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Arrangement Strategy of Corridor Madukoro to Support Semarang Urban Tourism

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Abstract. The Madukoro Corridor, located in the northern part of Semarang City, serves as the first corridor for migrants from outside Semarang through the Ahmad Yani Airport air route, making it a priority for development. However, the current state of the corridor presents issues related to urban tourism, particularly around popular destinations such as PRPP, Grand Maerakaca, and Kampung Laut. This study aims to identify the most optimal strategy for developing the Madukoro corridor to better support urban tourism in Semarang while taking into consideration ecological conditions. A mixed-method approach, combining qualitative and quantitative methods, was employed to explore the potential and identify problems in the corridor. A SWOT analysis was conducted, complemented by an IFAS and EFAS analysis, to determine the most appropriate strategy. The results indicate that a progressive strategy, prioritizing Weakness-Opportunity strategies, would be most effective in developing urban tourism. This would involve physical development of city infrastructure, utilization of commercial buildings in the surrounding area, and improving accessibility to Grand Maerakaca and Kampung Laut. Additionally, improving the quality of the nodes that affect the spatial pattern of regional circulation and regional landmarks is also recommended.

Keywords: *Arrangement strategy, Madukoro corridor, Urban Tourism, Semarang City, SWOT analysis*

INTRODUCTION

Currently, the government of Semarang City is striving to enhance its tourism potential (Hendrar Prihardi, 2021). In addition to being a trading city, Semarang is also developing as a service and tourism city. Therefore, it is undergoing physical and non-physical improvements to attract more tourists. One of the city government's initiatives to support urban tourism in Semarang is the development of Ahmad Yani airport, which includes relocating the terminal building to address the issue of capacity limitations. This endeavor also impacts the city's development, including changes to access routes to and from Ahmad Yani Airport, which previously utilized the Kalibanteng highway but now utilizes the Madukoro road.

Currently, Madukoro Road has been identified as a priority corridor because it serves as the first passage for migrants from outside Semarang to enter through the Ahmad Yani Airport air route. The Madukoro corridor's physical conditions are crucial for the development of tourism in Semarang City. The Madukoro corridor is surrounded by commercial and office areas, and several issues impede its development. For instance, the area is prone to environmental problems such as floods and tidal floods caused by land subsidence. Another issue is the presence of two lanes on the Madukoro corridor, where a new flyover with provincial road status supports airport accessibility,

while the lane below has a city road status. Travelers from the Ahmad Yani airport directed to the city road will miss the chance to stop by existing tourist destinations near the airport, such as Grand Maerakaca and Kampung Laut on Semarang's coast. Additionally, the primary access to Grand Maerakaca and Kampung Laut from the airport road is narrow, hindering the arrival of tourists at urban destinations around Ahmad Yani Airport.

Previous studies have explored the arrangement of corridors in Semarang, such as Anton Sumartono's "Study of the Pandanaran Corridor as a City Linkage in Semarang" (2003), Soetomo's "Spatial Patterns of S. Parman Street Corridor on Candi Baru Settlement Areas" (2003) and Nunuk Rini Murwani's "Changes in the Function of the Suyudono Street Corridor Due to the Existence of Pasar Bulu Semarang" (2007). However, these studies mainly focused on economic and spatial planning issues, whereas this study on the Madukoro corridor complements the previous research by focusing on urban tourism. As the only priority corridor connecting downtown Semarang with air infrastructure, the Madukoro corridor is of significant importance in the development of Semarang City's tourism industry.

Several leading destinations in Central Java are traversed by the Madukoro corridor, they are PRPP (Central Java Center of Recreation and development promotion), Grand Maerakaca, and Kampung Laut. Whether this linkage is sufficient to support urban tourism or not will be known in the result of the SWOT analysis used. This study is focused on finding the optimal strategy for structuring the Madukoro corridor to support urban tourism in Semarang. So that the flow of discussion in this article will start from the rating results of each element (strengths, weaknesses, opportunities, and threats). From the results of the description of each element in the SWOT analysis, it will be known the rating of each identification will be, which will be converted to a quadrant graph so that strategies can be explored to implement the right arrangement to support tourism in the city of Semarang. The intended strategy will refer to the physical and non-physical components supporting city tourism related to the Madukoro corridor.

