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## THE DEVELOPMENT OF PASAR KEPUH IN KUNINGAN DISTRICT

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### ABSTARCT

Development is an attempt to develop an effective product for future use. And when it is associated with Development education means a gradual process of change in the direction of a higher and more widespread that can thoroughly create a perfection or maturity.

The market is an economic institution where buyers and sellers meet, both directly and indirectly in the form of shopping centers, public markets, shops, malls, plazas, trade centers and other designations, to conduct trade transactions

The method used in this Thesis is to use qualitative methods, namely by emphasizing Primary and Secondary Data, Analysis Of The Projected Number Of Traders, Analysis Of Market Area Development uses the SWOT method, Analysis Of Extensive Building Needs, Calculation Of Parking Land Needs, Planning Waste Management System, Calculation Of Drainage, Design Of Market and Analysis Of Engineering Economic.

The conclusion taken from The Development Of Pasar Kepuh is Pasar Kepuh will developed into a Semi-Modern Market by maintaining land area which is 27,161 m<sup>2</sup> and will developed into 3 floors with a total building area of 30.315,68 m<sup>2</sup>. The number of kiosks of 1356 units and 416 units for stall. Pasar Kepuh development project after 25 years will be reater, Rp. 61.200.000.000 so to equalize the present value of future value with the present value of the expenditure for inveseмент requires interest 16,78%.

**Keyword :** *Engineering Economic, Market Development, Market Spatial Plan, Public Market, SWOT.*

**I. INTRODUCTION**

**1.1 BACKGROUND**

The existence of the Market has a major influence on the level or quality of community life, growth patterns, and prospects of economic development. The market acts as an economic and social process vehicle, where as a market economy institution has an important value in economic growth both by society and local government. Because in the traditional market there are many actors that have significance and strive for the prosperity of his life be it traders (seller), buyers, labourer and so on. They are all actors who play an important role in maintaining the existence of traditional markets in Indonesia.

Traditional markets have many disadvantages that have become the basic character that is very difficult to change, ranging from design factors, spatial, layout, and display that is not as good as modern shopping centers, relatively limited operational time allocation, lack of technology used, the quality of goods poor sales promotion, low level of security, clutter of parking, the complexity of the weakness of traditional market causing consumers to switch from traditional market to modern shopping center.

In the management and development of traditional markets there are still some obstacles and challenges that must be faced, among others, traditional markets are identical with slums, chaotic, dirty, high crime, uncomfortable, uncertain price (bargaining), minimal facilities such as parking lots, toilets , dumpster, muddy and narrow road. To avoid the Pasar Kepuh at Kuningan District, consumers should not abandon the development of the concerned market unit.

With the development of Pasar Kepuh at Kuningan District more representative is expected to improve the quality of service and the capacity of traders and buyers. The increase of capacity will be able to increase macro economic activity in Kuningan District.

**1.2 SCOPE OF PROBLEM**

As for the writing Scope of Analysis is:

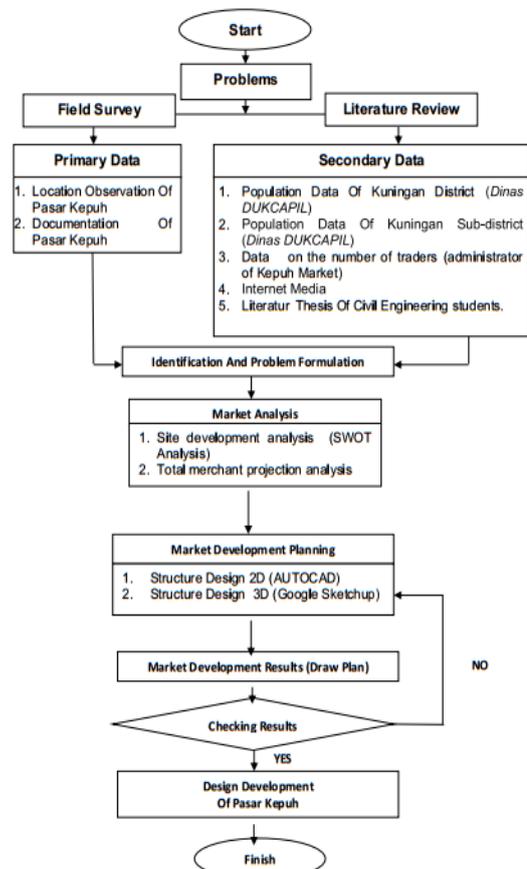
- a. Designing the Pasar Kepuh area of Kuningan District.
- b. Planning the concept of spatial development of the Pasar Kepuh in Kuningan District.
- c. Determining the development strategy of the Pasar Kepuh area of Kuningan District.
- d. Calculate the Engineering Economic Analysis of The Pasar Kepuh.

**1.3 PURPOSE**

As for the purpose of writing this thesis is as follows:

- a. To analyze how the development method of Pasar Kepuh in Kuningan District
- b. To find out how clean comfortable and orderly Spatial of Pasar Kepuh In Kuningan District.

**1.4 THE FRAMEWORK OF RESEARCH METHODOLOGY**



**Figure 1.1** The Framework of Research

## II. LITERATURE REVIEW

### 2.1. THE EXPLANATION OF THE DEVELOPMENT

Below are some explanations about development:

- a. According to Gay (1990) Development is an attempt to develop an effective product for future use. And when it is associated with Development education means a gradual process of change in the direction of a higher and more widespread that can thoroughly create a perfection or maturity.
- b. According to Undang-Undang Republik Indonesia Nomor 18 Tahun 2002, Development is an activity of science and technology that aims to utilize the proven principles and theories of science to improve the functions, benefits, and applications of existing science and technology, or produce new technologies.

### 2.2. THE EXPLANATION OF THE MARKET

The market is an economic institution where buyers and sellers meet, both directly and indirectly in the form of shopping centers, public markets, shops, malls, plazas, trade centers and other designations, to conduct trade transactions (SNI 8152:2015).

According to *Peraturan Menteri Perdagangan Republik Indonesia* No. 37/M-DAG/PER/5/2017 concerning Guidelines for the Development and Management of Trade Facilities Article 1 paragraph 4 states, Public Market is a certain area where buyers and sellers meet, both directly and indirectly, with the process of buying and selling various types of goods consumption through bargaining.

### 2.3. MARKET CLASSIFICATION

The Public Market Classification according to SNI 8152-2015 is divided into 4 (four) types, namely:

1. Types I is a Public Market with a total of more than 750 traders.
2. Types II is a Public Market with the number of traders between 501 to 750 traders.

3. Types III is a Public Market with the number of traders between 250 to 500 traders.
4. Types IV is a Public Market with the number of traders less than 250 traders.

