Strategic Planning Analysis of Information System Technology Using SWOT Method

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Abstract- Based on the results of planning analysis conducted, based on the 4 main aspects of SWOT namely Strengths, Weaknesses, Opportunities, and Threats, then obtained that are identified by priority category. Planning to allocate resources from those found, can be controlled by the suggested controls of the SWOT method based on the process undertaken by the researcher, in the hope of developing an effective and efficient business. Planning has weaknesses and advantages of information technology, especially infrastructure can be anticipated processes that can be planned advantage. risks that arise in companies with high workloads related to information technology infrastructure and complex problems, but lack of personnel so How the results of identification of effective and efficient infrastructure planning can support the business and economy of a company using the SWOT method (Strengths, Weaknesses, Opportunities, Threats) and how well an efficient and effective strategy in building a technology in a company helps businesses grow. The goal is to produce an overview of priorities and the risk of the use of information technology, to produce a strategy and implement the strategic planning of the use of information technology.

Index Terms- Planning, Infrastructure, Opportunity, Strategis, SWOT

I. INTRODUCTION

Along with the rapid development of information and Business technology has brought various positive impacts to the growth of a company. Utilization of Technology as a progress and the importance of business to carry out various interaction, communication, transaction, or cooperation have shifted paradigm conventional (traditional) for society in carrying out its daily activity. Information technology currently has a big effect on the company's performance in running its business process, the more advanced and sophisticated information technology in a company, it will put the company at the forefront in today's business competition. The company has plans and strategies to meet the needs of hardware and software infrastructure that can support the company's business that can control the changes that occur to the infrastructure or services within the company so that the planning process is conducted in a controlled manner and allows the changes to be carried out with minimum and effective risk. With the development of technology today the needs of technology in a company becomes very important in determining the progress of a company. Information technology is a major requirement in the design of infrastructure that will affect the development of the

company. Besides, the company also needs an infrastructure system that can manage well data and Application. This strategic plan aims to identify the factors found on the use of information technology. Using the method of analysis is the method of Strengths, Weaknesses, Opportunities, Threats (SWOT), SOWT SWOT Method is a strategic planning method used to evaluate strengths, weaknesses, opportunities (opportunities), and threats in a project or a business speculation. The four factors that make up the SWOT (strengths, weaknesses, opportunities, and threats). SWOT will be better discussed using tables made in large paper, so it can be well analyzed relationship of every aspect.

This process involves determining the specific objectives of business or project speculation and identifying internal and external factors that support and which are not in achieving that goal. The SWOT analysis can be applied by analyzing and sorting things that affect the four factors, then applying them in SWOT matrix images, where the application is how strengths are able to take advantage of existing opportunities, how to overcome weaknesses (weaknesses) that prevent the advantages of existing opportunities, then how strengths are able to deal with existing threats, and the last is how to overcome weaknesses that can make threats real or create a new threat. SWOT focuses on business needs and focuses on the time spent analyzing technology within an organization. In the process of strategic analysis using the SWOT method, will be generated documents that include data threats, prioritize the threats and create a list of controls.

II. MATERIAL AND METHODOLOGY

SWOT analysis is a systematic identification of various factors for formulating a firm's strategy based on logic that maximizes strength and opportunity, while simultaneously minimizing weaknesses and threats. Strategic decision-making is always concerned with the development of corporate mission, goals, strategies and policies. Thus, strategic planning should analyze the company's strategic factors (strengths, weaknesses, opportunities and threats) in the current situation called Situation Analysis. The SWOT analysis will be mapped from the environmental analysis results. Strengths are identified with the aim of knowing what organizational strengths can be to continue and sustain business. Knowing the strengths of an organization will be able to maintain and even increase its strength as a capital to compete. Identifying weaknesses aims to be able to know what weaknesses are still there, and by knowing those weaknesses, then the company can strive to improve in order to get better. Weaknesses that are not or late identified will be detrimental to the

company. Therefore, with the sooner know the weakness, then the company can also as soon as possible find a solution to be able to cover these weaknesses. By knowing the opportunities, both current opportunities and opportunities in the future, the company can prepare to be able to achieve these opportunities. Strategies can be prepared early and better planned so that identified opportunities can be realized. Various avenues to be able to realize opportunities / opportunities and maintain the continuity of

business organizations will certainly experience many threats. Threats that can be identified can be resolved so that the organization can minimize the threat.

