, this shows that the WO strategy is used to solve problems, namely by maximizing the opportunities that exist to overcome weaknesses in the organization. The WO sub-strategies include:

a.   Upgrade equipment according to the latest technological advances. Currently technology has developed very rapidly along with the sophistication of today's technology. The need for technology has a huge impact on human life in various activities. Increasing the quality of life increasingly requires humans to carry out various activities needed by optimizing the resources they have.

b.   increase the Slipway capability up to 700 tonnes. The existing slipway facility currently has a capacity of 700 tonnes but is in severely damaged condition.

c.   Build graving docks up to 5000 DWT capability. The construction of a graving dock with a capacity of up to 5000 DWT is expected to be repaired for all ships in the Indonesian Navy.

d.   Procurement of aluminum welding equipment to support the aluminum appliance procurement policy.

e.   Carry out the fulfillment of human resources in accordance with the DSP and qualifications.

f.   Improve human resources capabilities by carrying out training and science and technology education.

g.   Cooperating with domestic shipyards in the construction and repair of KRI.

h.   Carry out technology transfer in accordance with the policies of the shipping industry and marine technology.

i.   The development of Fasharkan is in line with the shipping industry development policy

4.   CONCLUSION

In the formulation of the development strategy of Fasharkan Jakarta, based on the SWOT analysis, 4 (four) alternative strategies were obtained, namely the SO strategy, the ST strategy, the WO strategy, the WT strategy. SO strategy consists of 6 (six) strategy steps. ST strategy consists of 6 (six) strategy steps. The WO strategy consists of 9 (nine) sub strategies and the WT strategy consists of 4 (four) strategic steps. From the 4 (four) strategies then weighting is carried out to get the main strategy selected using the EFAS and IFAS matrices. Based on the research results, it is known that the strategy chosen was a WO strategy consisting of 9 (nine) sub strategies to be the first alternative in the development strategy of Fasharkan Jakarta. From the results of the IFAS EFAS matrix on the SWOT analysis of the WO strategy which consists of 9 (nine) sub-strategies in the development of Fasharkan Jakarta.

The results of this study show that the classification of elements in the WO strategy is obtained 5 (five) levels of hierarchical structure. In this hierarchical structure, it can be seen that the sub-strategy (WO5) is at level V. Then the sub-strategies (WO1) and (WO4) are at level IV. At level III it consists of 4 (four) sub strategies, namely (WO2); (WO6); (WO7); (WO8). At level II, namely the sub strategy (WO3). At level I sub strategy (WO9).

REFERENCES

Ahmadi. (2017). Applied of Impressed Current Cathodic Protection Design for Fuel Pipeline. Iranian Journal of Materials Science and Engineering, 41-52.

Asmoro, R. D. (2018). Submarine Operations Degree Strategy in Support of Three Fleet Commandos to Strengthen the Archipelago's Maritime Defense Strategy. surabaya: Naval Technology College (Thesis).

Bandono, A. (2017). The Use of Value Clarification Technique-Based- Picture Story Media As An Alternative Media To Value Education In Primary School. Journal of Arts Research and Education 17 (1), 68-67.

Darmawan, D. P. (2017). Structured Decision Making with Interpretative Structural Modeling. Yogyakarta: Publisher Elmatera.

Firoz, N., & Rajesh, R. (2012). Relationship among Supplier Selection Criteria using Interpretative Structural Modeling for Manufacturing Organization in Kerala. International Journal of Engineering Science Invention, 3 (8), 60-70.

Hunger, J. D., & Wheelen, T. L. (2010). Essentials Of Strategic Management 5th edition. United States of America: Prentice Hall.

Hussain, M. (2011). Modeling the Enablers and Alternatives for Sustainable Supply Chain Management. Montreal: Concordia University.

I Made Jiwa Astika1, K. G. (2018). Measurement of Indonesian Naval Base Development in a Border Area: A Case Study. International Journal of Applied Engineering Research ISSN 0973-4562 Volume 13, Number 3, 1560-1566.

Istiqomah, A. (2017). Human Resources development strategies as an effort to improve the performance of village officials using a SWOT analysis. Journal of the State University of Malang, 1-9.

J. David Hunger, T. L. (2003). Strategic Management. Yogyakarta: ANDI.

Kasal. (2013). Regulation of the Chief of Naval Staff Number KEP / 1771 / XII / 2013 concerning Technical Manual for Standardization of Indonesian Navy Bases. Jakarta: Headquarters.

Kasal, K. (2018). Head of Kasal Number Kep / 1111 / V / 2018 concerning the Doctrine of the Indonesian Navy Jalesveva Jayamahe. Jakarta: Headquarters.

Kertajaya, H. (2005). Markplus on Strategy 12 years of Markplus & Go's journey to build a marketing strategy. Jakarta: PT Gramedia Pustaka Utama.

Khoiroh, S. M. (2016). Formulation of a Policy Strategy Roadmap for Strengthening the Regional Innovation System (SIDa) in the Maritime Industry Sector for Small-scale Ship IKM in Lamongan. Surabaya: Faculty of Industrial Technology, Sepuluh Nopember Institute of Technology.

Lumaksono, H. (2014). Implementation Of SWOT-FAHP Method To Determine The Best Strategy On Development Of Traditional Shipyard In Sumenep. Academic Research International Vol. 5 (5) September 2014, 56-67.

Nurcahya Dwi Asmoro, B. S. (2018). Formulation of Maritime Industry Mastery Strategies to Strengthen National Defense. Journal of Industrial Systems Optimization, 162-170.

Oreski1, D. (2012). Strategy Development by Using SWOT - AHP. TEM Journal, 283-291.

Panackal, N., & Singh, A. (2016). Using Interpretative Structural Modeling to Determine the Relation between Youth and Sustainable Rural Development. Journal of Management and Research, 4 (1), 58-64.

Presidential Decree No. 16. (2017). Indonesia is the World Maritime Axis. Jakarta: Coordinating Ministry for Maritime Affairs.

Puskom. (2015). 2015-2035 National Industrial Development Master Plan. Jakarta: Ministry of Industry.

Operation. Journal of Defense Management, 1-8.

Rangkuti, F. (2018). SWOT analysis. Jakarta: PT Gramedia Pustaka Utama.

Rizal, O. (2015). Strategic feasibility of relocating the TNI AL base in supporting the main tasks of elemental operations. Surabaya: STTAL Thesis.

Singh2, N. P. (2015). Using Interpretive Structural Modeling to Determine the Relation between Youth and. IBMRD's Journal of Management and Research, 58-74.

Suastika, W. A. (2017). Analisys Development Of Green Ship-Recycling yard. National Oceanic Journal, 33-34.

Suharjo, B. (2013). Applied statistics Dissertation example Application with SPSS. Yogyakarta: Graha Science.

Suharyo, O. S. (2017). Establishing the location of naval base using fuzzy MCDM and covering technique methods: A case study. International Journal of Operations and Quantitative Management IJOQM Vol 23 Issue 1,