### 2.4. REGULATION ABOUT THE MARKET

With the enactment of Undang – Undang No. 7 Tahun 2014 about Trade, the term Traditional Market changes the name to the Public Market. According to SNI 8152: 2015 the Public Market is an economic institution that has strategic functions, including:

- 1) Node of local economic power.
- 2) Contribute to the regional economy.
- 3) Increase work opportunities.
- 4) Providing means of selling, especially for micro, small and medium enterprises.
- 5) Become a reference price of the basic material that underlies the calculation of the inflation rate and an indicator of price stability.
- 6) Increase Locally Generated Revenue.
- 7) As a means of sustainability of local culture.

### 2.5. THE SPATIAL

According to D.A. Tisnaadmidjaja (1997) space is the physical form of the region in the geographical and geometric dimensions which is a place for humans to carry out their life activities in a decent quality of life.

According to Undang – Undang No. 26 Tahun 2007 Spatial is a form of space structure and space pattern. Spatial structure is the composition of residential centers and the network infrastructure and facilities system that functions as a supporter of socio-economic activities of the community which are hierarchically functional. Spatial planning is a system of spatial planning processes, spatial utilization and spatial utilization control. This is the scope of spatial planning as an object of State Administration Law.

### 2.6. ANALYSIS OF SWOT

SWOT is a strategic planning method used to evaluate Strengths, Weaknesses, Opportunities, and Threats in a project or a business

speculation. The four factors that form the SWOT acronym (strengths, weaknesses, opportunities, and threats).

This analysis was first introduced by Albert Humphrey who led the research project at Stanford University. Through SWOT analysis, we can identify the internal factors (strengths and weaknesses) and the systematic external factors (opportunities and threats) of the organization to formulate the organization's strategy.

**2.7. SUPPORTING SOFTWARE**

The software used in designing the market building plan in the thesis 'The Development Of The Pasar Kepuh Market in Kuningan District' is Google Sketch Up. Google SketchUp is a software made by Google that functions for graphic design that can produce 3D images. Besides this software is very light compared to other software. Even with a simple appearance. Google SketchUp allows us to draw faster and more accurately. This program is a flexible, fast and practical 3D modeling application program. Google SketchUp is also commonly used to design buildings and their details with an easy-to-read 3D appearance.

**2.8. ENGINEERING ECONOMIC ANALYSIS**

Engineering economic analysis is part of economics that applied to engineering project. Used by engineering to find the best solution by measuring the economic value of each potential alternative solution.

According to Kuiper (1971) there are three parameters that are often used in the analysis of benefits and costs, namely:

1. Benefit-Cost Ratio (B/C)
2. Internal Rate of Return (IRR)
3. Net Benefit (B-C)

**III. METHODOLOGY**

**3.1 RESEARCH METHODOLOGY**

The research method used was qualitative methods, namely by means of surveys and observed directly to Pasar Kepuh in Kuningan District.

**3.2 DATA COLLECTION METHODS**

The method of data collection conducted in this study consisted of:

1. Literature  
Literature is a method that is done by collecting, identifying and processing written data obtained.
2. Observation  
Observation is a method used by surveying directly in the field.
3. Questionnaire  
Questionnaire is a method that is done by compiling a list of questions on problems related to research to respondents.

**3.3 TYPES AND DATA SOURCES**

To make planning development of Pasar Kepuh in Kuningan required data as reference. These data can be classified into two types of data, namely:

1. Primary Data  
Primary data is data obtained from the location of the development plan and survey results that can be directly used as a source in the planning of development.
2. Secondary Data  
Secondary data is data obtained from the literature and regulations related to the thesis review material. This data which

**3.4 POPULATION AND SAMPLE**

Population sampling and samples used in this study using Random Sampling technique, which is a random sampling technique regardless of the level in the population.

The population of traders in Pasar Kepuh is 1395 in 2018 while the average number of buyers at the Market is 380 per hour.

To determine the number of samples using the Slovis Method.

$$n = \frac{N}{1+N(d)^2} \dots \dots \dots \{1\}$$

Explanation :

- n = Number of samples
- N = Number of Population
- d = Level of error in population collection

Samples of Traders:

$$n = \frac{N}{1+N(d)^2} = \frac{1395}{1+1395(10\%)^2} = 94 \text{ Samples}$$

Samples of Buyers:

$$n = \frac{N}{1+N(d)^2} = \frac{380}{1+380(10\%)^2} = 80 \text{ Samples}$$

The actual conditions in the field, many respondents refused to fill out questionnaires given because of the busy market activities and busy buying and selling transactions. So that the results of this study were only 50 respondents for traders and 20 respondents for buyers. With the error rate in the initial population sampling 10% to 15%.

### 3.5 DATA COLLECTION TECHNIQUE

Table 3.1 Data Collection Technique

No	Type Of Data	Source Of Data	Data Collection Technique
1	Primary Data: - Documentation - Observation - Kuisisioner	- Field - Field - Field	- Survey - Survey - Survey
2	Secondary Data: - Data on the number of kiosks and traders in Kephuh Market. - SNI 8152:2015 about Pasar Rakyat(Public Market). - Peraturan Menteri Perdagangan Republik Indonesia No. 37/M-DAG/PER/5/2017 about "Guidelines For The Development And Management Of Trading Facilities." - Population Statistic, Area, Administration Map Of Kuningan District. - Air Temperature and Rainfall In Kuningan District	- Administrator Kephuh Market Of Kuningan District. - Badan Standardisasi Nasional. - Menteri Perdagangan Republik Indonesia . - Government Of Kuningan District. - Dinas Sumber Daya Air dan Pertambangan Kuningan District.	- Document Review. - Document Review. - Document Review. - Document Review. - Document Review.

### 3.6 RESEARCH LOCATION

The reaserch is located at Jl. Jend. Sudirman No 45 Kuningan Sub-District, Kuningan District .

