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SPATIAL DEVELOPMENT OF CILIMUS MARKET AREA KUNINGAN DISTRICT

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ABSTRACT

Cilimus Market is located in Desa Cilimus, Kecamatan Cilimus, Kabupaten Kuningan-Jawa Barat. For Cilimus Market conditions, it's now starting to become irregular, such as parking lots being used as a place to sell, spaces in the stuffy market, air circulation is not good, types of traders are not separated according to the block, market space capacity is not in accordance with the number of visitors and traders. And often experience traffic jams around the Cilimus Market area due to vehicles parked along the road.

So that to overcome these problems needed a solution. First, to determine the determination of market development strategies using the analysis method of Strengths Opportunities Aspirations Results (SOAR), both projections of the number of traders are projected for 2023. Then planning the market building becomes 3 (three) floors with the addition of facilities and infrastructure facilities and market spatial plans based on SNI 8152: 2015 regulation on the People's Market designed with Autocad and SketchUp. And for the Cilimus Market area such as Taman Cilimus and Terminal Cilimus developed by adding infrastructure facilities in accordance with RDTR Kecamatan Cilimus Tahun 2014 and Peraturan Direktorat Perhubungan Tahun 1996.

The results of this thesis research are Cilimus Market was developed into a Modern Market with it's constructed 3 floors and to Cilimus Market area added other facilities according to existing regulations.

Keywords : Market Development, Market Spatial Planning, SOAR Analysis.

1. INTRODUCTION

1.1 BACKGROUND

Cilimus Market has been established since the Dutch and Japanese colonial times to date. Since the beginning of the Cilimus Market, there have been changes made, the first area of Cilimus Market which was originally from the back of the Market which has a very large land area, but in 2009 to 2010 the Cilimus Market was moved to the front of the Market only. So that the market space in the area behind the market is emptied, with some local government policies. And now Cilimus Market is built with 2 floors, the first floor is for traders of vegetables, meat, fruit and basic needs. Whereas for the second floor is used for clothes and shoes traders.

Since the construction of Cilimus Market in 2010 to date, the condition of Cilimus Market has begun to disorganize again. Like a parking lot that is intended to park vehicles, traders are used as a place to sell. While the conditions in the market, the space in the stuffy market, the air circulation is not good, the type of each trader is not separated according to the block, then the density of buyers in the market is not in accordance with the available space capacity so that there is a good density between buyers and traders jostling each other.

Because of the limited number of kiosks and stalls available in Cilimus Market, many traders sell around Cilimus Market, causing traffic jams around Cilimus Market. For vehicle parking lots, it is not comparable to the number of vehicles parked so that vehicles are forced to park beside Cilimus market building. Then the parking space and loading and unloading of the vehicle are not separated so that many vehicles that will carry out loading and unloading are forced to park in Cilimus Park which is precisely in front of the Market. And for the entrance and exit of the vehicle is not clearly regulated, so the entrance and exit are not separated.

In addition to parking and merchant problems, there are congestion problems caused by vehicles parking at Cilimus Market and public transport vehicles parked along the shoulders of Cilimus Market road which is supposed to park in Cilimus Terminal. Then for the landfill in the market, there is no reservoir, only the place is provided and this is integrated with the parking lot. This causes inconvenience for both visitors and traders and this waste is not managed by the market itself. For drainage inside the Market or outside the market, blockages often occur in the drainage channels.

Cilimus Market is a very crowded market for visitors, but for the provision of facilities in the Market is very lacking. Like the unavailability of toilets / toilets, poultry slaughterhouses, visitor resting places, etc. With the existence of some of these problems, the title is "Spatial Development of Cilimus Market Area, Kuningan District".

1.2 FOCUS PROBLEMS

Development strategy, structuring the market area and designing Cilimus Market area, Kuningan Regency.

1.3 FORMULATION PROBLEM

Based on the background above, there are several problem formulations, including:

1. How is the layout and design of the Cilimus Market area, especially the Cilimus Market part, a comfortable, clean and orderly area?
2. How is the analysis of spatial development in Cilimus Market area?

1.4 RESEARCH PURPOSES

1. Planning the spatial plan and designing the Cilimus Market area, especially the Cilimus Market to be a comfortable, clean and orderly market.
2. Analyzing the development of Cilimus Market area, especially Cilimus Market as an economic support activity.

2. LITERATURE REVIEW AND THEORETICAL BASIS

2.1 MARKET

The market in the sense of economic theory is a situation where buyers (consumers) and sellers (producers and traders) make transactions after both parties have taken an agreement about the price of a number (quantity) of goods with a certain quantity that becomes the object of the transaction. *(Menteri Perdagangan. 2004-2009. Pemberdayaan Pasar Tradisional (Dalam Rangka Peningkatan Daya Saing Pasar Tradisional)).*

2.2 SPATIAL PLANNING

Spatial planning is a structural form and pattern of space use, whether planned or not.

2.2.1 THEORY OF SPATIAL PLANNING

1. Concentric Theory (Burgess, 1925) which states that the Central City Region (DPK) or Central Business District (CBD) is the center of the city which is located right in the middle of the city and in the form of a round that is the center of social, economic, cultural and political life, and is a zone with a high degree of accessibility in a city.
2. Sectoral Theory (Hoyt, 1939) states that the Central City Region (DPK) or Central Business District (CBD) has the same meaning as that expressed by Concentric Theory.
3. Multiple Center Theory (Harris and Ullman, 1945) states that the Central City Region (DPK) or Central Business District (CBD) is a city center that is located relatively in the middle of other cells and serves as one of the "growing points" .
4. Theory of Building Height (Bergel, 1955). This theory states that the development of the city structure can be seen from the variable height of the building. The Central City Region (DPK) or Central Business District (CBD) is generally an area with high land prices, very high accessibility and there is a tendency to build urban structures vertically.
5. Consectoral Theory (Griffin and Ford, 1980). The consular theory is based on the urban space structure in Latin America. In this theory it is stated that the City Center Area (DPK) or Central Business District (CBD) is the main place of trade, entertainment and employment.
6. Historical Theory (Alonso, 1964). The Central City Region (DPK) or Central Business District (CBD) in this theory is the center of all city facilities and is an area with its own charm and high accessibility.

