

STRATEGIC DEVELOPMENT THE CAPABILITY OF INDONESIAN WARSHIP (KRI) „dr. SOEHARSO-990“ FOR COMBINE OPERATION OF HUMAN ASSISTANCE/DISASTER RESILIENCE (HA/DR) IN SOUTHEAST ASIAN REGIONAL

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Abstract: *In the aspect of disaster response, the Indonesian Navy has KRI: dr. Soeharso-990 which has been equipped with medical supplies in carrying out the operation task of disaster response in the regional area. However, as a KRI which is diversified as hospital-aids ship (BRS), KRI: dr. Soeharso-990 still has several obstacles in the implementation of emergency response operations. Based on the current conditions, it needs a training strategy to develop the capability of KRI: dr. Soeharso-990 during a joint emergency response operation. This study aims to provide an alternative formulation of strategy to train the capability development using approach of Strength, Weakness, Opportunity, Threat (SWOT), Interpretative Structural Modeling (ISM), and aspects of Balanced Scorecard (BSC). Based on the results of the SWOT matrix analysis, the SO Strategy consists of 3 (three) strategic steps; ST Strategy consists of 3 (three) strategic steps; WO strategy consists of a strategy step; and WT strategy consists of a strategy step so that all total consists of 8 sub-strategies. Based on the results of the elements' classification in the strategy, it was obtained 5 (five) levels of the hierarchical structure. In this hierarchical structure, it can be seen that sub-strategy of ST-3 and sub-strategy of WO-1 were at level V. Meanwhile, sub strategy of ST-1 and ST-2 were at level IV. Sub-strategy of SO-2, WT-2, SO-1 were at level III, II and I.*

Keywords: *Indonesia Warship (KRI) SHS-990, Humanitarian Assistance/ Disaster Resilience (HA/DR), SWOT, ISM, BSC.*

1. INTRODUCTION

Indonesian Navy, which is an integral part of Indonesian National Armed Forces, has a role as a major component of the defense and security of the maritime state, carrying out its duties based on state policies and political decisions to uphold national sovereignty, maintaining the territorial integrity of Unitary State of the Republic of Indonesia (NKRI) based on the Pancasila and The 1945 Constitution (Ministry of Defence, 2015).

Based on the basic tasks mentioned before, the Indonesian Navy participated in carrying out military operations other than war in the context of disaster response (Laksmana, 2014). In the aspect of disaster response, the Indonesian Navy has KRI: dr. Soeharso-990 which has been equipped with medical supplies in carrying out the task of disaster response operations in the Regional area. However, as a KRI which is diversified as hospital-aids ship (BRS), KRI: dr. Soeharso-990 still has several obstacles in the implementation of emergency response operations. Those obstacles are some physical abilities, professions that come from the health team, and the support of volunteers in which there are many of them who do not have the readiness to carry out their duties, so do not know who to do. These causes ineffectiveness and overlap in the

implementation of tasks (Rianto & Purwanto, 2017).

This study aims to provide an alternative formulation of strategy to train the capability development using approach of Strength, Weakness, Opportunity, Threat (SWOT), Interpretative Structural Modeling (ISM), and aspects of Balanced Scorecard (BSC). The SWOT approach is used to formulate a strategy to develop capability development, ISM methods and BSC methods which are used to determine priorities and conceptualize the strategy map in order to support the development of capability of Indonesia Warship (KRI).

There are several methods used in developing strategies to improve capability. Ahmadi et al (2011) explained about strategy of the defense system monitoring in the selection of Indonesian Navy Base. Yogi et al (2014) used the SWOT and AHP analysis methods in planning the strategy of base selection. Susilo et al (2019) used the SWOT and ISM methods in the priority of a strategy to develop the capability of Indonesian Navy. Firoz & Singh (2012) use the ISM method to identify logistics suppliers. Research on Balanced Scorecard (BSC), among others, BSC is as a methodological concept for system dynamics-based performance evaluation. Stavarakakis et al (2010) implemented the BSC to education and training of Indonesian Navy.

Sales et al (2016) implemented the BSC is as an information technology dynamic of the Indonesian Army.

This study is expected to provide input for the Indonesian Navy in the Training and development of the capability of KRI: dr. Soeharso-990 on the operations of disaster emergency response. This study is expected to contribute to research science of military operations in strategic management, training and development of the strength and capability of the KRI.