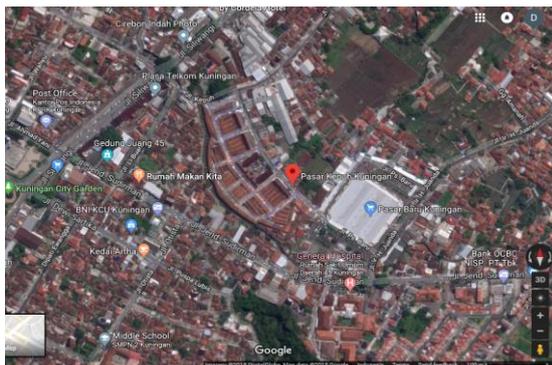


Figure 3.1 Research Location

### 3.7 FLOW OF RESEARCH

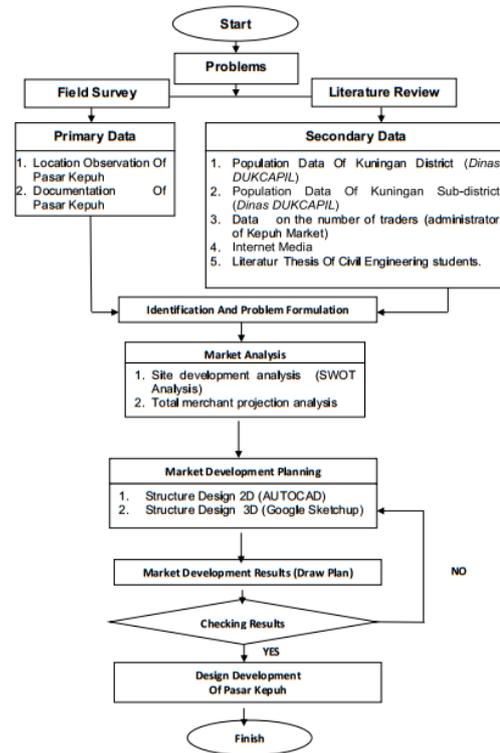


Figure 3.2 Flow Of Research

## IV. RESULT AND DISCUSSION

### 4.1 EXISTING ANALYSIS OF MARKET DEVELOPMENT

Table 4.1 Existing Condition of the Pasar Kephuh According to SNI 8152: 2015

No	Criteria	Type I	Existing Kephuh Market	Explanation
1.	Number of registered traders	>750 Traders	1241 Traders	Appropriate
<b>Technical Requirements</b>				
2.	Extensive size of merchant space	Min 2 m <sup>2</sup>	Min 2,31 m <sup>2</sup>	Appropriate
3.	Number of re-measuring posts	Min 2 post	-	Not Appropriate
4.	Zoning	- Wet food - Dry food - Fast food - Non-food - Poultry slaughterhouses	Many traders still sell not based on zoning	Not Appropriate
5.	Parking Area	Proportio-nal to the market land area	Not proportional to the market land area	Not Appropriate
6.	Loading and Unloading Area	Special available	Adjusted to the parking area	Not Appropriate
7.	Access to enter and exit the vehicle	Separate	Merge	Not Appropriate
8.	Width of corridor/ gangway	Min 1,8 m	Not clear	Not Appropriate
9.	Administrator/ manager office	Inside the market location	Inside the market location	Appropriate
10.	Toilet and bathroom location (separate between men and women)	Minimum at 4 different locations	There are only 2 toilet locations	Not Appropriate
11.	Number of toilets in one location	Minimum 4 men's toilets	There are only 3 toilets in 1	Not Appropriate

		and 4 women's toilets	location	
12.	Low temperature / coolant food storage area	Exist	Not Exist	Not Appropriate
13.	Handwashing facilities	Minimum at 4 different locations	Not Exist	Not Appropriate
14.	Nursing area	Minimum 2 rooms	Not Exist	Not Appropriate
15.	SOP	Minimum at 2 different	Not Exist	Not Appropriate
17.	Shared room	Exist	Not Exist	Not Appropriate
18.	Health post	Exist	Exist but does not work	Not Appropriate
19.	Security post	Exist	Exist	Appropriate
20.	Smoking area	Exist	Not Exist	Not Appropriate
21.	Disinfectant room	Exist	Not Exist	Not Appropriate
22.	Green Area	Exist	Not Exist	Not Appropriate
23.	Stair height (for markets with 2 floors)	Maksimum 18 cm	-	-
24.	Table height where from the floor, in the food zone	Minimum 60 cm	1 m	Appropriate
25.	Wheelchair access	Exist	Not Exist	Not Appropriate
26.	Evacuation route	Exist	Not Exist	Not Appropriate
27.	Fire extinguisher	Exist	Exist	Appropriate
28.	Hydrant	Exist	Exist	Appropriate
29.	Clean water quality testing	Every 6 months	Not clear	Not Appropriate
30.	Liquid waste testing	Every 6 months	Not clear	Not Appropriate
31.	Availability of trash bins	- Every stall/kiosk/street vendors - Every market facility	Exist	Appropriate
32.	Garbage transport equipment	Exist	Exist	Appropriate
33.	Temporary waste disposal site	Exist	Exist	Appropriate
34.	Waste management based on 3R	Exist	Not Exist	Not Appropriate
35.	Telecommunication facilities	Exist	Exist	Appropriate
<b>Management Requirements</b>				
36.	Trader identity information	Exist	Exist	Appropriate
37.	Price range information	Exist	Exist	Appropriate
38.	Market zoning information	Exist	Exist	Appropriate
39.	SOP	Exist	Not Exist	Not Appropriate
40.	Management structure	- Head office - Administration and finance - Order field and safety/ security - Maintenance and clean-iness - Customer service and	Exist	Appropriate

**Table 4.2** The Growing Number Of Traders In Pasar Kepuh

The Place	Year		Difference
	2016	2018	
Kiosk	332	374	42
Stalls	442	481	39
Street Vendors	467	540	73
Total	1241	1395	154
Percentage Increase			12,41%
Per year			6,20 %

Source : Local Government Of Pasar Kepuh In Kuningan District.

## 4.2 ANALYSIS OF THE PROJECTED NUMBER OF TRADERS

To calculate the projection of the number of traders in 2023 can be used to calculate exponential functions. The basic calculation usually uses the Exponential Function as follows:

$$P_t = P_1(1 + r)^{t-1} \dots\dots\dots\{2\}$$

Explanation:

- Pt = Number of Traders in t year
- P1 = Number of Basic Year Traders
- r = Trader's growth rate

- Number of kiosks in 2018 = 374
- Number of stalls in 2018 = 481
- Number of street vendors in 2018 = 540

With the following growth:

- Kiosks = 42
- Stalls = 39
- Street vendors = 73

So, the projection of the needs of traders in 2023, is:

- a. Kiosks
  - $K_{2023} = K_{2018} (1 + r)^{t-1}$
  - $K_{2023} = 374(1 + 0,062)^{5-1}$
  - $K_{2023} = 475$
- b. Stalls
  - $S_{2023} = S_{2018} (1 + r)^{t-1}$
  - $S_{2023} = 481(1 + 0,062)^{5-1}$
  - $S_{2023} = 611$
- c. Street vendors
  - $SV_{2023} = SV_{2018} (1 + r)^{t-1}$
  - $SV_{2023} = 540(1 + 0,062)^{5-1}$
  - $SV_{2023} = 686$

**Table 4.3** The Growing Number Of Traders In Pasar Kepuh at 2023

The Place	Year		Difference
	2018	2023	
Kiosk	374	475	101
Stalls	481	611 (converted into kiosks and stalls)	130
Street Vendors	540	686 (converted into kiosks)	146
Total	1395	1772	377

### 4.3 ANALYSIS OF MARKET AREA DEVELOPMENT

**Table 4.4** Description Of Score and Weight

Score	Weight	Description
1	1/4	Possibility the occurrence is very small or not at all / the effect on a problem solving is insignificant.
2	2/4	Possibility small occurrence, this requires a very long process.
3	3/4	When it occurs with a long time process and can affect the improvement of a solution that is used.
4	4/4	Very potential for the development of a solution that is used and has very good progress.