SWOT analysis is the systematic identification of various factors to formulate a company strategy, this analysis is based on logic that can maximize strength and opportunities, while simultaneously minimizing weaknesses and threats.
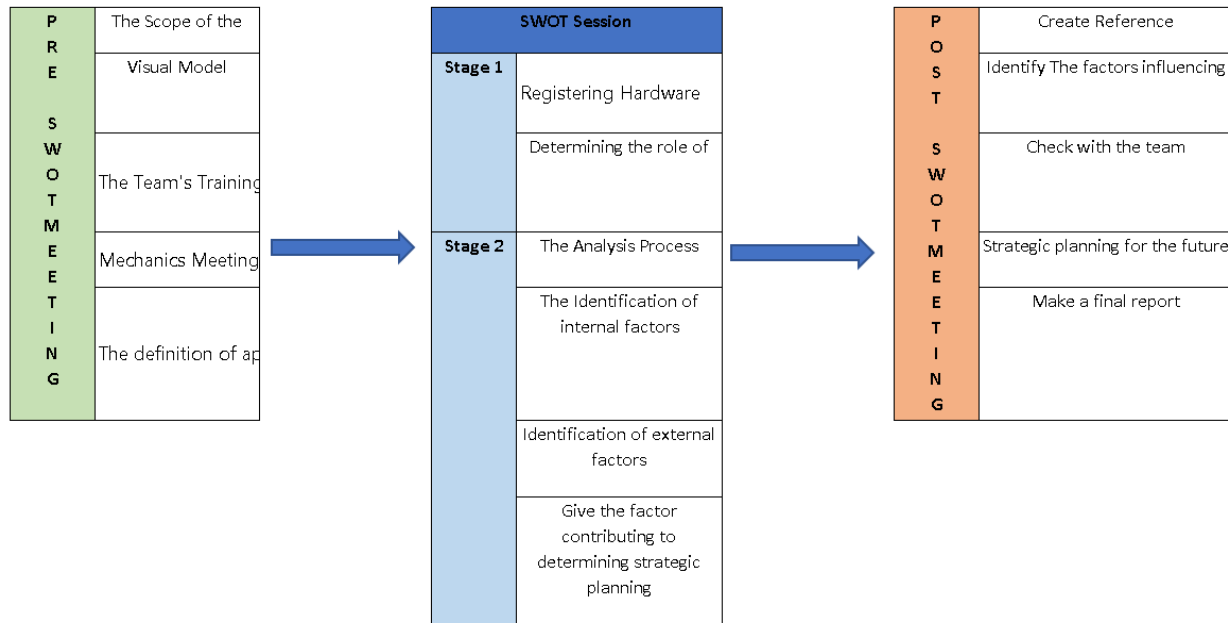
Major Components in SWOT

This analysis is based on the assumption that an effective strategy will maximize the strengths and opportunities and minimize the weaknesses and threats. When applied accurately, these simple assumptions have enormous impact on the design of a successful strategy and an environmental analysis of the industry presents the information needed to identify opportunities and threats that exist within the enterprise environment.

a. SO Strategy
This strategy is based on the company's way of thinking, that is by Utilizing all the power to seize and take advantage of opportunities as much as possible

b. Strategy ST
This is a strategy in using the power the company has to deal with threats

c. WO Strategy
This strategy is implemented based on the utilization of existing opportunities by How to minimize existing weaknesses

d. WT Strategy
This strategy is based on defensive activities and trying to minimize existing weaknesses and avoid threats with the SWOT can then make strategic planning that can support Internal and External.

Application of strengths, weaknesses, opportunities threats.

In conducting an analysis of SWOT conducted at, the author uses descriptive qualitative methods that produce descriptive data (not numbers), in the form of speech or writing and behavior that can be observed through the Strengths, Weaknesses, Opportunities and Threats (SWOT) approach. The process of taking data through the interview stage, and field observations accompanied by those responsible in their respective Stage 1 SWOT Session

a. Introducing the Self Identity of the SWOT Team
In this initial session, the author opens the discussion process, first asking each team member to introduce themselves and their positions,

b. Determining the Role of the SWOT Team
During this phase, the SWOT team will be given an overview of the process they will take part in in accordance with their respective areas of work focus. They will also be asked for statements about the scope, and then the author will provide an overview of the process under review (visual model).

