



# Marketing and Service Strategies Development Using Blue Ocean Strategy and System Dynamics

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**Abstract.** The TB Silalahi Center Batak Museum is one of the cultural tourism objects in Toba Regency. However, along with the development of tourism around Lake Toba, there is competition between tourist objects. This study aims to determine the appropriate marketing and service strategies used. This study uses the blue ocean strategy to design a new strategy and SWOT analysis to identify the museum's external and internal factors. Then a dynamic system simulation is carried out on the strategic design. This research was carried out at the TB Silalahi Museum. From the results of the discussion that has been carried out, the strategies that need to be implemented are the strategy of cultural inhibitions, augmented reality, cosplay of Batak traditional clothes and special vehicles for visitors. In addition, it is also necessary to reduce the price of tickets, while the attributes that need to be improved are special promotions, comfort of the place, quality of service, human resources, and museum development funds.

**Keywords:** Marketing Strategy · Service Strategy · Blue Ocean Strategy · System Dynamics

## 1 Introduction

This Indonesia is an archipelagic country with diverse ethnicities and cultures. This culture is the opportunity potential to be a tourist attraction. According to Yakup & Haryanto (2019), tourism can positively impact the economy, especially in tourist attractions [1]. The development of tourism also does not only affect the economy but also provides social and cultural benefits. Therefore, a sustainable strategy is needed to ensure that tourism can develop sufficiently and has many benefits for the community. Toba Regency is an area that has various kinds of natural attractions and cultural tourism. Cultural tourism has enormous potential for the younger generation to remember and appreciate the historical heritage.

The use of the blue ocean strategy is based on the number of tourist attractions around Toba, so the TB Silalahi Museum is expected to create new demand by analyzing the position of the TB Silalahi Center Batak Museum on internal and external factors through SWOT analysis. Furthermore, designing a new strategy to create market segmentation by innovating marketing and services at the TB Silalahi Center Batak Museum. In the blue ocean strategy method, there are stages of analyzing the visualization of the TB Silalahi Center Batak Museum's condition using a strategy canvas to determine the right development strategy. Then analyze the factors that influence marketing and service innovation with a four-step framework to generate value innovation for visitors. The objectives to be achieved in this research are:

1. Analyzing the visualization of the condition of the TB Silalahi Center Batak Museum to determine the right development strategy.
2. Analyze the factors influencing marketing and service innovation to create more value for visitors.
3. Designing a new strategy to create market segmentation by innovating marketing and services at the TB Silalahi Center Batak Museum.
4. Simulating the results of the strategy design using the dynamic system method.

## 2 Literature Review

An internal Factor Analysis Strategy is a strategic factor comprising strengths and Weaknesses obtained from within the organization or company. The weighting scale starts from 0 to 1. The assessment of factors that significantly influence the company will be given a high weight. The rating shows how effective the strategy has been carried out by the company—giving a rating value for each factor by giving a scale of 1 (not important) to 5 (very important) (Evelin, 2021).

In making strategic decisions, the factors contained in a business must be analyzed in the form of strengths, weaknesses, opportunities and threats with current conditions [2]. According to Setiawan & Budiastira (2020), SWOT analysis can help identify neglected and neglected aspects of the company's strengths, weaknesses, opportunities and threats [3]. An organization's opportunities, threats, strengths, and weaknesses require a SWOT analysis for sustainable progress. According to Ferdian (2020) SWOT analysis is a tool to collect strategic factors in a company [4]. SWOT describes the adjustment of strengths and weaknesses to external threats and opportunities of the organization. A SWOT analysis evaluates internal or internal factors of the company, namely the strengths and weaknesses in the summary matrix of the internal strategic factor analysis (IFAS), while external or external factors are the opportunities and threats that exist in the external strategy. Involved. External Factor Analysis (EFAS).

The concept of the Blue Ocean Strategy is to beat competitors by providing product innovations, so they can be in new markets. Kim & Mauborgne (2017) describe the blue ocean strategy as a medium for generating new demand in uncompetitive market segments [5]. This means that blue ocean strategies can create gaps in new markets to provide development opportunities that provide benefits related to competitive analysis, then develop strategies and create sustainable frameworks. According to Umar & Dewata (2017), the dynamic system method helps provide solutions to various problems

in current conditions [6]. The dynamic system method has explicitly phases: problem modelling, making causal loop models, making dynamic models in the form of stock and flow diagrams and performing scenario implementation on the model. The causal loop diagram model is used to solve problems through a systems approach method by taking into account a system's complexity and supporting a dynamic system approach. The causal loop is a modelling representation of a system so that it becomes the basis for formulating stock and flow diagrams. According to (Fuad & Sawan, 2020), the causal loop is a modelling representation of a system that becomes the basis for formulating stock and flow diagrams[7].