2.3 SOAR ANALYSIS

SOAR analysis is an analysis of the Appreciative Inquiry (AI) approach. This analysis puts forward the aspiration and results factors, thus giving rise to positive feelings for its members and eliminating negative feelings such as Weakness and Threat.

3. RESEARCH METHODOLOGY

3.1 RESEARCH METHODS

In this study the methods used are quantitative methods and qualitative methods.

1. Quantitative method is a method that is done by collecting and studying literature and references related to the research.
2. Qualitative method is a method that is done by collecting field data needed and will be used as data from the research.

3.2 DATA COLLECTION METHODS

There are several data collection methods that were carried out in this study, namely:

1. Observation

   Observation is a method of data collection that is done by surveying directly in the field or down directly to the object of the problem.

2. Questionnaire / Questionnaire

   Questionnaire / Questionnaire is a method of data collection which is done by compiling and making several questionnaires on the problems related to the research to the respondents.

3.3 PLANNING METHODS

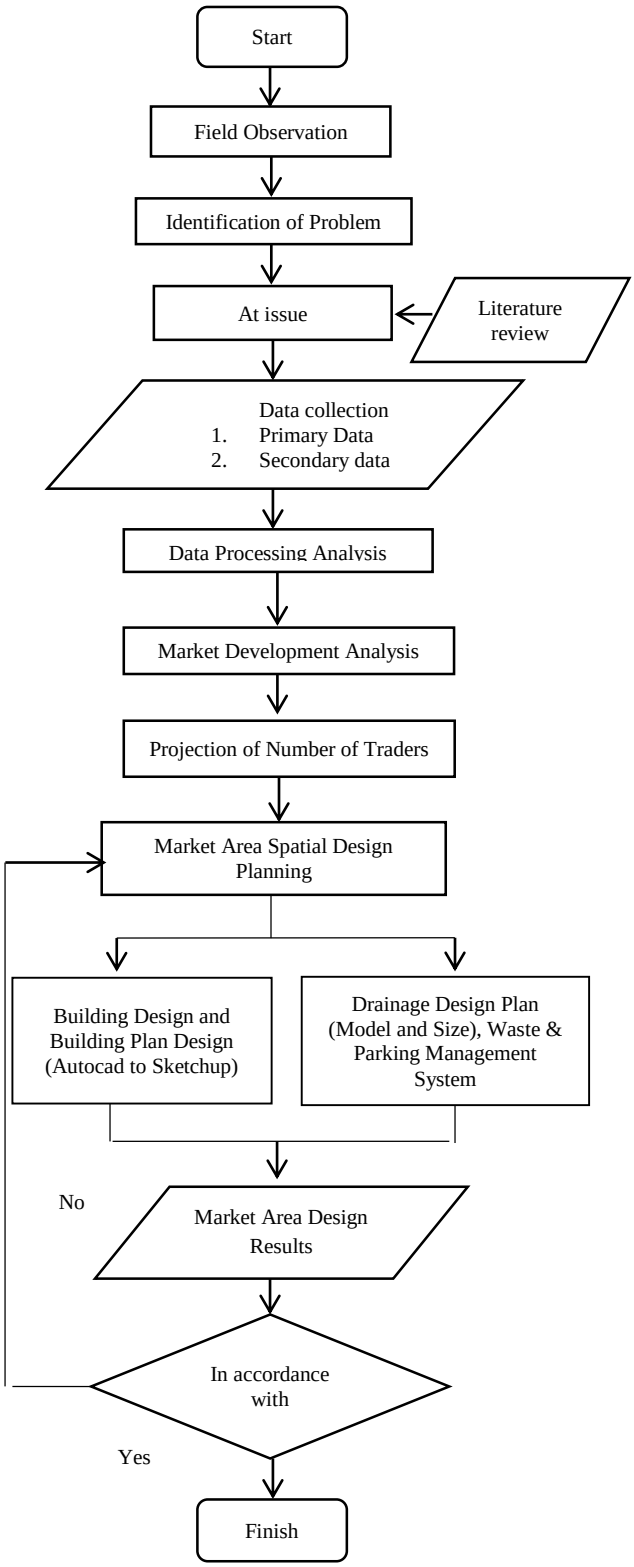


Figure 1. Flowchart Research

3.4 THE TYPES AND SOURCES OF DATA

In the study there are two types and sources of data used, namely:

1. Primary Data

Primary Data is data obtained directly in the field taken by survey and field observation. The primary data taken in this study are the number of traders in the current market and the number of vehicles parked on the market carried out on the peak day of the market. To find out the peak day the researcher asked the market parking manager.

2. Secondary data

Secondary data is data obtained indirectly, such as through government agencies or related institutions. The secondary data that has been obtained includes:

a. Cilimus Market Management Office:
   1. Area of Cilimus Market
   2. Number of traders in Cilimus Market in 2014
   3. Area of Cilimus Market parking area
   4. Number and Size of Stalls in Cilimus Market
   5. BAPPEDA Office Kab. Kuningan, namely the Regional Regulation of the District Spatial Planning District. Kuningan in 2011-2031.

b. Office of the Office of PUPR Kab. Kuningan is the RDTR of Cilimus District.

3.5 LOCATION

The location of the research conducted was in Cilimus Market, Jalan Raya Cilimus, Desa Cilimus, Kecamatan Cilimus, Kabupaten Kuningan, West Java.

Figure 2. Location of Cilimus Market (Source : Google Map,2018)

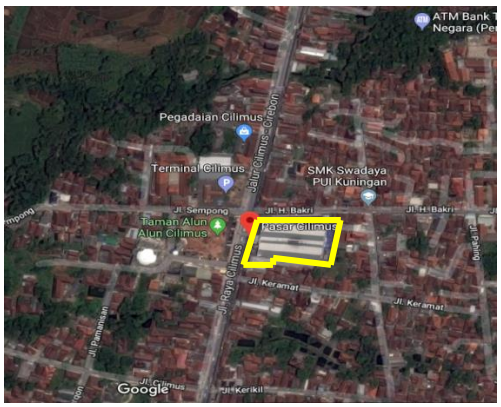


Figure 3. Research Location of Cilimus Market (Source : Google Map,2018)

4. RESULTS OF RESEARCH AND DISCUSSION

4.1 ANALYSIS CONDITION OF EXISTING MARKET

In the regulation of SNI 8152:2015 concerning the People's Market, to manage the market must be in accordance with the type of the people's market. Cilimus Market belongs to type I because the number of traders is 867 people, which are in> 750 people.