Stage 2 SWOT Session
a. Brainstorming process

The brainstorming process explains that the author will display the definitions and some examples of risky threats to the SWOT team according to the scope specified in the Pre-SWOT session. Then the SWOT team wrote threats based on 3 types of integrity, confidentiality, and availability in each field. The results of the brainstorming stages are the collection of factors identified and used to determine planning priorities.

The following are examples of definitions and threats displayed:

Topic factor: Confidentiality
Definition: Information that is on that
confidential and only authorized parties can access this information.
Point factor: a. Planning in the future
           b. Technology planning

fields until the final report making process is obtained primary data and secondary data which are supporting research data obtained through searching using intermediary media which will be processed by researchers. Through qualitative methods, the author can get to know the subject's environment and see them develop definitions and give opinions about aspects studied. In addition, learning can also be done about experiences or risks that may have never been known before. In this qualitative method, it is possible for the writer to investigate the concepts that are actually encountered in daily operations. Adjusting to the limited number of organizational structures, this research is not taken from a particular population to get a representative sample, but rather refers to the term participant, which is data taken from the organization by referring to local experts or key individuals who understand their respective fields -that. They are interested parties and viewed from the responsibilities and positions within the organizational structure. Broadly speaking, the stages of the method of work in the preparation of this research are divided into 7 stages:
1. Introduction
2. Data Collection Phase
3. Stage of Understanding the Current Situation
4. Estimating Phase of Future Needs
5. Determination stage of infrastructure portfolio
6. Infrastructure Mapping Phase
7. Final stage

1. Introduction

In this preliminary stage, it contains literature studies and survey objects. This activity begins by gathering all existing literature and is related to supporting research, reviewing other topics related to and linking all existing variables. Object surveys were conducted to find out the vision, mission, and matters relating to research needs.

2. Data Collection Phase

At this stage, information about the suitability and relevance of the existing strategies and the things needed to make improvements with the new strategy, how they integrate with others (including business unit plans, IS / IT strategies and application interfaces, coordination, scheduling and time scales), management, control and resources, studying the problems that have existed to be resolved. The data collection process is carried out by means of, among others:

a. Fill out questionnaires from the director level to the section head level in the organizational structure.

b. Conduct interviews directly with directors, division heads, service heads, and section heads.

c. Study the work documents of the Technology Services Company

3 phases of understanding the current situation

This stage is a stage for analyzing and understanding the current conditions and interpreting the Construction Services Company business needs to find out the strengths, weaknesses, opportunities and threats currently being faced by the Current Internal / External Business environment. This analysis is conducted to understand the internal / external environment of IS / IT in the Construction Services Company, which later serves to identify the current IS / IT in the technology service company, maturity, business contribution, resource expertise, technology infrastructure, applications used, and technology trend. The goal is not only to implement the latest technology, but also to find ways to use existing technology / have been used more economically, effectively and efficiently. SWOT Analysis This analysis is conducted to determine the current situation such as the strengths, weaknesses, opportunities, and threats that exist in PT. Sapta Tunas. This analysis illustrates how the strengths and weaknesses of a company or organization can exploit opportunities and minimize the impact of external threats faced by Technology Services Companies

4 Stages Estimating Future Needs

At this stage an analysis is carried out to determine the potential business needs and future IS / IT by identifying several factors that can influence business strategy and can improve performance. In this preliminary stage, it contains literature studies and survey objects. This activity begins by gathering all existing literature and is related to supporting research, reviewing other topics related to and linking all existing variables. Object surveys were conducted to find out the vision, mission, and matters relating to research needs.

5. Determination stage of technology portfolio

At this stage, mapping applications is needed based on the functions of each part of the organization in the four quadrants in the McFarlan application portfolio model, namely Support, Key Operational, Strategic or High Potential. Based on the mapping, it will be able to find out the three components of the application, namely the existing application, the application needed and the potential application in the future.

6. Technology Mapping Stage

At this stage, grouping applications into the application system map is based on the levels in the application system. The system application map classifies the system to be different. The top level is a strategic application and the level below includes operational, transactional, monitoring and control support applications, and planning and analysis.