2. MATERIAL/METHOD

2.1. The Indonesian Navy (TNI AL)

The Indonesian Navy, which is an integral part of Indonesian National Armed Forces, has a role as a major component of the defense and security of the maritime state, carrying out its duties based on state policies and political decisions to uphold national sovereignty, maintaining the territorial integrity of Unitary State of the Republic of Indonesia (NKRI) based on the Pancasila and The 1945 Constitution, as well as protect all the people of Indonesia and their entire native land from threats and disturbances to the integrity of the nation and state through the implementation of military operational level of war (OMP) and military operations other than war (OMSP) (Marsetio, 2013).

2.2. Role and Duties of Indonesian Navy

The duties and roles of Indonesian Navy in the future are a result of dynamic of strategic environment development of global, regional, and national which will be more complex.

a. The role of Indonesian Navy.

The Indonesian Navy has a universal role, those are the role of military, diplomacy, and the constituent (police) known as the "Universal Trinity Roles of the Indonesian Navy" (Susilo, et al., 2019). These three roles are also the responsibility of the Indonesian Navy, including: 1) The Role of Military; 2) The Role of Diplomacy; 3) The role of Police.

b. The duty of the Indonesian Navy.

In accordance with Regulations, Article 9, Number 34 of 2004 concerning the Indonesian National Armed Forces, the duties of the Indonesian Navy are as follows (Putra, et al., 2017):

1) Implementing the duties of the Indonesian Navy in the field of defense.

2) Upholding the regulation and maintaining security in the marine areas of national jurisdiction in accordance with the provisions of ratifying national and international regulation.

3) Implementing diplomacy task of Indonesian Navy in order to support foreign policy set by the government.

4) Implementing the tasks of the Indonesian National Armed Forces in the construction and development of the strength of the Indonesian Navy.

5) Implementing empowerment of marine defense areas.

2.3. KRI: dr. Soeharso-990

As hospital-aids ship, KRI: dr. Soeharso-990 has a strategic role and can be main choice in health services in coastal areas and small islands in Indonesian territory. KRI: dr. Soeharso-990 is designated as a Hospital-aids ship based on *Skep Kasal* Number: Skep/1100/VIII/2007, dated August 24, 2007. The function of KRI: dr. Soeharso-990 is a Hospital-aids ship which has the ability as a Level II Hospital which in its organization is included in co-fleet II of the Republic of Indonesia in the ranks of supporting forces. As for the operation, it follows the KRI pattern and objectives in hospital-aids ship units (Rianto & Purwanto, 2017).



Fig. 1. KRI dr. Soeharso-990

2.4. Humanitarian Assistance/ Disaster Relief (HA/DR)

The military approach for HA/DR is driven by a set of principles derived from the core values of its foreign policy. One of them is the emphasis on the centrality of territorial sovereignty and the principle of non-intervention in the internal affairs of the state. HA/DR assistance must be provided only with the approval of the affected country, and its principle is based on an official request from the state authority (Raja Mohan, 2014).. Authority is wary of non-governmental organizations having access to the affected zone and having access to provide direct assistance to the government. India emphasizes the importance of the principle that HA/DR assistance must be based on demand (Winn, et al., 2014).

The role of the Indonesian Navy in HA/DR is very important and has a strategic objective in providing assistance to countries in the Southeast Asian area after a disaster (Thuzar, 2015). The Indonesian Navy has the ability to project soft power through the capability of KRI: dr. Soeharso-990 as a hospital-aids ship. In accordance with the Strategy of National Security in an effort to support joint HA/DR operations in the Southeast Asia area, the HA/DR mission has now become a priority (Sani, 2013).

2.5. SWOT Analysis (Strength, Weakness, Opportunity, Threat)

SWOT analysis is the most common technique that can be used to analyze strategic cases. SWOT is a tool often used to analyze the internal and external environment to achieve a systematic approach and support for decision situations (Hill & Westbrook, 1997). SWOT is an acronym for Strength (S), Weakness (W), Opportunity (O) and Threat (T). The first two factors (strengths and weaknesses) are related to factors of internal organization, while

opportunities and threats cover the broader context or environment in which the entity operates (Collins-Kreiner & Wall, 2007).

Internal and external factors are referred to strategic factors, and they are summarized in the SWOT analysis. Strength and weakness are factors in the system allowing and hindering the organization from achieving its goals. Opportunity and threat are considered as external factors facilitating and limiting the organization in achieving its respective goals (Wang, et al., 2014).