This study offers theoretical and practical benefits. Theoretically, it enriches knowledge in the fields of urban architecture, infrastructure, spatial planning, and tourism. Moreover, this research serves as a reference for further studies on sustainable development in the coastal area of Semarang, particularly in the vicinity of the Ahmad Yani airport. Practically, the findings of this study can be used as a reference by the government to improve the development of Semarang, particularly in the Madukoro corridor and the area surrounding Ahmad Yani International Airport. By doing so, the city can be structured and utilize its urban space more effectively and efficiently, thereby supporting urban tourism in Semarang.

METHODOLOGY

This study was conducted in the Madukoro corridor,which is a priority road corridor due to being the primary route for migrants from outside Semarang through the Ahmad Yani Airport. The area around Jalan Madukoro is an office and commercial area. To be able to explore the potential and identify problems that exist in the Madukoro corridor, this study was carried out using a mixed method in the form of a qualitative method which was quantified by weighting and rating. The analysis used is a SWOT analysis to identify each component of strengths, weaknesses, opportunities, and threats in the Madukoro corridor area.

SWOT analysis is a tool for analyzing both internal and external factors to develop strategies for optimizing business profitability (Budiarti,2015). According to Robinson and Pearce (1997), SWOT analysis is a systematic approach to identify factors and strategies that best align with each other . This analysis assumes that an effective strategy will maximize strengths and opportunities while minimizing weaknesses and threats.

Since this research focuses on tourism for business purposes, SWOT analysis is a suitable approach. SWOT analysis has several advantages, including simplicity, collaboration, flexibility, and integration. It is easy to understand, participatory, and applicable to organizations of any size. Moreover, the consideration of both positive and negative aspects of internal and external factors makes SWOT a comprehensive and useful instrument.

Internal and external factors are categorized into strengths and weaknesses, and opportunities and threats, respectively. The next step is to create a SWOT matrix to determine the most appropriate strategy. This matrix combines the four components into four strategies: SO (Strength-Opportunity), WO (Weakness-Opportunity), ST (Strength-Threat), and WT (Weakness-Threat) strategies.

In addition to the SWOT matrix, the study also employed a strategy analysis of internal factors (IFAS) and external factors (EFAS). Each description of the strengths, opportunities, weaknesses, and threats are assessed using a weighted and rating system to obtain a score value, which is then plotted on a quadrant graph to determine the most suitable strategy. The weight is assigned a value ranging from 0.0 (least important) to 1.0 (very important), while the

rating value ranges from 1 (poor) to 4 (outstanding priority).

RESULT AND DISCUSSION

The mapping of the study location can be seen in the image below.

FIGURE 1. Study location in the Madukoro corridor
(Source: satellite map, 2021)

The satellite map depicted above presents the study area, which encompasses the Madukoro corridor stretching from the west flood canal to the Ahmad Yani airport. The length of the Madukoro corridor has undergone a change, from 1.15 kilometers to 1.95 kilometers. Originally, the length of this section of the corridor was delimited by the Siangker River, but it was extended after the Ahmad Yani airport terminal was relocated. The Madukoro Corridor serves as a connector between Ahmad Yani Airport and several prominent destinations in Central Java, such as PRPP (Central Java Center of Recreation and Development Promotion), Grand Maerakaca, and Kampung Laut. The route includes two terraced highway lanes, with the upper lane serving as a flyover on a provincial road, while the lower lane is classified as a city road.

FIGURE 2. Compilation of condition observations at several points in the Madukoro corridor
(Source: Author's observations, 2021)

The images presented above depict the ground-level situations around the Grand Maerakaca – PRPP entrance and the bottom of the Ahmad Yani flyover. The construction of the flyover has impacted the traffic flow towards the entrance to Kampung Laut and Grand Maerakaca, resulting in narrower access roads.

Based on field observations, several phenomena were identified as follows. Firstly, there is currently no pedestrian path connecting the three leading destinations in Central Java (PRPP, Grand Maerakaca, and Kampung Laut). This

pedestrian path is crucial in supporting urban tourism in Semarang, and proper facilities must be provided to accommodate pedestrian needs. Abley (2005) defined walkability is a condition where the environment is friendly to pedestrians, and it involves 9 aspects: connected, legible, comfortable, convenient, pleasant, safe, secure, universal, and accessible. According to Kobelke's (2007) book, A Walking Strategy for Western Australia, creating a walkable environment involves considering 4 factors: access, aesthetics, safety & security, and comfort. The Indonesian Institute for Transportation Development Policy recommends dividing sidewalks into 5 sections, including the front of the building, variation space, pedestrian space, bike path or street furniture space, buffer area, and utility zone, with each space having its own function.