7. Final stage

This stage is the final stage which contains conclusions and suggestions obtained from the study are expected to provide recommendations for the Construction Services Company.

To identify port strengths and weaknesses as internal factors, plan-makers need to consider three elements: inputs, process and performance (outputs). Consideration of the strengths and weaknesses of the organization is nothing but to identify the company's excellence, competitiveness, the sharpness of the strategy to win the fight and to manage the right resources to ensure business continuity.

Opportunities and threats are identified by the political, economic, social, technological, educational, and external stakeholders as well as resources (directly or indirectly). The focus of the team's attention should not only be addressed to the negative aspects of the threat, but the opportunity should be attentive. It is also regarded as an external stakeholder: service users, customers, users, taxpayers, regulators, and related agencies. Included in the external category are competitors, strengths, competition, the potential to increase important strengths, as well as all of their accomplishments or networks.

In the context of formulating competitive advantage strategy, there are some things to note that is

1. Strength is an internal condition that encourages success in achieving superior position in competition, such as human resources (professional, expertise, morality and high loyalty), financial resources (performance and availability of investment funds), information resources (technology superior information, own network)

2. Weakness is an internal condition that hampers the success of achieving company goals eg for example human resource management (spoil system, rigid organizational behavior)

3. Opportunities are external conditions that encourage the success of the company to create a mission, such as government (deregulation, debirokratisasi), private investors / pendants (Tax Holiday)

4. Threats are external conditions that impede the success of corporate goals, such as economics (global recession, high inflation), social (moral decline, drug use), technology (mismanagement)

Analyzing the mapping of internal strengths and weaknesses, as well as opportunities and external threats to the ports industry is certainly not free from missions expressed to stakeholders and mandates received from the government as a shareholder.

External and Internal Factors Strategies Issues

Strategic issues are fundamental questions or critical challenges that affect the mandate, mission, value, product, and quality of service. Strategic planning is focused on the relationship between the company and the environment. Understanding the mandate and external environment means accommodating in the outsourced input plan, and understanding the values of togetherness with the internal environment means input from within to planning. A company that does not respond to strategic issues will bring something that is unwanted in the form of threats, losing opportunities or both. Appendix 1. A list of 64 factor SWOT method

Definitions on the type of elements that appear at risk, namely: H   : *High Priority*
M   : *Average Priority*
 The   : *Low Priority*

LIST OF PRIORITY FACTORS

Not.	Statement	H	M	L
1.	Business	X		
2.	PRODUCT KNOWLEDGE		X	
3.	SDM		X	
4.	TRANSPORT AND DELIVERY			X
5.	Finance		X	
6.	RESEARCH & DEPLOYMENT		X	
7.	Sales	X		

List THE CURRENT EXTERNAL ENVIRONMENT

Not.	Statement	H	M	L
1	The Current Business development provides a solution	X		
2	User/client capacity To pay for the solutions offered at this time		X	
3	The availability of means of transport is necessary to reach the user's site/client is currently		X	
4	The budget form is issued to the user/client Against the current solution			X
5	The availability of Waranty provides services to the user/client in the development of today's business		X	
6	Current state aid in business development			X
7	Current business circumstances help in business competence			X
8.	Current business circumstances may develop	X		
9.	The Status of the sourceAn educated man For the development of the user/client service is currently		X	
10.	Indicate the number of employees who are in the development of a user/customer service			X
11.	The State of work force in the field of technology and BDM (Consultan, Marketing, technician) against the user/client service is currently			X
12.	Currently, the State of technological development for the development of user/Client service		X	
13.	The State of science development in the field of technology for the development of service to the user/client is currently		X	
14.	The State of communication technologies development for the development of the user/client service			X
15.	The State of technology in price and according to the needs Currently	X		
16	Reference Availability and documentation required by the user/client Currently		X	

List THE CURRENT INTERNAL ENVIRONMENT

Not.	Statement	H	M	L
1.	The Current Business development provides a solution		X	
2.	User/client capacity To pay for the solutions offered at this time			X
3.	The availability of means of transport is necessary to reach the user's site/client is currently			X
4.	The budget form is issued to the user/client Against the current solution			X
5.	The availability of Waranty provides services to the user/client in the development of today's business			