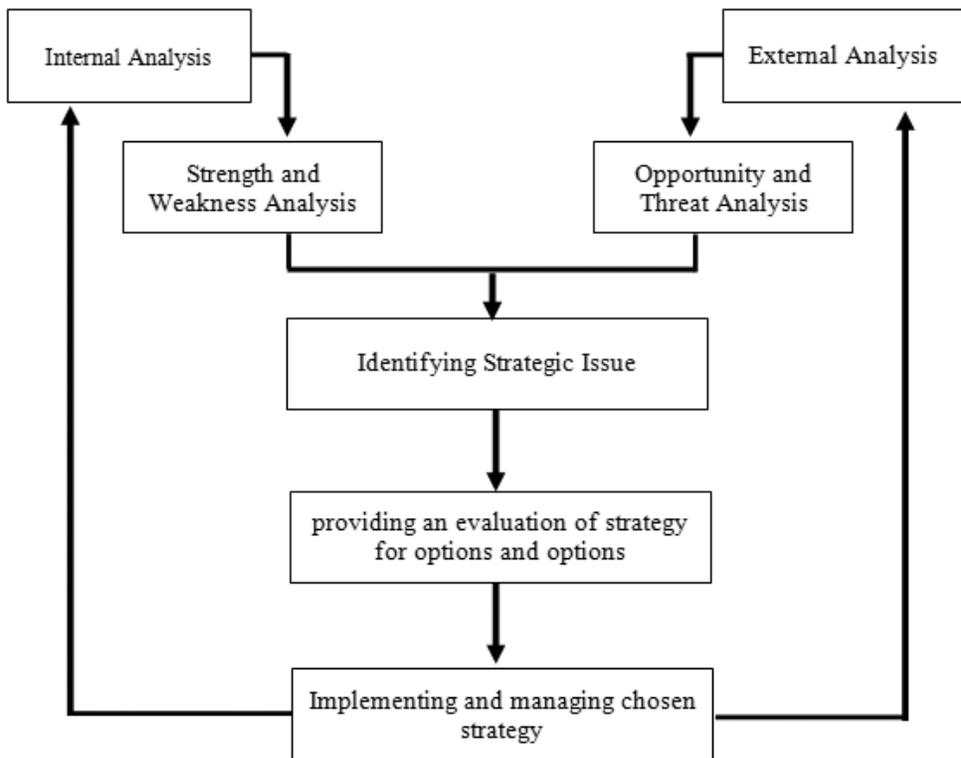


Fig. 2. SWOT Flowchart
(Yuksel & Dagdeviren, 2007)

2.6. Interpretative Structural Modeling (ISM)

Interpretative structural modeling (ISM), used for ideal planning, is an effective method because all elements can be processed in a simple matrix (Wang, 2015). ISM has been proven well to identify structural relationships among system specific variables. The basic idea is to use practical experience and expert knowledge to break down complex systems into several sub-systems (elements) and build multilevel structural models (Attri, et al., 2013).

ISM is often used to provide a basic understanding of complex situations, as well as to compile a series of actions to solve a problem. ISM is started with identifying relevant elements to problems and extending to group problem solving techniques (Firoz & Rajesh, 2012). A Structural Self Interaction Matrix (SSIM) was developed based on the comparison of paired elements. There are procedures or stages in the use of the ISM method, these stages include (Soti & Kaushal, 2010):

a. Parameter identification.

The elements that must be considered for relationship identification are obtained through the literature surveyor by conducting a survey.

b. Development of Structural Self Interaction Matrix (SSIM).

The development of interpretive structural models begins with the preparation of structural self-

interaction matrices, which show the direction of contextual relations among the elements. In developing SSIM, there are four symbols used to indicate the direction of the relationship between the two obstacles of *i* and *j* according to Table 1.

Table 1. Symbol Rules on SSIM

Symbol	Relationship between row (i) and Column (j) elements
V	Barrier j will lead to barrier i, not in reserve direction
A	Barrier i will lead to barrier j, not in reserve direction
X	Barrier I and j will lead to each other, in both directions
O	Barrier i and j are unrelated

c. Reachability Matrix.

From the Structural Self Interaction Matrix (SSIM), the relational indicator is converted to binary numbers 0 and 1 to get a square matrix, called the reachability matrix, with the following information:

1) If (i, j) the value in SSIM is V, in the reachability matrix, (i, j) the value will be 1, and (j, i) the value will be 0.