Table 1. Facilities in Cilimus Market

No	Criteria	Type I	Existing Cilimus Market	Information
1	Number of Registered Traders	>750 People	867 People	Corresponding
Technical Requirements				
2	Size of the Trading Room	Minimum 2 m2	Minimum 2,25 m2	Corresponding
3	Number of Measure Post	Minimum 2 Posts	-	Not Corresponding
4	Zoning	Wet Food Dry Food Fst Food Non Foof Live Poultry Cuts	Not divided according to zoning	Not Corresponding
5	Parking Area	Proportional to the market land area	Not in accordance with the land area	Not Corresponding
6	Loading and unloading area	Special Available	Unified with Parking Area	Not Corresponding
7	Access to enter and exit the vehicle	Separate	Merges	Not Corresponding
8	Wide Corridor / Gangway	Minimum 1,8 m	Not clear	Not Corresponding
9	Management Office	Inside the Market Location	Inside the Market Location	Corresponding
10	Toilet and bathroom location (separate between men and women)	At least four different locations	Hanya ada 1 lokasi toilet	Not Corresponding
11	Number of Toliet in one location	At least four men's toilets and four women's toilets	There is only one male tiolet and one female toilet	Not Corresponding
12	Wet food storage area with low temperature / coolant here	There is	There is no	Not Corresponding
13	Hand washing facilities	At least four different locations	There is no	Not Corresponding
14	Nursing Room	At least two spaces	There is no	Not Corresponding
15	CCTV	Minimum of two different locations	There is no	Not Corresponding
16	Pray Room	At least two spaces	There is no	Not Corresponding
17	Shared Space	There is	There is no	Not Corresponding
18	Healty Post	There is	There is no	Not Corresponding
19	Security Post	There is	There is no	Not Corresponding
20	Smoking Area	There is	There is no	Not Corresponding
21	Disinfectant Room	There is	There is no	Not Corresponding
22	Greening Area	There is	There is no	Not Corresponding
23	Stair Height (for a two-storey Market)	Maximum 18 cm	15 cm	Corresponding
24	Table height where the sale is from the floor, in the food zone	Minimum 60 cm	1 m	Corresponding
25	Wheelchair access	There is	There is no	Not Corresponding
26	Evacuation route	There is	There is no	Not Corresponding
27	Fire extinguisher	There is	There is	Corresponding
28	Hydrant	There is	There is	Corresponding
29	Clean Water Quality Testing	There is	There is no	Not Corresponding
30	Liquid Waste Testing	There is	There is no	Not Corresponding
31	Availability of Trash	Every six months	Collected directly at temporary garbage disposal sites	Not Corresponding
32	Garbage Transport Equipment	Every six months	There is	Corresponding
33	Temporary Waste Disposal Site	Every shop / kiosk / kiosk / jongko / counter / yard Every Market Facility	There is	Corresponding
34	Waste Management based on 3R	There is	There is no	Not Corresponding
35	Communication Facility	There is	There is	Corresponding
Management Requirements				
36	Merchant Identity Information	There is	There is	Corresponding
37	Price Range Information	Management Requirements	There is	Corresponding
38	Market Zoning Information	There is	There is	Corresponding
39	Work Procedure / SOP	There is	There is no	Corresponding

(Source : Survei Langsung (Primery Data))

Based on the table above, Cilimus Market does not meet the standards of technical requirements in accordance with the type of market that has been determined by SNI 8152:2015 concerning the People's Market. With the existence of existing conditions like this, there is a need for a comprehensive development in Cilimus Market.

4.2 PROJECTION ANALYSIS NUMBER OF MARKET TRADERS

Tabel 2. Development of Cilimus Market Stalls

Kind of Stall	Amount in Years		Difference/Addition
	2014	2018	
Kiosk	489	630	141
Los	378	378	0
Lemprakan	0	82	82
Total	867	1090	223
Increase Presentation (%)			25,72%
Year (%)			6,43%

(Source: Cilimus Market Management Office and Direct Survey)

In the spatial development of Pasar Cilimus area, for the projection process of the number of traders in 2018-2023 can be used to calculate exponential functions.

$$Pt = P_1 (1 + r)^{t-1}$$

Information :
Pt = Number of traders in year t
P1 = Number of early-year traders
r = Trader's growth rate

So, the calculation results are obtained, namely:

Table 3. Cilimus Market Number of Projectors Projection in 2023

No	Kind of Stall	Years	
		2018	2023
1	Kiosk	630	808
2	Los	378	485
3	Lemprakan	82	105 (Changes to Kiosk and Los)
	Total	1090	1399