6.	Current state aid in business development		X	
7.	Current business circumstances help in business competence			X
8.	Current business circumstances may develop			X
9.	The Status of the sourceAn educated man Aya For the development of the user/client service is currently	X		
10.	Indicate the number of employees who are in the development of a user/customer service	X		
11.	The State of work force in the field of technology and BDM (Consultan, Marketing, technician) against the user/client service is currently	X		
12.	Currently, the State of technological development for the development of user/Client service		X	
13.	The State of science development in the field of technology for the development of service to the user/client is currently		X	
14.	The State of communication technologies development for the development of the user/client service			X
15.	The State of technology in price and according to the needs Currently	X		
16.	Reference Availability and documentation required by the user/client Currently			X

List THE EXTERNAL ENVIRONMENT IN THE FUTURE

Not.	Statement	H	M	L
1.	The Current Business development provides a solution	X		
2.	User/client capacity To pay for the solutions offered at this time		X	
3.	The availability of means of transport is necessary to reach the user's site/client is currently			X
4.	The budget form is issued to the user/client Against the current solution		X	
5.	The availability of Waranty provides services to the user/client in the development of today's business	X		
6.	Current state aid in business development		X	
7.	Current business circumstances help in business competence		X	
8.	Current business circumstances may develop		X	
9.	The Status of the sourceAn educated man Aya For the development of the user/client service is currently		X	
10.	Indicate the number of employees who are in the development of a user/customer service	X		

11.	The State of work force in the field of technology and BDM (Consultan, Marketing, technician) against the user/client service is currently	X		
12.	Currently, the State of technological development for the development of user/Client service	X		
13.	The State of science development in the field of technology for the development of service to the user/client is currently	X		
14.	The State of communication technologies development for the development of the user/client service		X	
15.	The State of technology in price and according to the needs Currently	X		
16.	Reference Availability and documentation required by the user/client Currently	X		

List THE INTERNAL ENVIRONMENT IN THE FUTURE

Not.	Statement	H	M	L
1.	The Current Business development provides a solution	x		
2.	User/client capacity To pay for the solutions offered at this time		X	
3.	The availability of means of transport is necessary to reach the user's site/client is currently		X	
4.	The budget form is issued to the user/client Against the current solution			X
5.	The availability of Waranty provides services to the user/client in the development of today's business	X		
6.	Current state aid in business development			X
7.	Current business circumstances help in business competence			X
8.	Current business circumstances may develop	X		
9.	The Status of the sourceAn educated man Aya For the development of the user/client service is currently	X		
10.	Indicate the number of employees who are in the development of a user/customer service	X		
11.	The State of work force in the field of technology and BDM (Consultan, Marketing, technician) against the user/client service is currently	X		
12.	Currently, the State of technological development for the development of user/Client service	X		
13.	The State of science development in the field of technology for the development of service to the user/client is currently		X	
14.	The State of communication technologies development for the development of the user/client service			X
15.	The State of technology in price and according to the needs Currently			X
16.	Reference Availability and documentation required by the user/client Currently	X		

Table 4.6 List of priority risks and recommended control
List THE CURRENT EXTERNAL ENVIRONMENT

Not.	Statement	S	W	O	T
1.	The Current Business development provides a solution	X			
2.	User/client capacity To pay for the solutions offered at this time				X
3.	The availability of means of transport is necessary to reach the user's site/client is currently		X		
4.	The budget form is issued to the user/client Against the current solution				X
5.	The availability of Waranty provides services to the user/client in the development of today's business	X			
6.	Current state aid in business development			X	
7.	Current business circumstances help in business competence				X
8.	Current business circumstances may develop		X		
9.	The Status of the sourceAn educated man Aya For the development of the user/client service is currently	X			
10.	Indicate the number of employees who are in the development of a user/customer service	X			
11.	The State of work force in the field of technology and BDM (Consultan, Marketing, technician) against the user/client service is currently			X	
12.	Currently, the State of technological development for the development of user/Client service			X	
13.	The State of science development in the field of technology for the development of service to the user/client is currently				X
14.	The State of communication technologies development for the development of the user/client service		X		
15.	The State of technology in price and according to the needs Currently				X
16.	Reference Availability and documentation required by the user/client Currently			X	