(Source : Wikipedia Indonesia)

**Table 4.5** Assessment of Respondents of Traders and Buyers

No	Faktor	Score (Number of Responden)				Total Score	Total Respon- den	Aver- age
		1	2	3	4			
<b>Internal Factor</b>								
1	Pasar Kepuh is one of the centers of trade and service development in Kuningan District.	-	10	49	11	211	70	3
2	Pasar Kepuh is in a strategic location.	-	7	47	16	219	70	3
3	Easy access to Pasar Kepuh.	1	3	13	53	258	70	4
4	Pasar Kepuh is a crowded market.	-	7	14	49	252	70	4
5	Pasar Kepuh Facilities and Infrastructure is currently good.	20	30	14	6	146	70	2
6	Lack of car and motorcycle parking areas in Pasar Kepuh.	-	-	19	51	261	70	4
7	Poor waste disposal and drainage channels.	-	14	36	20	216	70	3
8	Inadequate loading and unloading area	-	-	29	41	251	70	4
9	Providing business opportunities for the community.	3	2	11	54	256	70	4
10	Market visitors come from inside and outside Kuningan Sub-District.	4	3	21	42	241	70	4
11	Zoning for each type of trader has not been implemented properly.	2	12	32	24	218	70	3
12	Public market facilities such as prayer rooms ( <i>mushola</i> ) and toilets are inadequate.	-	11	26	33	232	70	3
<b>Eksternal Factor</b>								
13	Attract Investment Interests	3	6	16	45	243	70	4
14	Increase Regional Original Income.	4	3	10	53	252	70	4
15	Providing convenience and comfort in the buying and selling process.	1	4	9	56	260	70	4
16	Threat of market location displacement.	42	17	9	8	135	70	2
17	Increasing choice of shopping places with diverse offers.	52	6	9	3	103	70	2
18	The need to develop Kepuh Market.	10	12	26	22	200	70	3
19	Facilities in Pasar Kepuh need to be improved such as ATM centers, CCTV, Nursery rooms, smoking area.	-	10	20	40	240	70	4

**Table 4.6** Variables Of Internal Strategy Factor

Internal Strategy factors	Score (S)	Weight (W)	(S X W)
<b>Strength (S)</b>			
• Located in the strategic area of Kuningan District (Kuningan District Center)	3	3/4	2,25
• Pasar Kepuh is one of the centers of trade and service development in Kuningan District.	3	3/4	2,25
• Easy access to Pasar Kepuh.	4	4/4	4
• Pasar Kepuh Facilities and Infrastructure is currently good.	2	2/4	1
• Pasar Kepuh is a crowded market.	4	4/4	4
• Market visitors come from inside and outside Kuningan Sub-District.	4	4/4	4
<b>TOTAL</b>			17,5
<b>Weakness (W)</b>			
• Lack of car and motorcycle parking areas in Pasar Kepuh.	4	4/4	4
• Poor waste disposal and drainage channels.	3	3/4	2,25
• Inadequate loading and unloading area	3	3/4	2,25
• Zoning for each type of trader has not been implemented properly.	3	¾	2,25
• Public market facilities such as prayer rooms ( <i>mushola</i> ) and toilets are inadequate.	3	3/4	2,25
<b>TOTAL</b>			13

Difference between strengths and weaknesses (as the x-axis in the strategy quadrant)

$$= S - W$$

$$= 17,5 - 13$$

$$= 4,5$$

**Table 4.7** Variables Of External Strategy Factor

External Strategy Factor	Score (S)	Weight (W)	(S X W)
<b>Opportunity(O)</b>			
• Attract Investment Interests	4	4/4	4
• Increase Regional Original Income	4	4/4	4
• Providing convenience and comfort in the buying and selling process.	3	¾	2,25
• Providing business opportunities for the community.	4	4/4	4
• Facilities in Pasar Kepuh need to be improved such as ATM centers, CCTV, Nursery rooms, smoking area.	4	4/4	4
<b>TOTAL</b>			18,25
<b>Threats (T)</b>			
• Threat of market location displacement.	2	2/4	1
• The need to develop Kepuh Market.	3	¾	2,25
• Increasing choice of shopping places with diverse offers.	2	2/4	1
<b>TOTAL</b>			4,25

Difference between Opportunities and Threats (as Y axis in the strategy quadrant)

$$= O - T$$

$$= 18,25 - 4,20$$

$$= 14,05$$

So that a point has been obtained in the quadrant of strategy (x, y) with a value (4,5 ; 14,05). With the reference to the strategy quadrant below:

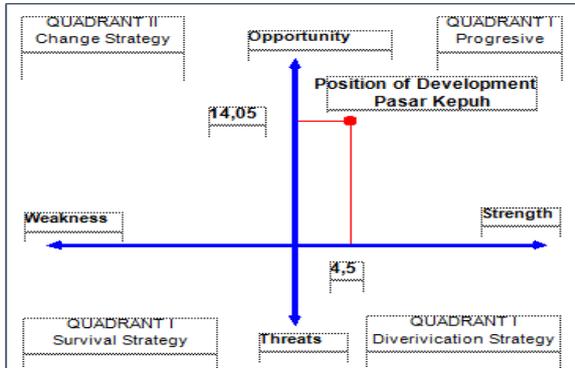


Figure 4.1 The Results Of The SWOT Analysis

Based on Figure 4.1, there is a description of each quadrant, it can be concluded that the development position of Pasar Kepuh Kuningan District is located in quadrant I or in a progressive position, it means that the position of the development object of this research is in good condition, no need to change strategy or diversification a strategy to increase fame, market popularity. In this case the cause of the market development location will be developed under progressive conditions, due to the strength and strength of the location which is already quite capable.