2) f (i, j) the value in SSIM is A, in the reachability matrix, (i, j) the value will be 0 and (j, i) the value will be 1.

3) If (i, j) the value in SSIM is X, in the reachability matrix, (i, j) the value will be 1, and (j, i) the value will also be 1.

4) If (i, j) the value in SSIM is O, in the reachability matrix, (i, j) the

value will be 0, and (j, i) the value will also be 0.

Table 2. Sample on Reachability Matrix

No	Code	Strategies	4	3	2	1
1			A	O	O	-
2			V	A	-	
3			V	-		
4			-			

d. Partition level.

From the reachability matrix, common variables in the reachability set and the antecedent set are allocated to the intersection set. The top-level element for each hierarchy is the element where the antecedent set and the intersection set are the same in the ISM hierarchy. After the top-level barriers are identified. Then, they are removed from top-level of considerations and barriers. This process will continue until all levels of each barrier are found.

e. Interpretative structural modeling construction (ISM).

From the partitioned parameters and the reachability matrix, the structured model is derived, showing parameters at each level and arrows showing the direction of the relationship. Such a graphical representation of the model is called a diagraph.

2.7. Balanced Scorecard (BSC)

Concept of Balanced Scorecard develops in line with the development of the implementation of that concept. The Balanced Scorecard consists of two words: (1) score card(scorecard) and (2) balanced. A scorecard is

a card used to record a person's performance score. Score card can also be used to plan scores that is wanted to be realized by someone in the future. Through a score card, the scores wanted to be realized by someone are compared with actual performance (Sales, et al., 2016). The results of this comparison are used to evaluate someone's performance in a balanced way from two aspects: financial and non-financial, short-term and long-term, internal and external. The word "balanced" in the

Balanced Scorecard means that:

- a. The owned performance measures have represented the four perspectives mentioned above.
- b. Performance measures represent the results of past actions (financial) and measures that are factors driving future performance (customers, internal business processes, learning & growth).
- c. Performance measures representing objective and subjective measures.

The company uses the Balanced Scorecard to manage the management process, as in the following figure (see Figure 2):

- a. Clarification and translation of mission, vision, and strategy.
- b. Communication and linking between goal and objective measures.
- c. Planning, goal setting, and aligning strategic initiatives.
- d. Improvement of strategy and knowledge feedback.

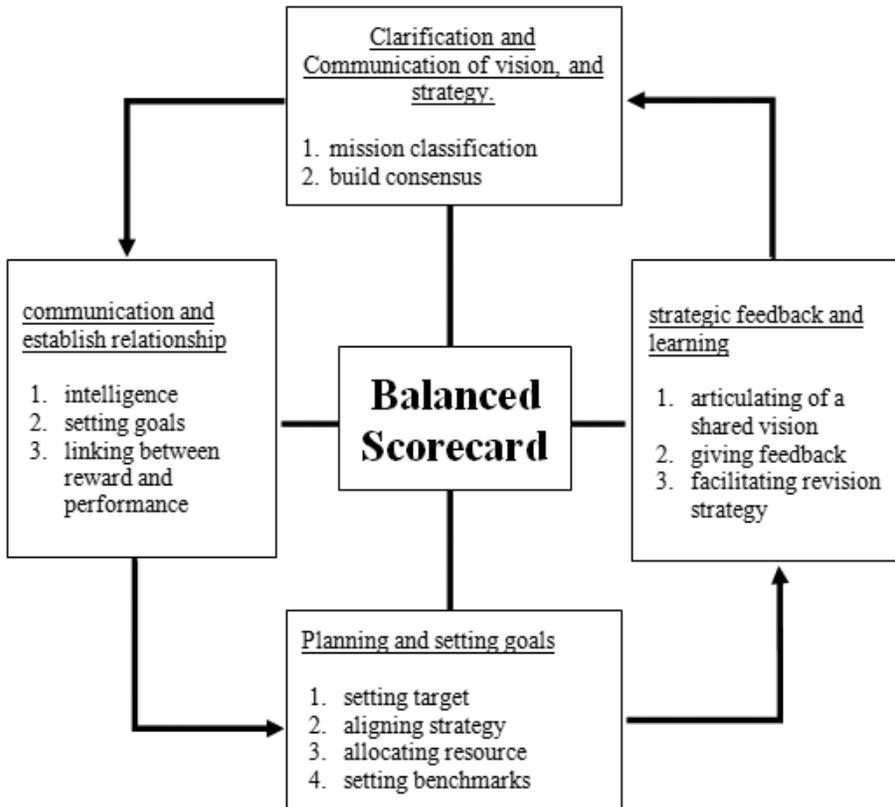


Fig. 3. Balanced Scorecard in the strategy management framework

The objectives of the use of Balanced Scorecard in the company as a management system framework are (Stavrakakis, et al., 2010):

- a. Creating value for shareholders with appropriate financial management.
- b. Creating value for customers through responsive marketing

strategies to customer needs and expectations.