List THE CURRENT INTERNAL ENVIRONMENT

Not.	Statement	S	W	O	T
1.	The Current Business development provides a solution			X	
2.	User/client capacity To pay for the solutions offered at this time				X
3.	The availability of means of transport is necessary to reach the user's site/client is currently		X		
4.	The budget form is issued to the user/client Against the current solution		X		
5.	The availability of Waranty provides services to the user/client in the development of today's business	X			

6.	Current state aid in business development		X		
7.	Current business circumstances help in business competence				X
8.	Current business circumstances may develop		X		
9.	The Status of the sourceAn educated man Aya For the development of the user/client service is currently		X		
10.	Indicate the number of employees who are in the development of a user/customer service		X		
11.	The State of work force in the field of technology and BDM (Consultan, Marketing, technician) against the user/client service is currently		X		
12.	Currently, the State of technological development for the development of user/Client service				X
13.	The State of science development in the field of technology for the development of service to the user/client is currently		X		
14.	The State of communication technologies development for the development of the user/client service		X		
15.	The State of technology in price and according to the needs Currently			X	
16.	Reference Availability and documentation required by the user/client Currently	X			

List THE EXTERNAL ENVIRONMENT IN THE FUTURE

Not.	Statement	S	W	O	T
1.	The Current Business development provides a solution			X	
2.	User/client capacity To pay for the solutions offered at this time				X
3.	The availability of means of transport is necessary to reach the user's site/client is currently				X
4.	The budget form is issued to the user/client Against the current solution				X
5.	The availability of Waranty provides services to the user/client in the development of today's business	X			
6.	Current state aid in business development			X	
7.	Current business circumstances help in business competence			X	
8.	Current business circumstances may develop			X	
9.	The Status of the sourceAn educated man Aya For the development of the user/client service is currently			X	
10.	Indicate the number of employees who are in the development of a user/customer service			X	
11.	The State of work force in the field of technology and BDM (Consultan, Marketing, technician) against the user/client service is currently		X		

12.	Currently, the State of technological development for the development of user/Client service				X
13.	The State of science development in the field of technology for the development of service to the user/client is currently	X			
14.	The State of communication technologies development for the development of the user/client service		X		
15.	The State of technology in price and according to the needs Currently				X
16.	Reference Availability and documentation required by the user/client Currently		X		

List THE INTERNAL ENVIRONMENT IN THE FUTURE

Not.	Statement	S	W	O	T
1.	The Current Business development provides a solution			X	
2.	User/client capacity To pay for the solutions offered at this time		X		
3.	The availability of means of transport is necessary to reach the user's site/client is currently		X		
4.	The budget form is issued to the user/client Against the current solution		X		
5.	The availability of Waranty provides services to the user/client in the development of today's business			X	
6.	Current state aid in business development	X			
7.	Current business circumstances help in business competence			X	
8.	Current business circumstances may develop			X	
9.	The Status of the sourceAn educated man Aya For the development of the user/client service is currently	X			
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11.	The State of work force in the field of technology and BDM (Consultan, Marketing, technician) against the user/client service is currently	X			
12.	Currently, the State of technological development for the development of user/Client service			X	
13.	The State of science development in the field of technology for the development of service to the user/client is currently			X	
14.	The State of communication technologies development for the development of the user/client service			X	
15.	The State of technology in price and according to the needs Currently		X		
16.	Reference Availability and documentation required by the user/client Currently				X

Appendix 2. Priority Factors

EKSTERNAL SAAT INI			
	H	**M**	**L**
H	1,15,22		
M		2,3,5,9,12,13,16	
L			4,6,7,10,11,14
T			

INTERNAL SAAT INI			
	H	**M**	**L**
H	9,10,11,15,		
M		1,6,12,13	
L			2,3,4,7,8,14,16
T			

EKSTERNAL MASA MENDATANG			
	H	**M**	**L**
H	1,5,10,11,12,13,15,16		
M		2,4,6,7,8,9,14	
L			3,
T			

INTERNAL MASA MENDATANG			
	H	**M**	**L**
H	1,5,8,9,10,11,12,16		
M		2,3,13	
L			4,6,7,14,15
T			

No	Tipe Faktor	Internal saat ini	Internal Masa Mendatang	Total
1	High	4	8	12
2	Medium	4	3	7
3	Low	7	5	12