#### 4.4 PLANNING OF MARKET SPACE DEVELOPMENT

Table 4.8 Space Need in Pasar Kepuh

No	Facilities	Planned Size (m)	Amount (Unit)	Area Plan (m <sup>2</sup> )	Building Area (m <sup>2</sup> )
<b>1st Floor</b>					
1.	Kiosk	3 m x 6 m	24	432 m <sup>2</sup>	30.315,68 m <sup>2</sup>
		3 m x 3 m	326	2934 m <sup>2</sup>	
2.	Stalls	2 m x 3 m	416	2496 m <sup>2</sup>	
3.	Raw Material Storage	4 m x 2 m	8 unit	64m <sup>2</sup>	
4.	WC / Toilet	8 m x 8 m	2 unit @ 1,5m x 2m	128m <sup>2</sup>	
5.	Disinfectant Room	3,5 m x 3,5 m	1 unit	12,25 m <sup>2</sup>	
5.	ATM Center	6,4 m x 6,4 m	1 unit	40,96 m <sup>2</sup>	
6	Circulation (Gangway)	2,8 m	-	6111,35 m <sup>2</sup>	
Amount				12.218,56 m <sup>2</sup>	
<b>2nd Floor</b>					
1.	Kiosk	3 m x 3 m	504	4536m <sup>2</sup>	
2.	WC / Toilet	8 m x 8 m	2 unit @ 1,5m x 2m	128 m <sup>2</sup>	
3.	Worship Room	10 m x 7 m	1 unit	70 m <sup>2</sup>	

4.	Management Office	10m x 10 m	1 unit	100 m <sup>2</sup>	
6	Circulation (Gangway)	2,8 m	-	4214,56 m <sup>2</sup>	
Amount				9048,56 m <sup>2</sup>	
<b>3rd Floor</b>					
1.	Kiosk	3 m x 3 m	504	4536 m <sup>2</sup>	
2.	WC / Toilet	8 m x 8 m	2 unit @ 1,5m x 2m	128 m <sup>2</sup>	
3.	Nursery Room	6 m x 6 m	1 unit	36 m <sup>2</sup>	
4.	Muhola	6 m x 6 m	1 unit	36	
5.	Smoking Area	6 m x 6 m	2 unit	72 m <sup>2</sup>	
6	Circulation (Gangway)	2,8 m	-	4240,56	
Amount				9048,56 m <sup>2</sup>	

#### 4.5 BASIC BUILDING COEFFICIENTS

In the zoning regulations contained in the Kuningan District (*Rencana Detail Tata Ruang*) RDTRof 2014, for the intensity of space utilization which includes the Basic Building Coefficient (BBC), Building Floor Coefficient (BFC), Basic Green Coefficient (BGC) there are several categories according to the type of space utilization. And for the Pasar Kepuh area which includes trade and service areas, the intensity of the use of space is:

- BBCa maximum of 80% in the area that functions as a trading area,
- BFCa maximum of 4,8 %
- BGC maximum 1-30% of the total area.

Pasar Kepuh was developed and planned with an area of 27.161 m<sup>2</sup>, the values of the BBC, BFC and BGC are:

$$\text{BBC} = 80 \% \times 27.161 \text{ m}^2 = 21.728,8 \text{ m}^2$$

$$\text{BFC} = 2,5 \times 27.161 \text{ m}^2 = 67.902,5 \text{ m}^2$$

$$\text{BGC} = 20 \% \times 27.161 \text{ m}^2 = 5432,2 \text{ m}^2$$

$$\begin{aligned} \text{Number of Building Floors} &= \text{BFC}/\text{BBC} \\ &= 67.902,5 / 21.728,8 \\ &= 3,125 \text{ floors} \end{aligned}$$

Based on the results above, the number of floors in accordance with zoning regulations in the Kuningan District RDTR 2011 is 3 floors

#### 4.6 MARKET SPATIAL PLAN

Spatial Plan which will be planned at Pasar Kepuh in Kuningan District, are:

1. Create zoning for each type of trader.
2. Create good air circulation system especially for wet traders (meat, fish, vegetables and fruit).
3. Addition of Market support facilities in accordance with the market types contained in the regulations of SNI 8152: 2015 concerning Public Market. And Pasar Kepuh will be developed for the next 5 years with the number of traders in 1894 traders, and is included in the Class I Market type.
4. Re-planning the drainage system, parking system and waste management at Pasar Kepuh.

So :

Area of Motorcycle Parking Area

$$= \text{Number of Vehicles} \times \text{SRP}$$

$$= 966 \times 1,5 = 1449 \text{ m}^2$$

$$= 966 \times 2 = 1932 \text{ m}^2$$

#### 4.8 PLANNING WASTE MANAGEMENT SYSTEM

The waste management system at Pasar Kepuh is currently not good because the manager of Pasar Kepuh only provides the location of the trash without the proper container / tub so that the garbage accumulates and is not separated according to the type of waste. So it is necessary to improve the waste management system at Pasar Kepuh in Kuningan District.

#### 4.7 CALCULATION OF PARKING LAND NEEDS

a. Cars

**Table 4.9** Car Vehicle Calculation Results

No.	Time	Entry	Exit	Accumulation Parking	Volume Parking
1.	07.00 – 08.00	19	15	4	19
2.	08.00 – 09.00	32	24	12	51
3.	09.00 – 10.00	29	16	25	80
4.	10.00 – 11.00	19	17	27	99
5.	11.00 – 12.00	11	7	31	110
6.	12.00 – 13.00	9	13	27	119
Total		110	92	126	478

Number of Vehicles = Area/SRP  
 Cars for Class II = 2,5 x 5  
 = 11,5 m<sup>2</sup> SRP

So :

Area of Car Parking Area  
 = Number of Vehicles x SRP  
 = 110 x 11,5  
 = 1265m<sup>2</sup>

b. Motorcycle

**Table 4.10** Car Vehicle Calculation Results

No.	Time	Entry	Exit	Accumulation Parking	Volume Parking
1.	07.00 – 08.00	223	130	93	223
2.	08.00 – 09.00	213	121	185	436
3.	09.00 – 10.00	181	113	253	617
4.	10.00 – 11.00	174	89	338	791
5.	11.00 – 12.00	92	87	343	883
6.	12.00 – 13.00	83	103	323	966
Jumlah		966	643	1535	3916

Number of Vehicles = Area/SRP  
 Motorcycle = 0,75 x 2  
 = 1,5 m<sup>2</sup> SRP

#### 4.9 CALCULATION OF DRAINAGE

**Table 4.11** Daily Rainfall Analysis

YEAR	RAINFALL (mm)												Total	Max
	JAN	FEB	MAR	APR	MEI	JUN	JUL	AGS	SPT	OCT	NOV	DEC		
2008	446	477	185	304	179	14	0	0	0	0	146	298	2049	477
2009	334	280	234	341	339	123	1	0	0	56	56	201	1965	341
2010	542	606	511	320	289	139	101	123	186	164	334	363	3678	606
2011	156	322	482	528	283	122	0	0	0	15	262	359	2529	528
2012	289	284	212	322	32	12	0	0	0	68	177	356	1752	356
2013	546	354	419	486	234	91	317	0	10	94	257	395	3203	546
2014	370	309	506	309	83	128	226	88	0	106	126	673	2924	673
2015	659	324	429	418	206	0	0	0	0	0	140	232	2408	659
2016	332	216	549	340	236	138	0	68	0	0	0	232	2111	549
2017	487	0	374	339	79	150	19	0	61	35	366	0	1910	487
Average	416,1	317,2	390,1	370,7	196	91,7	66,4	27,9	25,7	53,8	186,4	275,3	2452,0	515,8