The second phenomenon is the suboptimal signage at the entrance point to Grand Maerakaca, which cannot be easily recognized due to its location and size, especially for first-time visitors. Therefore, a main gate with more prominent signage is needed, which can serve as a landmark for the Grand Maerakaca entrance gate area and be integrated with the entrance to Kampung Laut. According to Shirvani (1985), clear design elements are essential for creating a city with distinct characteristics, and signage is a crucial element of urban design. In contemporary city life, visual advertising dominates the city's visual space through billboards, banners, and other signage, which greatly impacts the city's visualization both macro and micro. Signage is an important factor in urban planning and design, and the arrangement of signs should not negatively impact the city's visual appearance or traffic flow, as recommended by the Indonesian Institute for Transportation Development Policy. Lynch (1960) posits that a city is a unity between its function and physical form, and the landmark is an essential element that forms the regional image in the human psychological map of the city on a macro scale. Landmarks can be in the form of buildings or natural objects that are distinct from their surroundings and can be seen from afar, such as statues, monuments, and buildings.

Thirdly, a current phenomenon involves social activities being frequently carried out in public open spaces. However, in the vicinity of the three destinations discussed earlier, there is insufficient public open space to accommodate this need. To invigorate the city space, including the Madukoro corridor, a "trigger" is necessary to encourage people to utilize public spaces more freely. Therefore, an open space on the water's edge is required to accommodate community activities. Its location must be easily accessible and integrated with the three existing destinations. According to Shirvani (1985), public open space refers to space designated by people due to equipment restrictions on two elements or fields, the base and the wall without a roof area (open). Public open space is space that is limited by nature.

Based on the three phenomena discussed, this study aims to determine the best strategy for structuring the Madukoro corridor to support urban tourism around Ahmad Yani Airport Semarang. The purpose of this study is to identify the most effective strategy to organize the Madukoro corridor, specifically in the area around Ahmad Yani Airport Semarang, to support urban tourism.

1. SWOT ANALYSIS RESULT

The following identification results were obtained from the SWOT analysis:

STRENGTH

Strength is an internal factor. The following factors can be identified as strengths at the site:

1. Strategic location, close to Ahmad Yani Airport.
2. Regional facilities and infrastructure are quite complete.
3. Has leading coastal tourism destinations in Central Java (PRPP, Grand Maerakaca, Kampung Laut).
4. Have a sea view.
5. Property values on main roads tend to be stable.
6. Including areas with minimal earthquake risk.
7. Zone of minimal movement/ground fault.
8. Flat topography, not contoured.

WEAKNESSES

Weaknesses are internal factors that can be addressed relatively quickly with appropriate solutions. The weaknesses identified at the location are as follows:

1. Lowlands, temperature, and humidity tend to be high.
2. Located on alluvial land (softland) in the form of sediment from rivers since hundreds of years ago.
3. Geological structure in the form of sandy stone – sandy sediment with alluvium soil type.
4. Including areas prone to rob and annual floods.
5. High population density.

6. Lack of shade vegetation.
7. The image of the area is not strong enough to give a characteristic of urban tourism.
8. There are no good pedestrian facilities available to get to tourist destinations in that location.

OPPORTUNITY

Opportunities are external factors that exist outside of the site. The opportunity factors at the location can be identified as follows:

1. The Madukoro corridor, being situated in the capital of Central Java province, presents a significant opportunity to benefit from the infrastructure planning acceleration program for ten metropolitan areas by BPIW PUPR, aimed at reducing regional disparities and optimizing development in surrounding areas such as industrial areas, special economic zones, and national tourism strategic areas. This program has been initiated as part of the national economic recovery effort following the COVID-19 pandemic.
2. Mixed land use regulations can be developed to facilitate the development of new superblocks that combine residential, commercial, and educational areas as investment opportunities in the vicinity of the airport.
3. The programs and initiatives of the Semarang City Government in tourism, especially regarding the main gateway to the city, provide opportunities for landscape improvements that can enhance urban tourism. .

THREATS

Threats are factors that come from outside (external. Weakness factors require a relatively long time to be overcome with solutions. Threat factors at the location can be identified as follows:

1. Land subsidence (including areas with average subsidence of 2 - 6 centimeters/year).
2. Changes in the coastline that have the potential to cause abrasion and disaster impacts on other coastal parts of the island.
3. Low soil productivity, and scarce water discharge (less than 5 liters/second).
4. The condition of the global economic crisis due to the covid-19 pandemic.