No	Tipe Faktor	Eksternal saat ini	Eksternal Masa Mendatang	Total
1	High	3	4	7
2	Medium	7	3	10
3	Low	6	7	13

Identification of strategic issues is done basically with a direct approach to the mandate and mission of the organization, and SWOT (Strenghs, Weaknesses, Oppurtunities, Threats). As a follow-up of the identification, it is to manage strategic issues where strategic need is formulated based on the results of analysis of external and internal factors. Matrix strategy as seen in figure 2.2 has been developed into Matrix SWOT or TOWS Matrix The Wheelen and Hunger developed SWOT matrix is structured as shown in table 2.1. The horizontal line contains the Internal Factor Analysis Summary (IFAS), and the vertical column contains the External Factor Analysis Summary (EFAS). At Cell Strengths-Oppurtunities (SO) programmed the strategy to exploit the opportunity to grow by using existing strengths. In the Weakness-Oppurtunities (WO) cell program is strategized to exploit opportunities by addressing internal weaknesses. In Strengths- Threats (ST) cells stratified strategies utilize the power to avoid threats; in Weakness-Threats (WT) cells built strategies to minimize weaknesses and at the same time avoid external threats.

Matriks SWOT Kearns

EKSTERNAL / INTERNAL	OPPORTUNITY	TREATHS
STRENGTH	Comparative Advantage	Mobilization
WEAKNESS	Divestment/Investment	Damage Control

Sumber: Hisyam, 1998

Results and Discussion : Setting Priority Risk

At this stage the swot team will concentrate on prioritizing factors according to the risk type definition of the weaknesses and their impacts discussed in the previous chapter and assisted using the priority matrix, but in this session there is a priority matrix adjustment in order to facilitate the prioritization of the risks of adding numerical sequences, Such adjustments are shown in Figure a.

	Business Impact		
Vulnerability	High	Medium	Low
High	A 1	B 1	C 1
Medium	B 2	B 3	C 2
Low	C 3	C 4	D 1

Figure a Priority Priority Factor

In the final stages of this SWOT session, the SWOT team is required to determine the suggested controls against prioritized risks and only on the priority risks of type S, W, O and T because those priority categories are more in need of action. The process of determining risk control can be done in a way, the authors can direct the SWOT team to any priority risk that has a high category and ask the team to see enough controls to deal with those risks. Determination of risk control refers to 14 controls that have been established by the SWOT (listed in the appendix). shows the table of control lists on risks that have been prioritized by the SWOT team. The final stage of the analysis using SWOT is to create a work plan or often called an action plan. After the cross reference sheet is established, an action plan is developed that will explain the actions that management and operations can take on how to control the risks identified and prioritized. for risks that are still open and the risks to be implemented control. Project leaders, business writers and managers determine which control measures are most effective and determine which parties will implement those controls along with their implementation dates.

Similar to cross reference sheets, this action plan is formed by combining identified risks with a control list giving a clear picture of how each risk will be treated, complete with a work plan. The result of the action plan is shown in Table b.

No Risk	Decryption Risk	Control	Action	By Who	When
1	Human Resources	PRIORITIES	Adds staff with skills and education.	division Manager	In progress
2	Research and Development Team	PRIORITIES	Create a research and development team to help marketing and consultants provide solutions	IT Manager	In progress
3	Transport and Shipping	MEDIUM	Cooperate with shipping and transport service providers	Finance team	In progress
4	Sumber Daya Manusia Human Resources	MEDIUM	Training and workshop for all employees	Division Manager	In progress
5	sales	PRIORITIES	Know the policies and regulations on shipping and transportation	AM Manager	In progress
6	Knowledge of Products	MEDIUM	Work with product providers	Marketing dan IT Manager	Has been done
7	Develop a business by dividing the type of business industry and developing products to be sold	MEDIUM	Divide marketing with the type of business industry with specialization in the field of business industry	Sales and Marketing manager	Has been done

Figure b Result of the action plan

In the action plan shown in Table b, each risk is registered together with the type of risk, description, control, control that can be carried out, and work plan. In preparing an action plan, a risk can have several controls that are appropriate to the type of risk faced. This means that in dealing with a risk several controls can be applied which are interrelated. Controls that are still general are then explained in the action plan.