(Source : Dinas PSDA Kuningan District, Kuningan Station)

In calculating the need for drainage channels, it is necessary to plan a maximum rainfall data for 10 years by taking the nearest statute in the Pasar Kepuh area. Rainfall data taken from Kuningan Station. The following are the calculation steps  
 Rainfall frequency analysis calculation using Log Pearson III distribution method. After that the rainfall plan for the T year return period is obtained:

T	Rt
2	506,9777328
5	510,4940217
10	513,9302115

- a. Calculation of Rainfall Intensity  
 - S (Channel Slope)

$$S = \frac{\Delta t}{L}$$

$$= \frac{8}{492}$$

$$= 0,06126 \text{ m}$$

- Tc (Travel Time Flow Is Distributed)

$$TC = \left(\frac{0,87 \times L^2}{1000 \times S}\right)^{0,385}$$

$$= \left(\frac{0,87 \times 492^2}{1000 \times 0,06126}\right)^{0,385}$$

$$= 0,1876 \text{ hour}$$

- I (Rainfall intensity during concentration time)

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

$$= \frac{R}{24} \left(\frac{24}{0,1876}\right)^{2/3} = 540,037$$

mm/hour

b. Calculation of Flood Debit Plans (Q)

Large of Drainage channel(A)

$$A = 181 \text{ m} \times 65 \text{ m}$$

$$= 11765 \text{ m}^2 = 0,011765 \text{ km}^2$$

$$Q = 0,278 \times C \times I \times A$$

$$= 0,278 \times 0,7 \times 540,037 \times 0,011765$$

$$= 1,236398 \text{ m}^3/\text{second}$$

c. Calculation of Channel Dimensions

n = 0,020 (Manning coefficient of ply stone surfacecement)

$$S = 0,06126 \text{ m}$$

$$b = 2 \text{ h}$$

So :

$$h = \left(\frac{Q \times n}{2 \times s}\right)^{3/8}$$

$$= \left(\frac{1,236 \times 0,02}{2 \times 0,06126}\right)^{3/8}$$

$$= 0,902376 \text{ m}$$

So :

$$\text{Water Level}(h) = 0,902376 \text{ m}$$

$$\text{Width of Channel}(b) = 2 \times h$$

$$= 2 \times 0,902376$$

$$= 1,804752 \text{ m}$$

From the above results obtained

- Cross-sectional area (A)

$$A = b \times h$$

$$= 1,804752 \times 0,902376$$

$$= 1,628565058 \text{ m}^2$$

- Wet Circumference of Channel (P)

$$P = b + 2h$$

$$= 1,804752 + 2 \times 0,902376$$

$$= 3,609504186 \text{ m}$$

- Jari-jari Hidrolis (R)

$$R = \frac{A}{P} = \frac{1,628565058}{3,609504186} = 0,451188023 \text{ m}$$

- Velocity of flow(V)

$$V = \frac{1}{n} R^{2/3} \times S^{1/2}$$

$$= \frac{1}{0,02} \times 0,451188023^{2/3} \times 0,06126^{1/2}$$

$$= 3,750629412 \text{ m}^3/\text{second}$$

- Debit Channel (Qs)

$$Qs = V \times A$$

$$= 3,750629412 \times 1,628565058$$

$$= 6,108144007 \text{ m}^3/\text{det}$$

- Height of Jagaan(w)

$$W = \sqrt{0,5x h} - \sqrt{0,5x}$$

$$= 0,67170531 \text{ m}$$

- Height of Channel(H)