### 3 Method

This study uses a descriptive type of research with a qualitative approach. Researchers do not collect data one or all at once and then process it, but the steps and their meaning are completed during the process from beginning to end of the activity, narrative and holistic. After the necessary data is collected, processing and analysis are based on the theory used so that conclusions can be drawn. In collecting and processing data, data is needed in the form of currently applied strategies, external and internal conditions from the TB Silalahi Center Batak Museum. The data required in the form of primary data is obtained based on observations, interviews, and questionnaires distributed to visitor respondents and museum managers. Observations were made through direct visits to museum research sites. Secondary data is data that serves as a supporter of this research. Secondary data in this study were obtained through literature studies, documents, regulations, previous similar research reports from related agencies, and literature. Primary data was obtained by making direct observations on the research object to identify the condition of the research object and problems from both internal and external research objects directly. Conduct is written and direct interviews with visitors at the research object to find out the needs that are attributes of visitor satisfaction. Secondary data obtained through the literature study stage related to research supporting documents originating from books, journals, articles, and previous theses. Conduct interviews and discussions with tourism object management experts to gather information on sustainable management. Stock and flow diagram will compare the current condition model and the model after the strategy change.

An internal Factor Analysis Strategy is a strategic factor consisting of Strengths and Weaknesses obtained from within the organization or company. The results of the IFAS matrix are shown in Table 1.

External Factor Analysis Strategy is a strategic factor consisting of opportunities and threats obtained from the environment outside the organization or company. The results of the EFAS matrix are shown in Table 2.

**Table 1.** IFAS Matrix Result

No	Strength	weight	rating	score
1	Ticket price	0,080	4	0,289
2	Cultural heritage quality	0,087	4	0,342
3	Number of cultural heritage collections	0,096	4	0,416
4	Convenience	0,087	4	0,342
5	Safety	0,089	4	0,356
	Total strength	0,440		1,747
No	Weakness	weight	rating	score
1	Variety of cultural heritage	0,094	4	0,400
2	Promotion	0,090	4	0,363
3	Human Resources	0,097	4	0,423
4	Service quality	0,088	4	0,349
5	Tourist attraction location	0,090	4	0,371
6	Tourism museum development fund	0,098	4	0,431
	Total Weakness	0,559		2,341
	Total Internal	1		4,089

Based on the results of the diagram, a strategy was obtained from a combination of internal and external factors. This strategy will later be re-analyzed in strategy design using the Blue ocean strategy method [8]. The strategy canvas visualizes the situation in a known market space [9]. This method can help understand the current competitive position and be able to understand the factors that cause competition for a product and delivery service. The strategy canvas result is shown in Fig. 1.

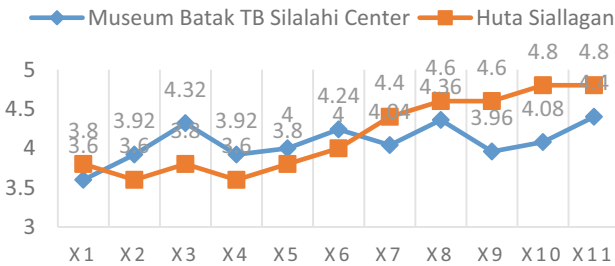
Dynamic system modelling is carried out to simulate the results of the strategies carried out previously by making a Causal Loop Diagram (CLD). A causal loop diagram (CLD) is useful in solving problems with a systems approach that considers the dynamic complexity of a system in a dynamic system modelling approach [6]. A CLD shows a causal relationship between the variables that affect the number of visitors at the TB Silalahi Center Batak Museum, as can be seen in the following Fig. 2.

After doing causal modelling with Causal loop diagrams, then dynamic modelling with Stock and flow diagrams is carried out to perform simulations that refer to the strategy results. The results of system modelling with Stock and flow diagrams are described in Fig. 3.