From Table b, it can be seen that each risk has been mapped with controls in accordance with the risks faced. In the action column there are recommendations for actions that can be taken to overcome risks. An action can solve more than one risk, this happens because there is a link between each risk, so that doing an action plan can overcome several risks at once. This risk comparison is carried out based on the communication between the author and the clerk with the project leader on the risks and controls that have existed before and then carried out a comparison with the risks and controls after the SWOT process is implemented. Risks that have been determined After the SWOT

process is carried out . Based on the results of interviews with project leaders, the risks that have existed before and have been determined are as many risks as they appear, as shown in table 4.6. After the SWOT process is obtained as much as internal strength factor 6 factors, weakness 13 factors, 9 factor opportunities and 4 threat factors and external factors internal strength factors 6 factors, weakness 6 factors, 10 factor opportunities and 10 threat factors which have internal risk comparisons and external SWOT process can be concluded that before applying this method the factors identified through the process of interviewing the team in the integrity aspect there are only a few risks, after going through the brainstorming process and mapping the risk using the SWOT method the identified risk is very significant, namely internal factors strength 6 factors, weakness 13 factors, 9 factor opportunities and 4 threat factors and external factors internal strength factors 6 factors, weakness 6 factors, 10 factor opportunities and 10 threat factors. The more factors that are identified, the better, because with the controls that will be

applied, the company will be more prepared to face the worst possible future events.

1. Companies need to identify and apply management to risks in certain periods that may occur, especially in operations that are used to anticipate the emergence of an increasingly high impact of new risks that arise.

2. Based on the action plan document, the Company needs to increase the number of experts and policies related to the business process and its information technology infrastructure in writing and then conduct training for all personnel of the company, and supervise the implementation that has been made

3. Based on the action plan document, the institution needs to conduct training or training of all personnel with a certain period in order to develop the expertise of the personnel themselves as well as develop a good strategy and research on the system used.

At this stage the SWOT team will identify the factors that are possible from the results of the discussion of the brainstorming stage and has occurred in the institution's business system. After referring to the list of 120 factors available from the SWOT method, the SWOT team found as many as 31 factors and were grouped according to the 3 risk type classifications shown.

Determining the risk priorities of the swot team will concentrate on prioritizing factors according to the definition of risk types of weaknesses and their impacts discussed in the previous chapter and assisted by using a priority matrix, but in this session there is an adjustment of priority matrices in order to facilitate the determination of priorities of risk, namely the addition of a number sequence. the adjustments are shown in table c.

Table c

Conclusion Based on the research that has been done by the author using the approach of strength, weakness, opportunity, threat (SWOT), then obtained the following conclusion:

Comparing the risk before and after the process is carried out Swot

The risk comparison is done from communication between the author and leadership of the project against the risks and controls that have been there before and then make a comparison with the risk and the control after the SWOT.Comparative risk Table of internal and external SWOT process can be concluded that before applying this method of factors identified through the process of interview with the team in the aspect of integrity, there are only some of the risks, after going through the Process *Brainstorming* And the allocation of risks using the DAFO method of identified risks are very significant internal factors, namely strength 6 factors, 13 factors, opportunities for weakness 9 4 factors and threat factors and internal factors external factors of force weakness of factors, 6 6 Factors, 10-factor opportunities and 10-threat factor. The more factors identified then better because the control you want to apply the company's parties will be more prepared to face the worst possible that will occur in the future. The final stage of the analysis to Swot is to make a work plan or often called *Action Plan*. After *Cross-reference Sheet* Format, compost *Action Plan* That would explain the actions that the management can adopt or operate on how the risks that have been

identified and which have been prioritized are controlled. The risk that will remain open and the risk-that will implement control. Project Manager, writer, and business managers to determine what the action of the most effective controls and determines which party will implement these controls along with the date of their application. In *Action Plan* Country, Table 4.10Risk are incurred with types of risk, description, ControlControl which can conducted the work plan. In Compose *Action Plan*, a risk can have Some The control that corresponds to the type of risks found. This means dealing with a risk can be applied to several simultaneously interconnected controls. The controls are still common then described in *Action Plan*. From Table 4.10 It seems that any risk had already been allocated with the control corresponding to the risk in the hand. In a column of action contained action recommendations that can be made to tackle these risks. An action can perform more than one risk, this happens because there is a link between each risk, so that when making an action plan you can tackle some of the risks at the same time.

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