4.3 ANALYSIS OF MARKET DEVELOPMENT

4.3.1 ANALYSIS OF INTERNAL AND EXTERNALFACTORS

Table 4. Weight of Assessment of Respondents Traders

No	Factors	Rating Weight					Result
		5	4	3	2	1	
Internal Factors							
1	The strategic location of Cilimus Market	0,5	0,43	0,05	0,02	0	S
2	Cilimus as one of the centers of development of trade and services	0,38	0,57	0,05	0	0	S
3	The Cilimus community has the spirit of trading / entrepreneurship	0,21	0,5	0,29	0	0	S
4	Increase regional income sources	0,36	0,5	0,12	0,02	0	O
5	Providing business opportunities for the community	0,31	0,45	0,21	0,02	0	O
6	Attract investors (investors)	0,24	0,4	0,26	0,1	0	O
7	Regency Regulation Kuningan No.26 of 2011 concerning the Kuningan Regency 2011-2031 Spatial Plan as an accommodator of the rapid growth in Kuningan Regency	0,31	0,6	0,1	0	0	O
8	Cilimus District RDTR in 2014 as a spatial planning effort in Cilimus District	0,26	0,57	0,17	0	0	O
External Factors							
9	Available kiosks and stalls have been fulfilled	0,38	0,31	0,26	0	0,05	R
10	Facilities in Pasar Cilimus need to be improved such as cctv, toilets, breastfeeding rooms, cutting rooms, etc.	0,38	0,36	0,21	0	0,05	A
11	Adding parking space	0,43	0,4	0,07	0,1	0	A
12	Drainage channels and landfills function optimally	0,07	0,17	0,43	0,31	0,02	R
13	Distribution of zoning for each type of trader	0,31	0,45	0,17	0,07	0	R
14	Food court area for food traders and as a resting place.	0,31	0,45	0,19	0,05	0	R
15	The need to increase the Cilimus Market area	0,31	0,5	0,14	0,05	0	A
16	The concept of Market building must be clear, to make it look comfortable, clean, and neatly arranged	0,31	0,43	0,19	0,07	0	A
17	The concept taken must characterize the regional identity	0,21	0,48	0,29	0,02	0	A
18	The terminal in front of Cilimus Market functions optimally	0,02	0,12	0,45	0,29	0,12	A
19	The need for transfer / expansion / developmentterminal lebih lanjut	0,29	0,4	0,31	0	0	R
20	Congestion factors around Cilimus Market occur because parking areas do not meet the number of vehicles and public transportation vehicles parked on the shoulder of the road.	0,4	0,33	0,14	0,12	0	R
21	In order to be a comfortable, clean and well-organized area, development is not carried out in the market	0,36	0,43	0,12	0,1	0	A

Table 5. Percentase of Assessment of Respondents Traders

No	Factors	Score Presentation				
		5	4	3	2	1
Internal Factors						
1	The strategic location of Cilimus Market	50	42,9	4,8	2,4	0
2	Cilimus as one of the centers of development of trade and services	38,1	57,1	4,8	0	0
3	The Cilimus community has the spirit of trading / entrepreneurship	21,4	50	28,6	0	0
4	Increase regional income sources	35,7	50	11,9	2,4	0
5	Providing business opportunities for the community	31	45,2	21,4	2,4	0
6	Attract investors (investors)	23,8	40,5	26,2	9,5	0
7	Regency Regulation Kuningan No.26 of 2011 concerning the Kuningan Regency 2011-2031 Spatial Plan as an accommodator of the rapid growth in Kuningan Regency	31	59,5	9,5	0	0
8	Cilimus District RDTR in 2014 as a spatial planning effort in Cilimus District	26,2	57,1	16,7	0	0
External Factors						
9	Available kiosks and stalls have been fulfilled	38,1	31	26,2	0	4,8
10	Facilities in Pasar Cilimus need to be improved such as cctv, toilets, breastfeeding rooms, cutting rooms, etc.	38	36	21	0	5
11	Adding parking space	43	40	7	10	0
12	Drainage channels and landfills function optimally	7	17	43	31	2
13	Distribution of zoning for each type of trader	31	45,2	16,7	7,1	0
14	Food court area for food traders and as a resting place.	31	45	19	5	0
15	The need to increase the Cilimus Market area	31	50	14	5	0
16	The concept of Market building must be clear, to make it look comfortable, clean, and neatly arranged	31	43	19	7	0
17	The concept taken must characterize the regional identity	21,4	47,6	28,6	2,4	0
18	The terminal in front of Cilimus Market functions optimally	2,4	11,9	45,2	28,6	11,9
19	The need for transfer / expansion / developmentterminal lebih lanjut	28,6	40,5	31	0	0
20	Congestion factors around Cilimus Market occur because parking areas do not meet the number of vehicles and public transportation vehicles parked on the shoulder of the road.	40,5	33,3	14,3	11,9	0
21	In order to be a comfortable, clean and well-organized area, development is not carried out in the market	35,7	42,9	11,9	9,5	0

4.3.2 SOAR ANALYSIS

Table 6. SOAR Analysis Diagram

Strategic Inquiry	***Strengths (S)***	***Opportunities (O)***
	1. The strategic location of Cilimus Market	1. Increase regional income sources
	2. Cilimus as one of the centers of development of trade and services	2. Providing business opportunities for the community
	3. The Cilimus community has the spirit of trading / entrepreneurship	3. Attract investors (investors)
	4. Including busy markets every day	4. Regency Regulation Kuningan No.26 of 2011 concerning the Kuningan Regency 2011-2031 Spatial Plan as an accommodator of the rapid growth in Kuningan Regency
	5. Easy Access to Location Access	5. Cilimus District RDTR in 2014 as a spatial planning effort in Cilimus District
Appresiative	***Aspirations (A)***	***Results (R)***
	1. Facilities in Pasar Cilimus need to be improved such as cctv, toilets, breastfeeding rooms, cutting rooms, etc.	1. Fulfillment of kiosks and booths on the Market
	2. Adding parking space	2. Drainage Channels and landfills are optimally functioned
	3. The need to increase the Cilimus Market area	3. Divide zoning for each type of trader
	4. The terminal in front of Cilimus Market functions optimally	4. Procurement of food court areas for food traders and as a resting place.
	5. The concept of the building taken must characterize the regional identity and must be clear, so that it looks comfortable, clean, and neatly arranged	5. Further terminal transfer / expansion / development is needed.
	6. In order to be a comfortable, clean and neat area, development is not only done in the market.	6. Creation of a sense of order, comfort, safety and cleanliness both within the Market and outside the Market.
	7. Increase the level of security, the comfort of order and cleanliness both inside and outside the Market.	

Table 7. SOAR matrix

Internal / External	*Strengths (S)*	*Opportunities (O)*
Aspirations (A)	**Strategi SA**	**Strategi OA**
	1. Improving regional development with the existence of strategically located trade and service centers, which are supported by the facilities needed to support activities in the Cilimus Market.	1. Develop / optimize the infrastructure in the Market Area
	2. Optimizing the role of HR (Human Resources) around in increasing the construction of trade and service centers in the Market.	2. Embracing investors to support the development of the Market area development.
	3. With the ease of access to transportation from and to the Market, it will become a central urban area that is crowded with trade and service activities	3. Involving HR (Human Resources) to create new jobs.
		4. Support the RTRW and RDTR regulations as a reference for the development of the market area.
Results (R)	**Strategi SR**	**Strategi OR**
	1. Optimizing the level of security on the Market so that crime does not occur	1. Optimizing RTRW and RDTR regulations in development in the Market area
	2. Market land area expansion, so that the capacity of the parking area for motorcycles and cars is fulfilled.	2. Empowering the surrounding community to increase the level of security, comfort and cleanliness of the market
	3. Improvement of facilities and infrastructure in the Market.	3. Supporting regulations on RTRW and RDTR, so that the Pasar area becomes an orderly, clean and comfortable area.
	4. Optimizing the development in terms of spatial planning in the Market to become a regular, clean and comfortable market.	