2. SWOT MATRIX

To determine the most appropriate strategy, a SWOT matrix can be utilized by combining the four components into SO (Strengths-Opportunities) strategies, WO (Weaknesses-Opportunities) strategies, ST (Strengths-Threats) strategies, and WT (Weaknesses-Threats) strategies.

TABLE 1. SWOT Matrix

	STRENGTH – S Positive characteristics and advantages of the issue, situation, or technique	**WEAKNESS – W** Negative characteristics and disadvantages of the issue, situation, or technique
OPPORTUNITY – O Factors, and situations that can benefit, enhance or improve the issue, situation, or technique	**SO - STRATEGIES / ANALYSIS** **Using strength to take advantage of opportunities**	**WO - STRATEGIES / ANALYSIS** **Overcoming weaknesses by taking advantage of opportunities**
THREAT – T Factors, situations that can hinder the issue, situation, or technique	**ST - STRATEGIES / ANALYSIS** **Using strength to avoid threats**	**WT - STRATEGIES / ANALYSIS** **Minimize weaknesses and avoid threats**

Sources: SWOT Analysis (Freddy Rangkuti, 2014)

3. SWOT STRATEGIES

SO (STRENGTH - OPPORTUNITY) STRATEGIES

The strategies for Strength-Opportunity can be determined as follows:

1. The development of physical infrastructure that supports the area's environment, such as transportation, drainage, and raw water, can be initiated. This can be feasible due to the acceleration program for infrastructure planning in ten metropolitan areas by BPIW PUPR, which includes the Semarang metropolitan area. The location around Ahmad Yani Airport and the Madukoro corridor is considered a priority area.
2. Investments such as transit hotels and commercial areas can be developed around the airport, which is a mixed land-use area. This development can support urban tourism.
3. The optimization of Grand Maerakaca and Kampung Laut can be done by developing tourist destinations,

including rearranging the entrance area. The Semarang city government's support and attention in the tourism sector make this possible.

WO (WEAKNESS - OPPORTUNITY) STRATEGIES

The strategies under Weakness - Opportunity can be identified as follows:

1. Providing proper pedestrian facilities with comfortable softscape to access tourist destinations (Grand Maerakaca, Kampung Laut) is feasible, supported by the accelerated infrastructure planning program from PUPR BPIW and the Semarang city government's support for urban tourism development along the Semarang coast.
2. Improving the area's image with a local wisdom touch to support Semarang's identity and promote the tourism sector.
3. Developing a creative economy based on the urban society's potential and high population density.

ST (STRENGTH - THREAT) STRATEGIES

The Strength - Threat strategies can be determined as follows:

1. To develop the area by considering the safe construction of land subsidence.
2. Development to avoid shoreline changes to avoid the risk of abrasion.
3. To provide water based on rainwater harvesting communally and utilizing a flat topography.

WT (WEAKNESS - THREAT) STRATEGIES

For the Weakness - Threat strategies can be determined as follows:

1. To carry out flood control efforts
2. To perform sediment maintenance on the western flood canal and city drainage

4. IFAS (INTERNAL FACTOR ANALYSIS STRATEGY)

TABLE 2. IFAS

		IFAS	QUALITY	RATING	SCORE
OPPORTUNITIES (+)	O.1	As the capital of Central Java Province, it has the opportunity to receive priority from the infrastructure planning acceleration program for 10 metropolitan areas by BPIW PUPR	0.30	4	1.2
	O.2	Mixed land-use regulations can be developed for the development of new superblocks (residential areas, commercial areas, educational areas) as investments around the airport	0.10	3	0.3
	O.3	Programs and attention of the Semarang City Government in tourism - as the main door to enter the city of Semarang, there is an opportunity with a landscape arrangement that can support urban tourism	0.30	4	1.2
			Sub Total Opportunities		**2.7**
THREATS (-)	T.1	Land subsidence area	0.20	4	0.8
	T.2	Changes in the coastline that have the potential to cause abrasion & catastrophic impacts on other coastal parts of the island	0.05	2	0.1
	T.3	Low soil productivity, scarce water flow < 5 liters/second	0.01	2	0.02
	T.4	The condition of global economic crisis due to the covid-19 pandemic	0.05	3	0.15
			Sub Total Threats		**1.07**
		TOTAL EFAS POINT			**3.77**