Model simulation involves experimenting with a model to identify component behaviour based on the scenario (Rahayu et al., 2018) the best strategy is obtained through dynamics simulation [10]. Each strategy is simulated with pessimistic, moderate, and optimistic assumptions, as shown in Table 3.

**Table 2.** IFAS Matrix Result

No	Opportunity	Weight	rating	score
1	Government support for cultural tourism objects.	0,127	4	0,522
2	The number of cultural tourism objects in the form of museums is still tiny in the Toba area.	0,130	4	0,545
3	Increasing trend of social media users	0,132	4	0,563
4	Companies that want to collaborate to improve cultural tourism objects	0,126	4	0,514
	Total Opportunity	0,514		2,143
No	Threat	Weight	rating	Score
1	Decreased interest in visiting cultural tourism objects	0,117	4	0,441
2	Increasing natural attractions and water tourism around Toba	0,127	4	0,522
3	The declining economic conditions due to the Covid-19 pandemic	0,122	4	0,484
4	The number of cultural attractions that are doing restoration	0,120	4	0,465
	Total Threat	0,486		1,912
	Total External	1		4,055

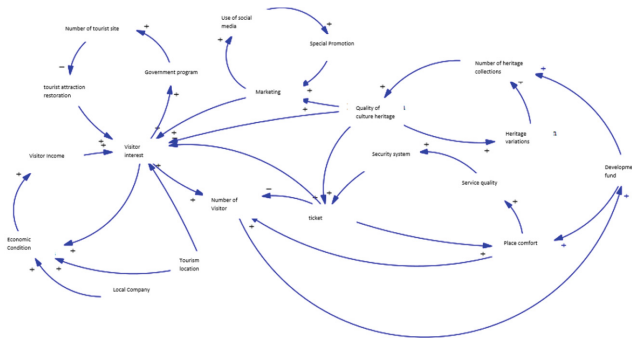


**Fig. 1.** Strategy canvas result.

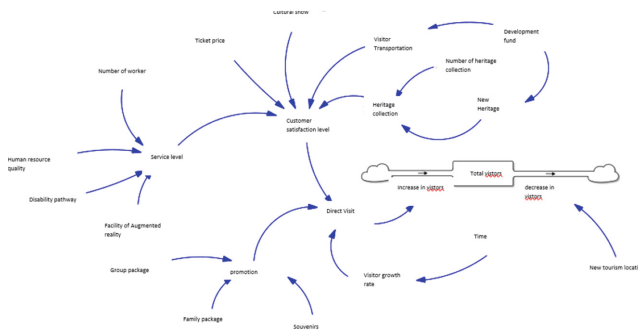
## 4 Result

### 4.1 Dynamic Simulation Results When Conditions Are Pessimistic

The results of the pessimistic assumption show three strategies with the most significant total visitors: group package, family package, and museum development funds. This result can be a top priority for implementing a strategy with a pessimistic condition to generate the largest number of visitors within five years. The results of the pessimistic assumption also show that there are three strategies that still need to be studied, namely essential chain souvenirs, special pathways for disability, and augmented reality facilities. In reviewing a pessimistic condition strategy, it is necessary to consider the results of moderate and optimistic assumptions. The simulation results of the total visitors can be seen in Fig. 4.



**Fig. 2.** Causal Loop Diagram TB Silalahi center.



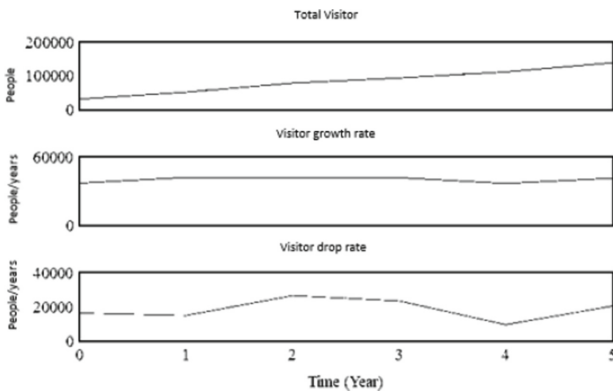
**Fig. 3.** Stock and Flow Diagram TB silalahi center.