- c. Creating value for the future, through the creation of a conducive work atmosphere.
- d. Working efficiently and effectively with reference to business processes that enable synergistic cooperation.

2.8. Research Diagram

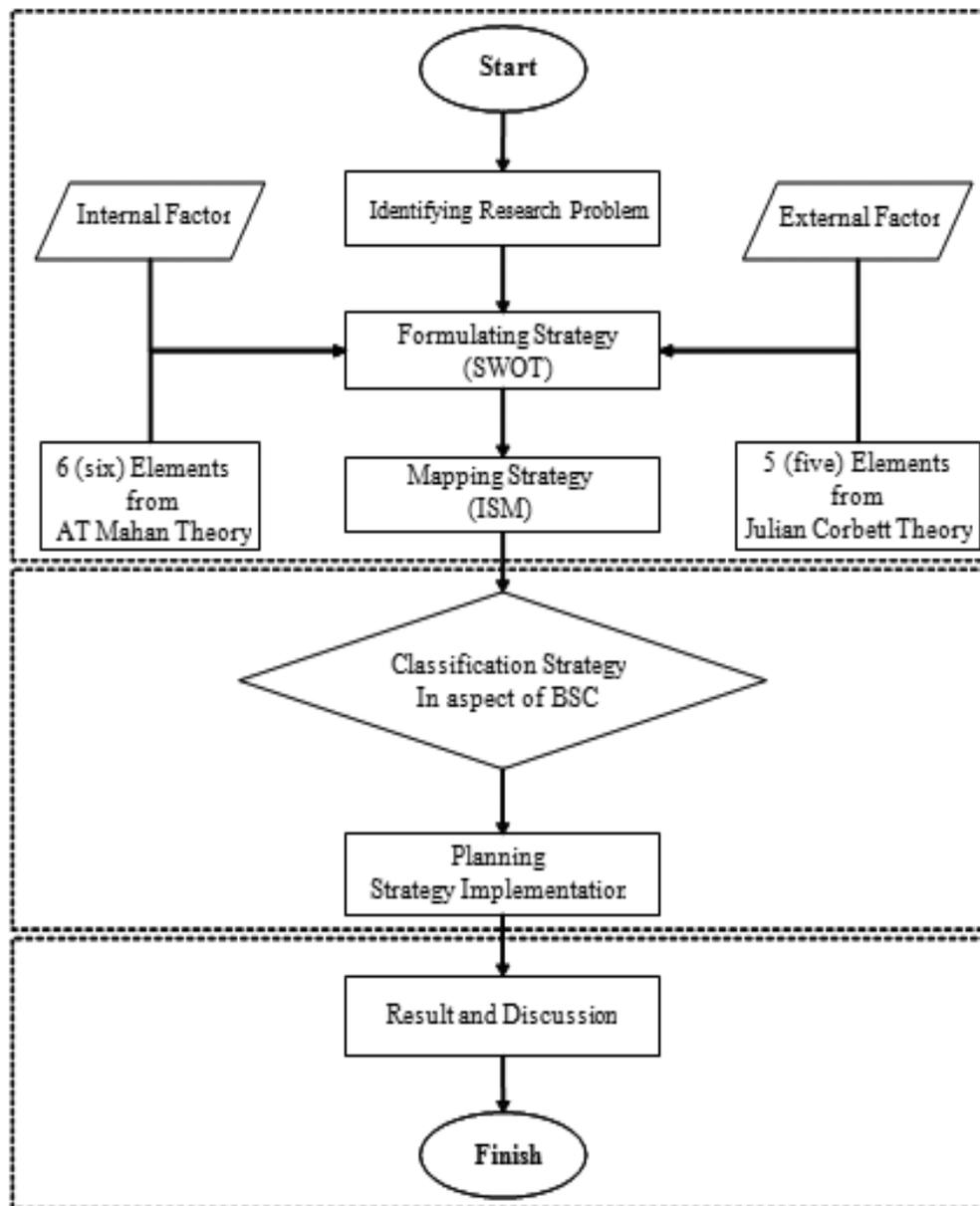


Fig. 4. Research Diagram of Capability Training of KRI: SHS-990

This study was divided into 3 (three) stages according to Figure 3 with the following explanation:

a. Stage I, it was started with the identifying the research problem formulation, and it continued with the formulation of strategy of training and development. In the formulation of the strategy, SWOT analysis method was used in combination with AT Mahan and Julian Corbett's theories in supporting HA/DR operations. Furthermore, the strategies that had been formulated. Then, it was made the determination of the strategy map in order to identify the priorities of sub-strategies.

b. Stage II, at this stage, it aimed to make a classification of sub-strategies that have been formed and arranged based on aspects of the Balanced Scorecard. This stage also aimed to prepare a roadmap for the strategy implementation plan that was formulated in the previous stage.

c. Stage III, it analyzed and discussed the results of the research concepts in stage I and stage II.

In stage III, it also discussed the implications of the formulation of a strategy for training and developing the capability of KRI: dr. Soeharso-990 for the operational tasks of the Indonesian Navy.

3. RESULTS

3.1. Strategy formulation

Based on the identification of various internal and external factors, the next step can be formulated strategy factors. From internal and external factors that were then combined to determine alternative strategies to improve the support capability of KRI: dr. Soeharso-990. The research stage began with data collection by conducting interviews with six Expert personnel (E1; E2; E3; E4; E5; E6) in the development of strategy of KRI: SHS-990. The following strategies were formulated and generated from the SWOT matrix. This matrix illustrated how external opportunities and threats facing the company were aligned with their strengths and weaknesses.

Table 3. Identification of SWOT Analysis

Analysis of Internal Factor	
Strength (S)	Weakness (W)
S1. Potential is as the largest Navy in southeast Asia. S2. A good ability of diplomacy is as part of the ability of the Indonesian Navy. S3. It has an information system infrastructure platform. S4. Capability of KRI: dr. Soeharso is as the first hospital ship in ASEAN.	W1. The power of information and cyber systems is still partial. W2. The defense budget is still below international standards (2% of GDP).

Analysis of External Factor	
Opportunity (O)	Threat (T)
O1. It is as the largest maritime country in Asia. O2. Geographical conditions and physical form are as a strategic route of world traffic. O3. Economic growth supports an increase in the defense budget.	T1. World maritime axis policy is still not going well. T2. Geographical conditions require extra surveillance in marine areas including vulnerability to the threat of natural disasters. T3. The defense industry is still dependent on foreign technology. T4. Information systems and fisheries infrastructure are still partial.

Based on the analysis of external factors in Table 3 above, obtained 3 (three) factors are in the form of opportunities, and 4 (four) factors

are in the form of threat. 4 (four) factors are in the form of strengths, and 2 (two) factors are in the form of weaknesses.

Table 4. Strategy Matrix of SWOT Analysis

Development Strategies	
Strength-Opportunity (S-O)	Weakness-Opportunity (W-O)
(SO)1. Becoming a leader of the maritime axis in the ASEAN area Including with disaster and humanitarian response operations. (SO)2. Enhancing the role of the Indonesian Navy diplomacy in supporting Government policy in HA/DR operations. (SO)3. Enhancing capability of information and cyber systems as security controllers and disaster response in ASEAN	(WO)1. Upgrading weaponry equipment with the latest technology adaptation.
Strength-Threat (S-T)	Weakness-Threat (W-T)
(ST)1. Increasing the ability of HA/DR to elements of KRI: dr. Soeharso in facing the threat of natural disasters in the ASEAN area. (ST)2. Improving the ability of other KRI in carrying out HA/DR operations as part of Indonesian National Armed Forces diplomacy in the regional area. (ST)3. Integrating information systems from KRI: dr. Soeharso to main commands and as part of the ability of Search and detection in supporting the task of operating HA/DR.	(WT)1. Optimizing the existing defense equipment capabilities in the supervision of the marine area.

Based on the results of the SWOT matrix analysis (Table 4), the SO Strategy consists of 3 (three) strategic steps; ST Strategy consists of 3 (three) strategic steps; WO strategy consists of a strategy step; and WT strategy consists of a

strategy step so that all total consists of 8 sub-strategies. The next step, all the strategy steps that have been compiled into a strategy step, determining priorities and mapping the strategy.