Sources: Author's analysis, 2021

5. EFAS (EXTERNAL FACTOR ANALYSIS STRATEGY)

TABLE 2. EFAS

		EFAS	QUALITY	RATING	SCORE
STRENGTHS (+)	S.1	Strategic location, close to Ahmad Yani Airport	0.20	4	0.8
	S.2	The area's facilities and infrastructure are quite complete	0.10	3	0.3
	S.3	Has leading coastal tourism destinations in Central Java (PRPP, Grand Maerakaca, Kampung Laut)	0.20	4	0.8
	S.4	Have a sea view	0.03	2	0.06
	S.5	Property values on main highways tend to be stable	0.01	2	0.02
	S.6	Including areas with minimal earthquake risk	0.02	2	0.04
	S.7	Zone of minimal movement/ground fault	0.02	2	0.04
	S.8	Flat topography, not contoured	0.02	1	0.02
			Sub Total Strength		**2.08**
WEAKNESSES (-)	W.1	Lowlands, temperature & humidity tend to be high	0.05	3	0.15
	W.2	Located on alluvial land, sediment from rivers since hundreds of years ago	0.10	3	0.3
	W.3	Geological structure of sedimentary sandy rock, alluvium soil type	0.05	3	0.15
	W.4	Including areas prone to tidal waves and annual floods	0.15	4	0.6
	W.5	High population density	0.01	1	0.01
	W.6	Lack of shade vegetation	0.01	1	0.01
	W.7	The image of the area is not yet strong enough to give a distinctive character to urban tourism	0.01	1	0.01
	W.8	There are no good pedestrian facilities to get to tourist destinations	0.02	1	0.02
			Sub Total Weaknesses		**1.25**
		TOTAL IFAS POINT	1.00		**3.33**

Sources: Author's analysis, 2021

6. QUADRANT GRAPH

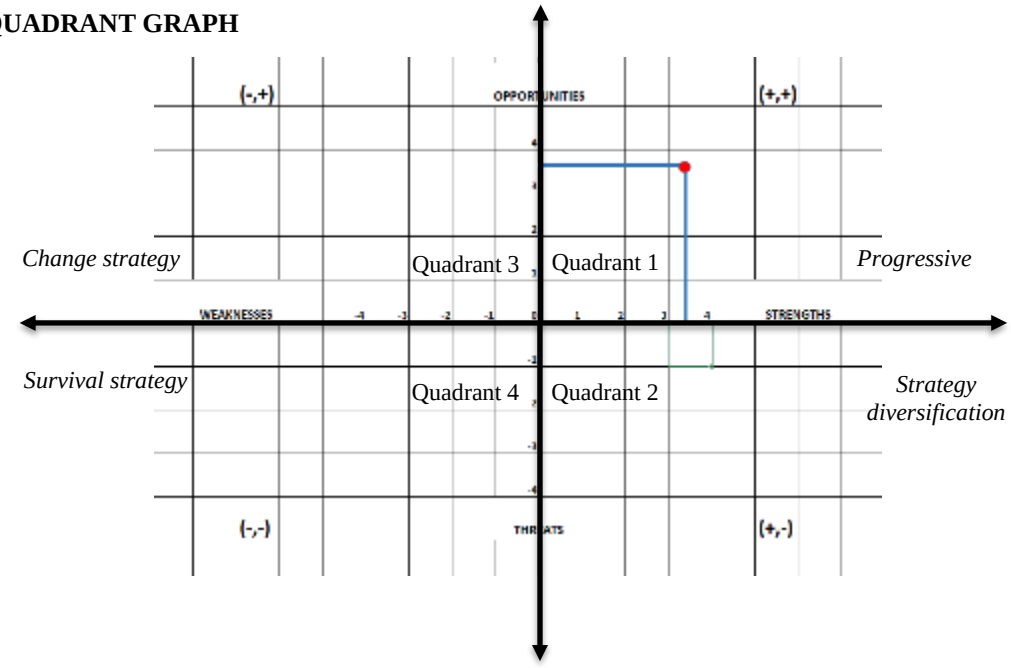

FIGURE 4. SWOT Quadrant
(Source: Author's analysis, 2021

The results of the SWOT weighting show that the Madukoro corridor has potential for further development due to internal strengths supported by external opportunities, as indicated by the IFAS value of +3.33 and EFAS value of +3.77, positioning the graph point in quadrant 1. A progressive strategy is recommended for organizing the Madukoro corridor to support urban tourism in this quadrant.