**4.2 Dynamic Simulation Results When Conditions Are Moderate**

The results of the moderate assumption show that there are three strategies with the most significant total visitors, namely the group package strategy, family package, and cosplay traditional Batak clothes. This result can be a top priority for implementing a strategy with moderate conditions to generate the most significant number of visitors within five years. The results of the moderate assumption also show that there are two strategies that still need to be studied, namely essential chain souvenirs, and special pathways for disability. In assessing the use of a moderate condition strategy, it is necessary to consider the results of optimistic assumptions. The assessment of the strategy review is also because the two strategies have not increased the number of visitors to 150,000 within five years. The simulation results of the total visitors can be seen in Fig. 5.

**Table 3.** Condition Strategy

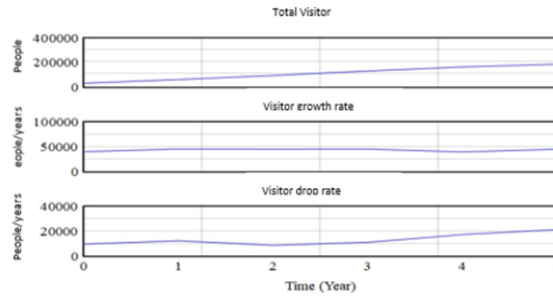
No	Strategy	Condition		
		Pessimistic	Moderate	Optimistic
1	Group package	200 Group/year	300 Group/year	700 Group/year
2	Family Package	100 Group/year	200 Group/year	500 Group/year
3	Souvenir	25 pcs	40 pcs	60 pcs
4	Disability Pathway	10%	20%	30%
5	Human Resource quality	20%	40%	60%
6	Augmented Reality	50 pcs	100 pcs	150 pcs
7	Number of worker	50	60	70
8	Ticket price	Rp.15.000	Rp. 13.000	Rp. 12.000
9	Cultural show	6 times/year	6 times/year	6 times/year
10	Visitor Transportation	2 unit	3 unit	4 unit
11	Development fund	Rp. 100 million	Rp. 150 million	Rp. 200 million
12	Cosplay	50/year	100/year	150/year



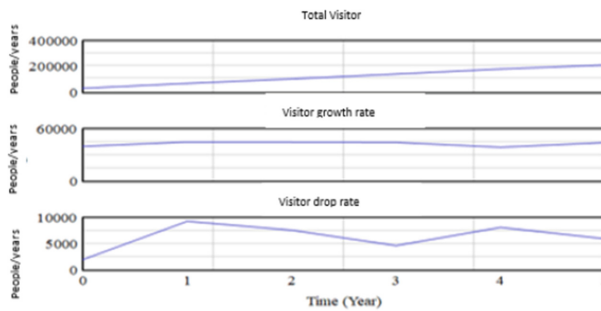
**Fig. 4.** Dynamic simulation results when conditions are pessimistic.

**4.3 Dynamic Simulation Results When Conditions Are Optimistic**

The results of the optimistic assumption indicate that there are three strategies with the most significant total visitors, namely the group package strategy, family package, and cosplay traditional Batak clothes. This result can be a top priority for implementing the strategy with the conditions of the optimistic assumption to generate the most significant number of visitors within five years. Assumption results The optimistic assumption results also show that a strategy still needs to be studied for its implementation, namely the unique pathway for disability. The assessment of the strategy review has not increased



**Fig. 5.** Dyamic simulation results when conditions are moderate.



**Fig. 6.** Dynamic simulation results when conditions are moderate.

the number of visitors to 150,000 in 5 years. The simulation results of the total visitors can be seen in Fig. 6.

## 5 Conclusion

The results of the three alternative scenarios of pessimism, moderation, and optimism indicate the selection of a better scenario to use; there are four priority strategies that can increase the number of visitors, namely group packages, family packages, museum development funds, and traditional Batak costume cosplay. The simulation results also show that the disability-specific route strategy with assumptions of pessimism, moderation, and optimism has not been able to increase the number of visitors. Other strategies can also be applied because they can increase the number of visitors within five years at the Batak TB Silalahi Center Museum.

Analysis of the strategy canvas shows that the museum still has several weaknesses compared to competitors. In some factors, the competition is still tight, so it requires a new strategy that focuses on improving the attributes that are still below competitors to get out of the competition. Four priority strategies can increase the number of visitors: group packages, family packages, museum development funds, and cosplay of traditional Batak clothes. The simulation results also show that the disability-specific route strategy with assumptions of pessimism, moderation, and optimism has not increased the number



of visitors. Other strategies can also be applied because they can increase the number of visitors within five years at the Batak Museum.

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