Table 5. Compilation of strategy to improve support Capability of KRI: SHS-990

No.	Code	Sub-Strategy
1	(SO)1	Becoming a leader of the maritime axis in the ASEAN area Including disaster and humanitarian response operations.
2	(SO)2	Enhancing the role of the Indonesian Navy diplomacy in supporting Government policy in HA/DR operations.
3	(SO)3	(Enhancing capability of information and cyber systems as security controllers and disaster response in ASEAN.
4	(ST)1	Increasing the ability of HA/DR to elements of KRI: dr. Soeharso in facing the threat of natural disasters in the ASEAN area.
5	(ST)2	Improving the ability of other KRI in carrying out HA/DR operations as part of Indonesian National Armed Forces diplomacy in the regional area.
6	(ST)3	Integrating information systems from KRI: dr. Soeharso to main commands and as part of the ability of Search and detection in supporting the task of operating HA/DR.
7	(WO)1	Upgrading weaponry equipment with the latest technology adaptation.
8	(WT)2	Optimizing the existing defense equipment capabilities in the supervision of the marine area.

3.2. Strategic Mapping and Strategic Implementation Plan

In this section, it is presented mapping and determination the prioritization of sub-strategies to improve the capability of KRI: dr. Soeharso-990. The method

used was Interpretative Structural Modeling (ISM). The first step is to identify the elements that need to be investigated. In this study, these elements were obtained from the results of determining the strategy in the SWOT analysis.

Table 6. Reachability Matrix for Upgrading the Capability of HA/DR.

No.	Code	Sub-Strategy (WO)								
			8	7	6	5	4	3	2	1
1	(SO)1	Becoming a leader of the maritime axis in the ASEAN area Including disaster and humanitarian response operations.	O	A	A	A	A	A	A	
2	(SO)2	Enhancing the role of the Indonesian Navy diplomacy in supporting Government policy in HA/DR operations.	O	X	X	A	X	X		
3	(SO)3	Enhancing capability of information and cyber systems as security controllers and disaster response in ASEAN.	X	X	X	A	X			
4	(ST)1	Increasing the ability of HA/DR to elements of KRI: dr. Soeharso in facing the threat of natural disasters in the ASEAN area.	O	X	X	A				
5	(ST)2	Improving the ability of other KRI in carrying out HA/DR operations as part of Indonesian National Armed Forces diplomacy in the regional area.	O	X	X					
6	(ST)3	Integrating information systems from KRI: dr. Soeharso to main commands and as part of the ability of Search and detection in supporting the task of operating HA/DR.	X	X						
7	(WO)1	Upgrading weaponry equipment with the latest technology adaptation.	X							
8	(WT)2	Optimizing the existing defense equipment capabilities in the supervision of the marine area.								

Table 7. Results of Interpretative Structural Modeling in upgrading the Capability of HA/DR of KRI SHS-990

No.	Code	Sub-Strategy								DP	Rank
		1	2	3	4	5	6	7	8		
1	(SO)1	1	0	0	0	0	0	0	0	1	8
2	(SO)2	1	1	1	1	0	1	1	0	6	6
3	(SO)3	1	1	1	1	0	1	1	1	7	3
4	(ST)1	1	1	1	1	1	1	1	0	7	3
5	(ST)2	1	1	1	1	1	1	1	0	7	3
6	(ST)3	1	1	1	1	1	1	1	1	8	1
7	(WO)1	1	1	1	1	1	1	1	1	8	1
8	(WT)2	0	0	1	0	0	1	0	1	3	7

Based on the results of the elements classification in the strategy, it was obtained 5 (five) levels of the hierarchical structure. In this hierarchical structure, it can be seen that the sub-strategy integrated the information system of KRI: dr. Soeharso to main commands and as part of the ability of Search and detection in supporting the HA/DR (ST-3) and sub-strategy operations in implementing upgrade weaponry equipment with the latest technology adaptation (WO-1) were at level V.

Afterwards, the sub-strategy of improving the ability of information systems and cyberspace as security controllers and disaster response in ASEAN (SO-3); Upgrading the ability of HA/DR to elements of KRI:

dr. Soeharso in facing the threat of natural disasters in the ASEAN area (ST-1); and improving the ability of other KRI in carrying out HA/DR operations as part of Indonesian National Armed Forces diplomacy in the regional area (ST-2) was at level IV.