The progressive strategy involves prioritizing steps based on the (S-O) strength and opportunity strategies, as outlined in the previous page's description of Strength-Opportunity strategies. For instance, the development of physical infrastructure to support the area's environment, such as transportation, drainage, and raw water, is possible due to the acceleration program for infrastructure planning for ten metropolitan areas by BPIW PUPR, which covers the Semarang metropolitan area, including the Madukoro corridor. Additionally, investment development around the airport, such as transit hotels and commercial areas supporting urban tourism, is feasible due to the area's mixed land-use designation. Finally, to optimize Grand Maerakaca, Kampung Laut, including rearranging the entrance area, is necessary with the support and attention of the Semarang city government in the tourism sector.

CONCLUSION

Based on the results of the SWOT analysis, it is evident that despite having weaknesses and threats, the area surrounding the Ahmad Yani international airport possesses strengths that are supported by both the Semarang city government and the central government. As such, there is a significant potential for the area's development, especially in the realm of urban tourism. The government hopes to enhance the area's appeal, making Semarang a more desirable destination for travelers.

To achieve this goal, a progressive strategy prioritizing S-O strategies must be implemented. The following strategies should be carried out:

1. Attention must be given to the physical development of supporting city infrastructure, including transportation, drainage, and raw water facilities that can harness communal rainwater harvesting.
2. Utilization of commercial buildings in the area surrounding the airport to function as transit hotels and trade in goods and services that support urban tourism, particularly in the vicinity of Ahmad Yani airport.
3. Accessibility to the area's leading tourist destinations in Central Java (Grand Maerakaca, Kampung Laut) should be prioritized.
4. Improvements in the quality of urban design elements, particularly nodal points, regional landmarks, and pedestrian ways on city roads, should be made to enhance the area's identity and appeal.

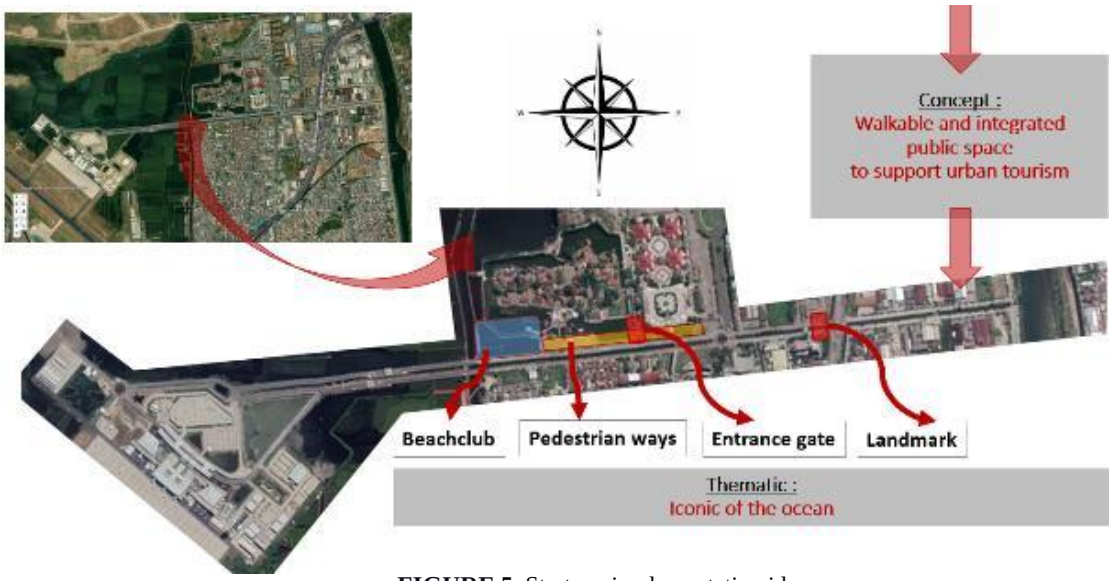

FIGURE 5. Strategy implementation ideas
(Source: Author's analysis, 2021)

This figure presents the macro-level ideas derived from the preceding discussion. Based on the analysis, the depicted location calls for the creation of open space facilities in the form of a beach club concept, pedestrian pathways connecting the beach club to the Grand Maerakaca entrance gate, and regional landmarks.

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