- Based on the SOAR matrix above it can be concluded that:
  a. Cilimus Market Kuningan Regency needs to be developed in the direction of the Modern Market in accordance with the concept and
  b. Fixing / adding supporting facilities located in Cilimus Market in accordance with SNI regulations on People's Markets and RTRW / RDTR regulations in Cilimus District, Kuningan Regency. So there is no need to develop strategies or diversify strategies to increase market popularity or fame because the location of Pasar Cilimus is very strategic.

4.4 MARKET AREA DEVELOPMENT PLANNING

4.4.1 BUILDING BASIC COEFICIENTS

In the zoning regulations found in the Cilimus District RDTR 2014 Cilimus Market Area which includes trade and service areas, the intensity of the utilization of space is:

- Maximum 80% KDB in the area that functions as a trading area.
- Maximum outbreak of 4.8
- KDH 10-30% of the area of the plot

Cilimus Market which has an area of 6341.42 m2, for the planned development direction with an area of 9200 m2, the KDB, KLB and KDH values are:

KDB = 80% x 9200 = 7360 m2
KLB = 2.5 x 9200 = 23000 m2
KDH = 20% x 9200 = 1840 m2
So, the number of floors of the building:
KLB / KDB = 23000/7360 = 3,125

Based on the results above, the number of floors in accordance with zoning regulations in the Cilimus District RDTR 2014 is 3 floors.

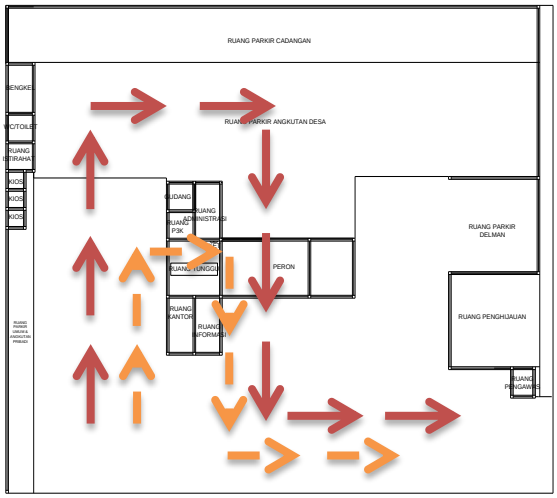
4.4.2 MARKET REGION STRUCTURE PLAN

1. Cilimus Market

   a) Zoning is made for each type of trader
   b) The creation of a good air circulation system, especially for wet traders (meat, fish, vegetables and fruit).
   c) Addition of Market supporting facilities in accordance with the market types contained in the regulations of SNI 8152: 2015 concerning the people's market.
   d) And Pasar Cilimus will be developed for the next 5 years with a number of 1400 traders, and is included in the Class I Market type.
   e) Re-plan drainage systems, parking and waste management systems in the Market.

2. Terminal Cilimus

Complete the Terminal facilities in accordance with the Type of Terminal Based on the Directorate of Transportation regulations in 1996, Terminal facilities are in accordance with their needs.



Note:
Circulation of People :
Circulation of Public Transportation :

Figuere 4. Cilimus Terminal Development Plan

3. Cilimus Park

Performed by completing other supporting facilities, such as the area for food courth, parking, and bus stops. The following is a depiction of the development direction of CIlimus Park:

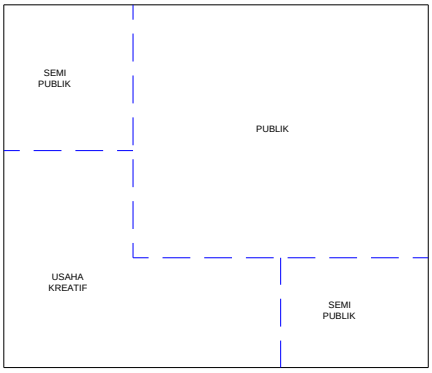


Figure 5. Zoning of the Development Direction of Taman Cilimus

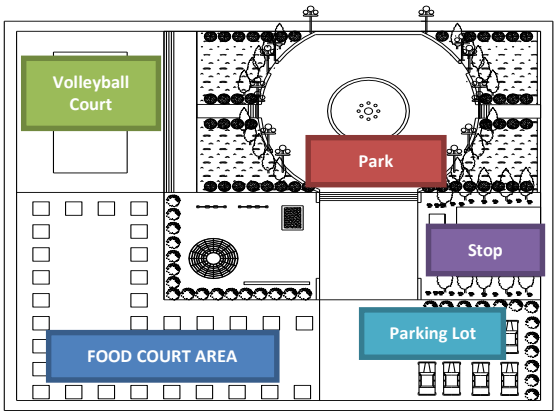


Figure 6. Taman Cilimus Development Plan

4.4.3 CALCULATION OF PARKING NEEDS

Table 8. Car Vehicle Calculation Results

No	Time	Enter	Exit	Parking Accumulation	Parking Volume
1	07.00-08.00	12	5	7	12
2	08.00-09.00	10	8	9	22
3	09.00-10.00	6	3	12	28
4	10.00-11.00	7	4	15	35
5	11.00-12.00	3	5	13	38
Total		38	25	56	135

(Source: Direct Field Survey)

Table 9. Motor Vehicle Calculation Results

No	Time	Enter	Exit	Parking Accumulation	Parking Volume
1	07.00-08.00	270	128	142	270
2	08.00-09.00	298	167	273	568
3	09.00-10.00	397	203	467	965
4	10.00-11.00	172	90	549	1137
5	11.00-12.00	63	43	569	1200
Total		1200	631	2000	4140

(Source: Direct Field Survey)

Number of Vehicles = Area / SRP
Based on the Determination of Parking Units in the Guidelines for Planning and Operation of Parking Facilities, the SRP type of vehicle is for:
Car goal II = 2.50 x 5.00 = 11.50 m2 SRP
Motorcycle = 0.75 x 2.00 = 1.5 m2 SRP
So:
Area of Car Parking Area
= Number of Vehicles x SRP
= 38 x 11.50
= 437 m2
Area of Motorcycle Parking Area
= Number of Vehicles x SRP
= 1200 x 1.50
= 1800 m2
So the parking area is 2237 m2, with a circulation of 15% to be 335.55 m2. So that the total area is 2572.55 m2 while the parking area is 2655 m2. So that the planned plan for the parking area meets the number of vehicles in Cilimus Market.