At level III, sub-strategy increased the role of the Indonesian Navy diplomacy in supporting Government policies in the operation of HA/DR (SO-2). At level II, the sub-strategy optimized the capability of defense equipment in the supervision of the marine area (WT-2). At level I, the sub-strategy was to become a maritime axis leader in the ASEAN area including the operation of disaster and humanitarian response assistance (SO-1).

Table 8. Results of Strategy Mapping and Strategy Implementation

Level	Aspect	Indicator	Target	Rlz
I	(SO)1	o Becoming leader of Maritime Axis in ASEAN area	100%	
II-III	(SO)2, (WT)2	o Achievement of marine area surveillance (WT)2 o Increasing the role of the Indonesian Navy's diplomacy in ASEAN	100% 100%	
IV	(SO)3, (ST)1, (ST)2	o Capability and cyber system increase (SO) 3 o Capability of HA/DR KRI: dr. Soeharso Increases (ST) 1 o Capability of other KRI Increases (ST) 2	100% 100% 100%	
V	(ST)3, (WO)1	o information systems integration (ST) 3 o achieving latest technology (WO) 1	100% 100%	

The next step is strategy mapping. Strategy mapping will make it easier for organizational actors to monitor the development of strategy implementation. The results of the analysis of the strategy mapping design correlate the Balanced Scorecard with the designed strategy which is a development in supporting the development of enhancing the support capability of KRI: dr. Soeharso-990. In this case, BSC is arranged with 4 (four) aspects, namely perspective I (Technology);

perspective II (internal process); perspective III (learning and growth); perspective IV (consumer). Perspective I (Technology) consists of two sub-strategy steps namely (ST-3) and (WO-1); Perspective II (internal process) consists of three sub-strategy steps namely (SO-3), (ST-1), (ST-2); Perspective III (learning and growth) consists of two sub-strategy steps namely (SO-2), (WT-2); Perspective IV (consumers) as the goal of the sub-strategy namely sub-strategy (SO-1).

4. DISCUSSION

In this study, the SWOT analysis method was used to identify and form. The next step is strategy mapping. Strategy mapping will make it easier for organizational actors to monitor the development of strategy implementation. The results of the analysis of the design of the strategy mapping correlated the Balanced Scorecard with the designed strategy which was a development in supporting the development of enhancing the support capability of KRI: dr. Soeharso-990. In this case, BSC was arranged with 4 (four) aspects, namely perspective I (Technology); perspective II (internal process); perspective III (learning and growth); perspective IV (consumer). Perspective I (Technology) consists of two sub-strategy steps namely (ST-3) and (WO-1); Perspective II (internal process) consists of three sub-strategy steps namely (SO-3), (ST-1), (ST-2); Perspective III (learning and growth) consists of two sub-strategy steps namely (SO-2), (WT-2); Perspective IV (consumers) as the goal of the sub-strategy namely sub-strategy (SO-1).

5. CONCLUSIONS

Based on the results of the SWOT matrix analysis, the SO Strategy

consists of 3 (three) strategic steps; ST Strategy consists of 3 (three) strategic steps; WO strategy consists of a strategy step; and WT strategy consists of a strategy step so that the total consists of 8 sub-strategies. The next step, all the strategic steps that have been compiled into a strategic step, determining priorities and mapping the strategy. Based on the results of the classification of elements in the strategy, it was obtained 5 (five) levels of the hierarchical structure. In this hierarchical structure it can be seen that the Sub-strategy (ST-3) and sub-strategy (WO-1) were at level V. Sub-strategies (ST-1) and (ST-2) were at level IV. At level III, II and I, they were sub-strategies (SO-2), (WT-2), (SO-1).

The results of the analysis of the strategy mapping design correlated the Balanced Scorecard with the designed strategy which is a development in supporting the development of enhancing the support capability of KRI: dr. Soeharso-990. In this case, BSC was arranged with 4 (four) aspects, namely perspective I (Technology); perspective II (internal process); perspective III (learning and growth); perspective IV (consumer). Perspective I (Technology) consists

of two sub-strategy steps namely (ST-3) and (WO-1); Perspective II (internal process) consists of three sub-strategy steps namely (SO-3), (ST-1), (ST-2); Perspective III (learning and growth) consists of two sub-strategy steps namely (SO-2), (WT-2); Perspective IV (consumers) as the goal of the sub-strategy namely sub-strategy (SO-1).

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