4.4.4 DRAINAGE CHANNEL CALCULATION

Rainfall data used is the maximum rainfall data at Linggarjati Station from 2008 to 2017.

Table 10. Maximum Daily Rainfall

No	Year	Maximum Rainfall (mm)
1	2008	119
2	2009	105
3	2010	132
4	2011	107
5	2012	121
6	2013	147
7	2014	115
8	2015	78
9	2016	78
10	2017	102

(Source: Dinas PSDA Kuningan Regency; Linggarjati Station)

Calculation of Rainfall Frequency Analysis is done by Log Person III Distribution method. After the calculation is obtained the rainfall of the T-year return period plan.

Table 11. Repeat Period Analysis

T	Gt	Log Rt	Rt
2	-0,010116405	2,034128706	108,1754
5	-0,000613115	2,034973863	108,3862
10	0,00950329	2,035873546	108,6109

Calculation of Rainfall Intensity by using the Mononobe formula:

$$S = \frac{\Delta t}{L} = \frac{(424-423)}{310} = 0{,}00322581 \text{ m}$$

$$tc = \left(\frac{0{,}87 \text{ x } L^2}{1000 \text{ x } S}\right)^{0{,}385}$$

$$= \left(\frac{0{,}87 \text{ x } 310^2}{1000 \text{ x } 0{,}00322581}\right)^{0{,}385}$$

$$= 0{,}245 \text{ jam}$$

$$I = \frac{R}{24}\left(\frac{24}{tc}\right)^{\frac{2}{3}}$$

$$= \frac{108{,}3861682}{24} \text{ x } \left(\frac{24}{0{,}245}\right)^{2/3}$$

$$= 58{,}0529 \text{ mm/jam}$$

Debit Plan:
Q = 0,278 x C x I x A
= 0,278 x 0,70 x 58,0529 x 0,0057
= 0,06439347 m3/det

Channel Dimensions
n = 0.020 (Manning Coefficient of Cement Stone Surface)
S = 0.003225 m
b = 2h

The cross section used in the planning of drainage channel dimensions is rectangular.

Area (A) = b x h
Wet Roving (P) = b + 2h
Hydraulic radius (R) = A / P
Channel Debit (Qs) = V x A
= 1 / n x R1 / 3 x S1 / 2 x A
So:

$$Q = \frac{1}{n} \text{ x } R^{\frac{1}{3}} \text{x } S^{\frac{1}{2}} \text{x } A$$

$$Q = \frac{1}{n} \text{ x } \frac{A^{\frac{1}{3}}}{P} \text{ x } S^{\frac{1}{2}} \text{x } (b \text{ x } h)$$

$$Q = \frac{1}{0{,}020} \text{ x } \frac{(b \text{ x } h)^{\frac{1}{3}}}{(b+2h)} \text{ x } S^{\frac{1}{2}} \text{x } (b \text{ x } h)$$

$$0{,}064 = \frac{1}{0{,}020} \text{ x } \frac{(2h \text{ x } h)^{\frac{1}{3}}}{(2h+2h)} \text{ x } 0{,}0032258^{\frac{1}{2}} \text{x } (2h \text{ x } h)$$

$$0{,}064 = \frac{1}{0{,}020} \text{ x } \frac{(2\text{h x h})^{\frac{1}{3}}}{(2\text{h} + 2\text{h})} \text{ x } 0{,}0032258^{\frac{1}{2}} \text{x } (2\text{h x h})$$

$$0{,}064 = \frac{1}{0{,}020} \text{ x } \frac{2\text{h}^{2\frac{1}{3}}}{4\text{h}} \text{ x } 0{,}0032258^{\frac{1}{2}} \text{x } (2\text{h}^2)$$

$$\text{h} = \left(\frac{0{,}064 \text{ x } 0{,}020}{2 \text{ x } 0{,}0032258^{1/2}}\right)^{\frac{3}{8}} = 0{,}546 \text{ m}$$

Then:
Water level (h) = 0.546 m
Channel base width (b) = 2 x h
= 2 x 0.546
= 1,093 m

From the above results obtained:
Cross Section (A)
A = b x h
= 1,093 x 0,546
= 0.597 m2

Wet Circulation Channel (P)
P = b + 2h
= 1,093 + 2 (0,546)
= 2,186 m

Hydraulic radius (R)
R = A / P = 0.597 / 2.186 = 0.273 m

Flow Speed (V)
V = 1 / n x R ^ (2/3) x S ^ (1/2)
= 1 / 0.020 x (0.273) ^ (2/3) x (00 0.00322581) ^ (1/2)
= 1,196 m³ / sec

Debit Channels (Qs)
Qs = V x A
= 1,196 x 0,597 = 0,714 m3 / sec

Height (w)
W = ,50.5 x h = ,50.5 x 0.546
= 0.5227 m

Channel height (H)
H = h + w
= 0,546 + 0,5227 = 1,069 m

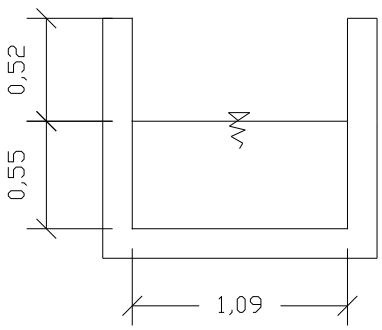


Figure 7. Drainage Channel Section

4.4.5 WASTE MANAGEMENT SYSTEM PLANNING

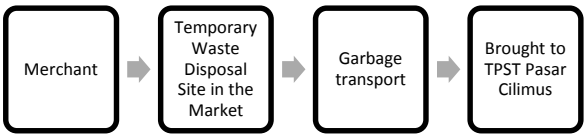


Diagram 1. Waste Disposal Scheme in Cilimus Market

4.5 PLANNING AND DESIGN RESULTS

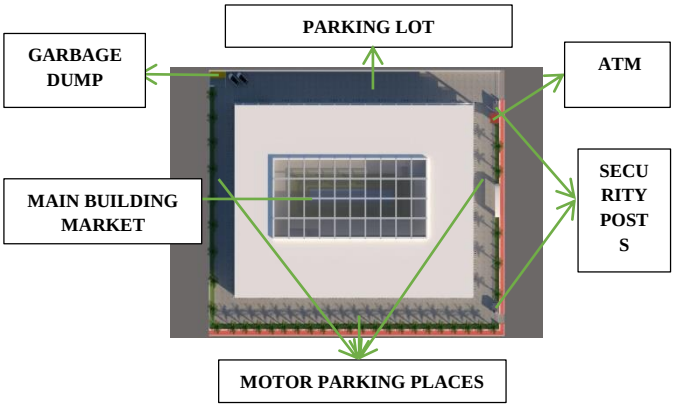


Figure 8. Plan of Cilimus Market Development Design Results

Below is a floor plan for Cilimus Market building:

1. First Floor

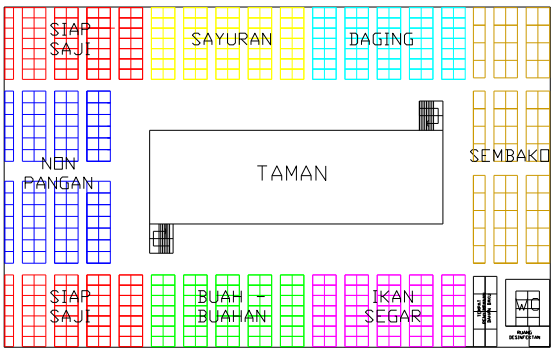


Figure 9. Floor Plan 1

Table 12. Floor Plan 1

No	Name Facilities	Size	Total
1	Los	1,5 m x 1,75 m	14 unit
		2 m x 2 m	464 unit
2	Kiosk	3 m x 2 m	65 unit
3	Raw Material Storage	3 m x 2 m	8 unit
4	WC/Toilet	7,5 m x 8 m	1 unit @1,5 m x 2 m
5	Disinfectant Room	3,5 m 3,5 m	1 unit

2. Second Floor

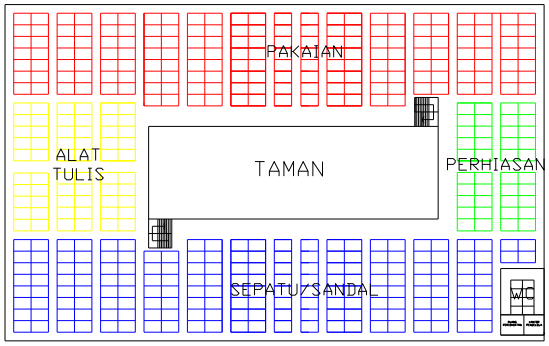


Figure 10. Floor Plan 2

Table 13. Floor Plan 2

No	Name Facilities	Size	Total
1	Kiosk	3 m x 2 m	443 unit
2	WC/Toilet	7,5 m x 8 m	1 unit @1,5 m x 2 m
3	Pray Room	4 m x 3,5 m	1 unit
4	Managing Office	4 m x 3,5 m	1 unit

3. The Third Floor

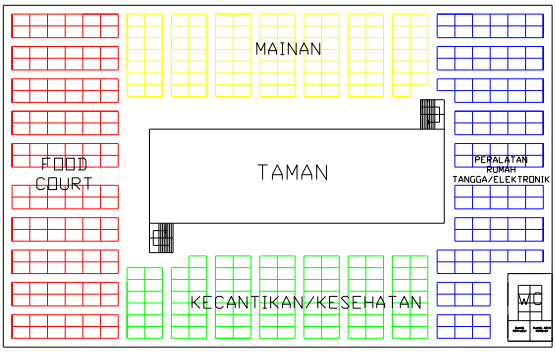


Figure 11. Floor Plan 3

Table 14. Floor Plan 3

No	Name Facilities	Size	Total
1	Kiosk	3 m x 2 m	414 unit
2	WC/Toilet	7,5 m x 8 m	1 unit @1,5 m x 2 m
3	Nursing Room	4 m x 3,5 m	1 unit
4	Smoking Area	4 m x 3,5 m	1 unit

So the total kiosk and kiosk planning is 922 units and 478 units of kiosks, bringing the total number to 1400 units. And below is a description of some of the facilities in Cilimus Market, Kuningan Regency:

1. In Front Of Market

Figure 12. Front of Cilimus Market

2. Kiosk

Figure 13. Kiosk

3. Los

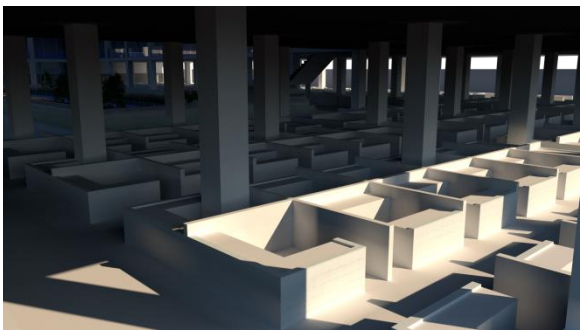


Figure 14. Los

4. Supporting Facilities
   a. Parking lot

Figure 15. Motorcycle Parking

Figure 16. Car Parking

b. Garbage Dump

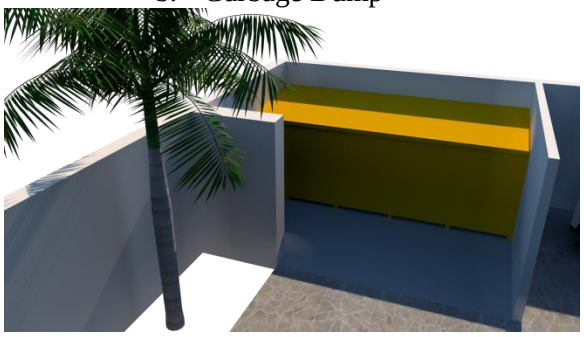


Figure 17. Garbage Dump

c. Drainage Channel

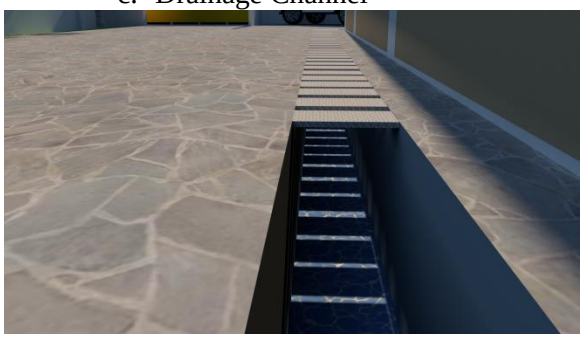


Figure 18. Drainage Channel

d. Security Posts

Figure 19. Security Posts of Cilimus Market

e. WC/Toilet

Figure 20. WC/Toilet

f. Green Open Space

Figure 21. Green Open Space

g. ATM

Figure 22. ATM

h. Disinfectant room, worship room, management office, nursing room, and smoking area.

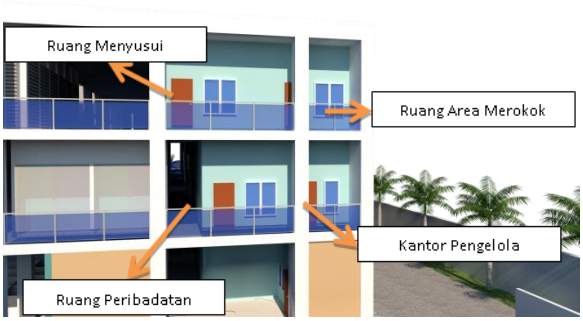


Figure 23. Other Facilities

5. COVER

5.1 CONCLUSION

1. Cilimus Market Land was developed by expanding the land by adding 2858.58 m2, which previously had an area of 6341.42 m2. So that the total area of development carried out covers 9200 m2. For the concept developed at Cilimus Market, it is directed to the Modern Market with a plan for a 3-story market building covering 16,182 m2.
2. Planning the amount of kiosk and booth capacity is planned for the next 5 years in accordance with the number of percentage of traders. With 922 kiosk

units with a size of 3 mx 2 m and 478 units of booths with a size of 1.5 m x 1.75 m and 2 m x 2 m, the total number is 1400 units.

3. Supporting facilities planned in accordance with SNI regulations on the People's Market.
4. Parking plans for motorbikes covering an area of 1800 m2 while for cars 437 m2 with a circulation of 15% so that the total amount is 2572.55 m2. And the drainage plan uses a square cross section with b = 1,093 m, h = 0,546 m and w = 0,5227 m.
5. For Cilimus Market area, namely Taman Cilimus and Cilimus Terminal, only additional facilities are planned. Taman Cilimus is planned to have a creative economic area where traders sell during the afternoons and place additional shelters. Whereas Cilimus Terminal is added to parking lots, workshops, kiosks, counters, health rooms, warehouses, administration rooms, waiting rooms, lavatories and parking lots for private vehicles.

5.2 SUGGESTION

1. Cilimus Market Development needs to be done to see the market economy that is progressing and the more crowded markets that will arise other problems.
2. The addition of the number of kiosks and stalls is adjusted to the number of traders in Cilimus Market, Kuningan Regency.
3. Adjustment of the Cilimus Market facility is seen based on the type of Market in accordance with SNI regulations on the People's Market.
4. There needs to be further study of parking in Cilimus Market so that it can accommodate the number of vehicles and does not cause traffic jams around Cilimus Market and optimization of drainage channels in Cilimus Market in Kuningan District.
5. To optimize the development of the area around Cilimus Market, namely Taman Cilimus and Terminal Cilimus, further research is needed on the transportation system that is located around Cilimus Market in Kuningan Regency.

BIBLIOGRAPHY

Agus Saputra, Ferry. 2008. Skripsi : *Perencanaan Pengembangan Terminal Penumpang Bangsri Kecamatan Bangsri Kabupaten Jepara*. Semarang : Universitas Negeri Semarang.

Dani, Imran. Syafaruddin As., dan Sumiyattinah. 2014. *Penataan Lahan Parkir Di Pasar Melati Puring Parit Baru Kecamatan Sungai Raya Kabupaten Kubu Raya*. Pontianak : Universitas Tanjungpura.

https://id.wikipedia.org/wiki/Cilimus,_Kuningan

https://id.wikipedia.org/wiki/Pasar

Kurnia Putri, Ade. Mawardi Samah., dan Lusi Utama. 2014. *Perencanaan Saluran Drainase Di Kawasan Komplek Perumahan Jaya Setia Di Kabupaten Bungo Provinsi Jambi*. Padang : Universitas Bung Hatta.

Laporan Akhir Penyusunan RDTR Kawasan Perkoraan Cilimus Tahun 2014-2034

Nadia, Eva. 2017. Skripsi : *Pengembangan Pasar Minggu Kecamatan Palimanan Kabupaten Cirebon*. Cirebon : Universitas Swadaya Gunung Jati.

Pedoman Perencanaan dan Pengoperasian Fasilitas Parkir Direktorat Bina Sistem Lalu Lintas dan Angkutan Kota (Dinas Jenderal Perhubungan Darat)

Peraturan Daerah Kabupaten Kuningan No 26 Tahun 2011 tentang Rencana Tata Ruang Wilayah Kabupaten Kuningan Tahun 2011 – 2031

SNI 3242 : 2008 Tentang Pengelolaan Sampah di Pemukiman

SNI 8152 : 2015 Tentang Pasar Rakyat.

Surijani Tatura, Lydia. 2011. *Analisis Penataan Ruang Parkir Pasar Central Kota Gorontalo*. Gorontalo : Universitas Gorontalo.

Yuniansyah, Irfan. Bahrul Anif., dan Lusi Utama. 2014. *Perencanaan Saluran Drainase Kelurahan Pasar Kecamatan Sarolangun Kabupaten Sarolangun Provinsi Jambi*. Padang : Universitas Bung Hatta.