$$H = h + W$$

$$= 0,902376 + 0,67170531$$

$$= 1,34341062 \text{ m}$$

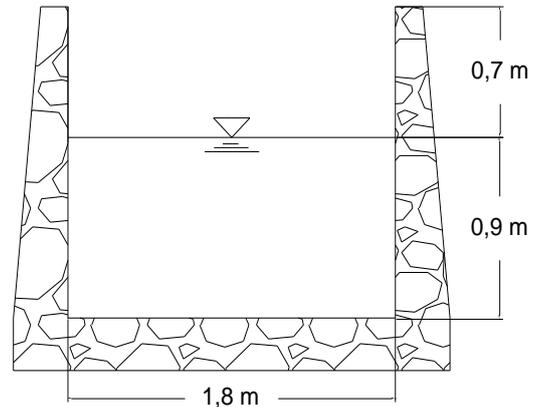


Figure 4.2 Section of Drainage Channel

#### 4. RESULT OF PLANNING AND DESIGN

a. Analysis Of Research Object Design



Figure 4.3 Location Of Pasar Kepuh in Kuningan District

b. Design Of Market

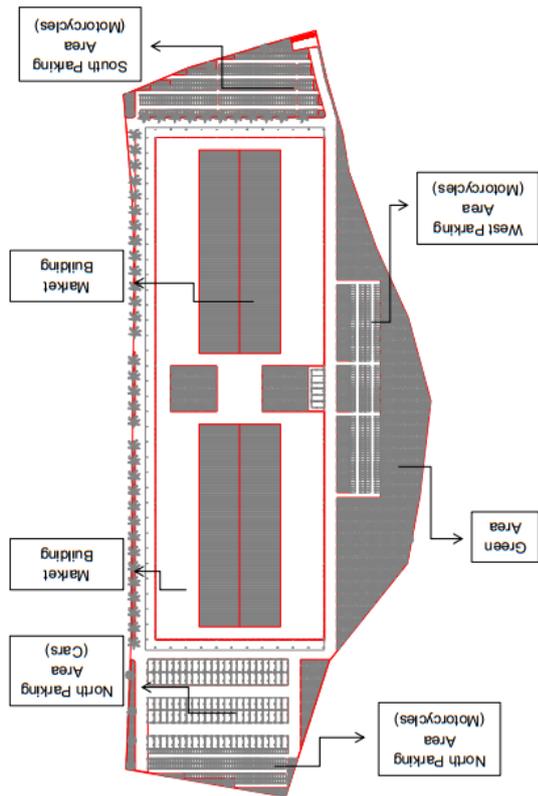


Figure 4.4 Site Plan Of Pasar Kepuh in Kuningan District

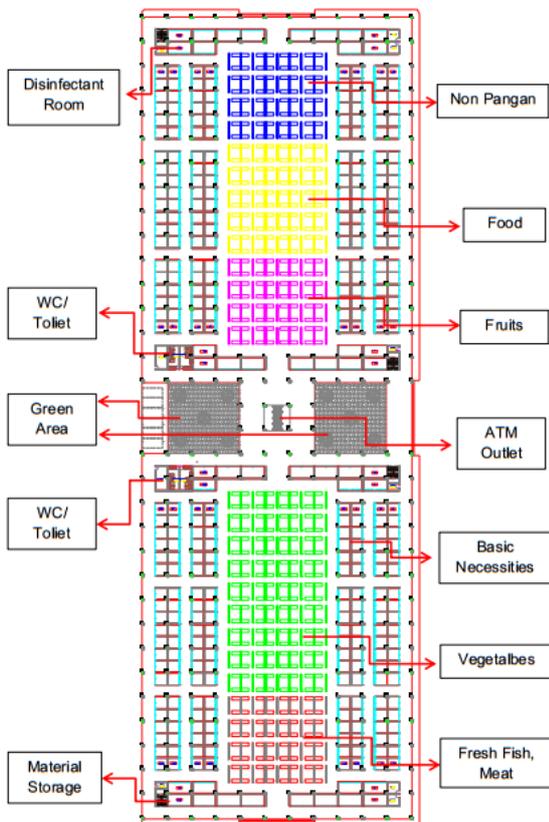


Figure 4.5 First Floor Plan

This 1st floor is dedicated to the area of wet and food traders such as vegetables, fruits, meat, fresh fish, basic necessities, non pann, food, atm outlet and so on. For the number of kiosks, stalls and other supporting facilities, including:

Table 4.12 Facilities on the 1st Floor

No	Facilities	Size	Amount
1.	Kiosk	3 m x 6 m	24
		3 m x m	326
2.	Stalls	3 m x 2 m	416
3.	Raw Material Storage	4 m x 2 m	8 unit
4.	WC / Toilet	6 m x 6 m	2 unit @ 1,5m x 1m
5.	Disinfectant Room	3,5 m x 3,5 m	1 unit
6.	ATM Center	6,4 m x 6,4 m	1

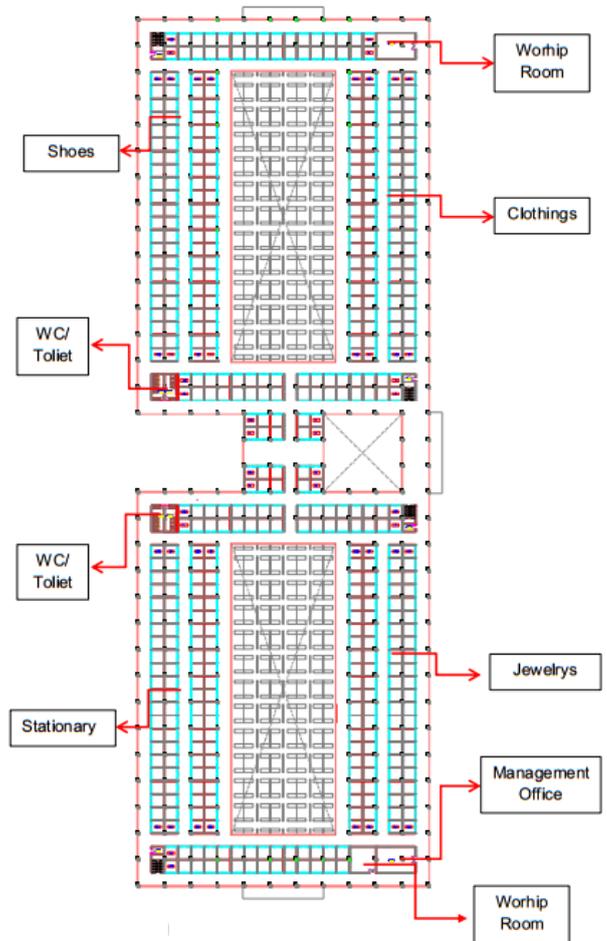


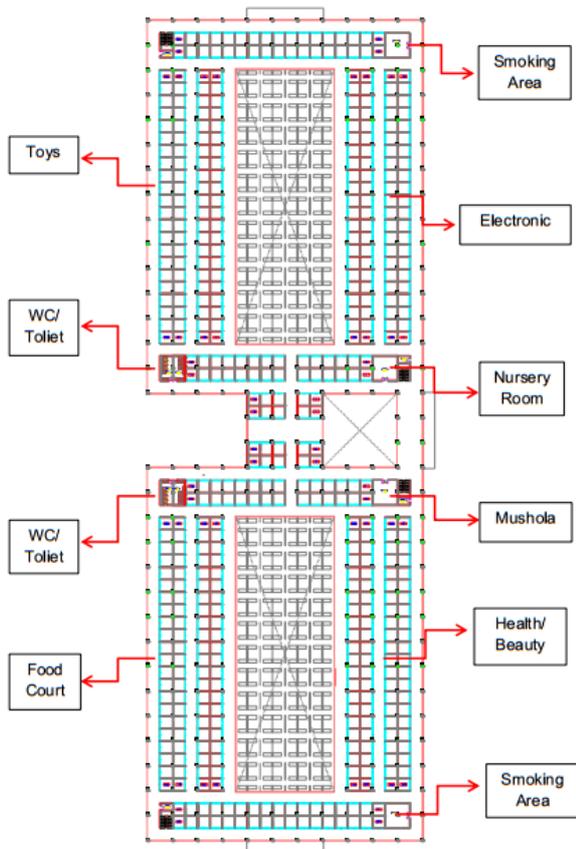
Figure 4.5 Second Floor Plan

For the 2nd floor, it is devoted to clothing areas such as clothing, shoes, stationary, jewelrys, etc. The following is a description of

the number of kiosks and facilities located on the 2nd floor:

**Table 4.13** Facilities on the 2nd Floor

No	Facilities	Size	Amount
1.	Kiosk	4 m x 4 m	570
2.	WC / Toilet	6 m x 6 m	2 unit @ 1,5m x 1m
	Worship Room	9 m x 6 m	2 unit
3.	Management Office	10 m x 10 m	1 unit



**Figure 4.6** Third Floor Plan

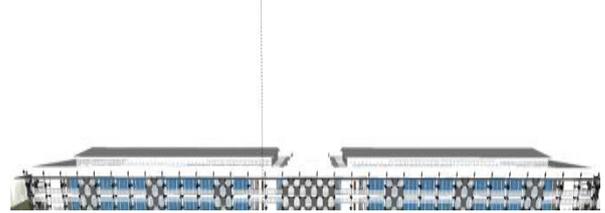
Whereas for the 3rd floor is reserved for leisure areas, on this floor there is a food court area, toys, beauty / health and household / electronic, ect. In addition there are also supporting facilities on this floor, here are the descriptions:

**Table 4.14** Facilities on the 2nd Floor

No	Nama Fasilitas	Ukuran	Jumlah
1.	Kiosk	4 m x 4 m	560
2.	WC / Toilet	6 m x 6 m	2 unit @ 1,5m x 1m
	Nursery Room	7 m x 5 m	1 unit
3.	Smoking Area	4 m x 3,5 m	1 unit

So the total planning of kiosks and stalls namely, Kiosks 1480 units and stalls 388 units so that the total number is 1898 units. And below is a description of some of the facilities located in Pasar Market in Kuningan District:

1. Pasar Kepuh



**Figure 4.7** Pasar Kepuh



**Figure 4.8** The Front Of The Pasar Kepuh



**Figure 4.9** The Side Of The Pasar Kepuh

2. Facilities For Traders

a. Kiosk

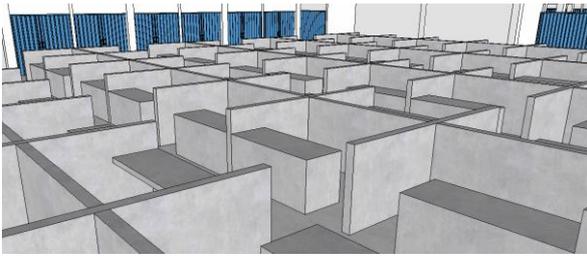
The Kiosk in Pasar Kepuh is planned to be 3 m x 6 m and 3 m x 3 m in size with a total kiosk of 1356 units.



**Figure 4.10** Kiosk

b. Stall

Stalls found in Pasar Kepuh are developed to 3 m x 2 m with a total number of 416 units.



**Figure 4.11 Stalls**

c. Parking Area

For the parking lot, the total area is planned to be 3676,55 m<sup>2</sup>, parking spaces are separated for motorbikes and cars.



**Figure 4.12 Parking Area**

d. Security Pos

In the Development of Kepuh Market, 2 security post units are planned which are located in front of the entrance and exit of Pasar Kepuh.



**Figure 4.13 Security Post**

e. Garbage Dump

In Pasar Kepuh design has 5 polling stations that are behind the market with a length of 3 m, width of 2 m and height 1 in the trash has a capacity of 6 m<sup>3</sup> / tub.



**Figure 4.14 Design of a Waste Disposal Plan**

f. Drainage

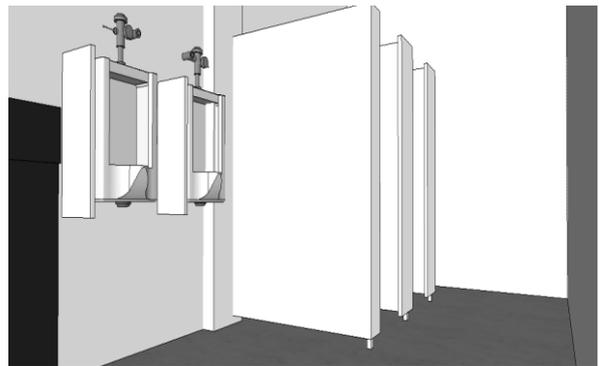
Based on the calculation above, the drainage channel planned at Pasar Kepuh is as follows:  $L = 492$ ,  $b = 1,8$  m,  $h = 0,9$  m,  $w = 0,7$  m.



**Figure 4.15 Drainage Channel**

g. WC / Toilets

The toilet planned at Pasar Kepuh is 2 toilets on each floor.



**Figure 4.16 WC / Toilet**

h. ATM Center

ATM outlets as market support facilities to make banking transactions easier for visitors and sellers.



**Figure 4.17 ATM Center**

i. Green Open Space

The design of green Area in the development of Pasar Kepuh is made by maximizing the available land.



Figure 4.18 Green Open Space

- j. **Worship Room**  
The Worship Room is a room that is used to perform worship that is provided to visitors, buyers and managers of the Pasar Kepuh.



Figure 4.19 Worship Room (Mushola)

- k. **Other Facilities**

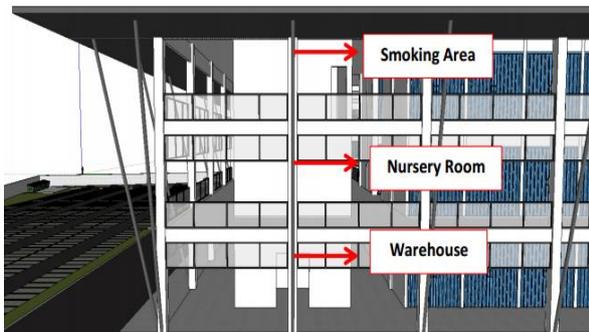


Figure 4.20 Other Facilities

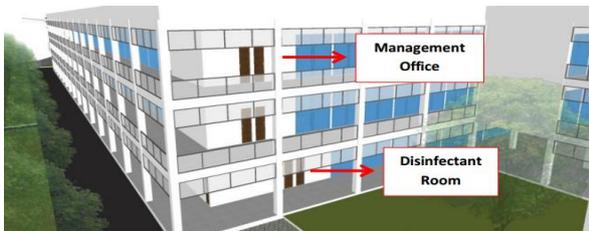


Figure 4.21 Other Facilities

**4. ENGINEERING ECONOMIC ANALYSIS**

To find out the capital market for Pasar Kepuh, the formula is used:

$$\text{Capital Market} = (\text{building area} \times 4.000.000) \times \text{total of building}$$

- a. **Kiosk**  
 $A = (18 \text{ m}^2 \times 4.000.000) \times 24$   
 $= \text{Rp. } 1.728.000.000$   
 $B = (9 \text{ m}^2 \times 4.000.000) \times 1332$   
 $= \text{Rp. } 47.952.000.000$
- b. **Stall**  
 $= (6 \text{ m}^2 \times 4.000.000) \times 416$   
 $= \text{Rp. } 3.504.000.000$
- c. **Mushola**  
 $= (54 \text{ m}^2 \times 4.000.000) \times 4$   
 $= \text{Rp. } 864.000.000$
- d. **Toilet**  
 $= (36 \text{ m}^2 \times 4.000.000) \times 6$   
 $= \text{Rp. } 864.000.000$
- e. **Management Office**  
 $= (100 \text{ m}^2 \times 4.000.000) \times 1$   
 $= \text{Rp. } 100.000.000$
- f. **Security Pos**  
 $= (9 \text{ m}^2 \times 4.000.000) \times 1$   
 $= \text{Rp. } 36.000.000$
- g. **ATM Center**  
 $= (9,6 \text{ m}^2 \times 4.000.000) \times 1$   
 $= \text{Rp } 38.400.000$
- h. **Total capital market of Pasar Kepuh**  
 $= \text{Rp. } 55.086.400.000$   
 $= \text{Rp. } 55.100.000.000$

Table 4.15 Data Of Traders in Pasar Kepuh

Traders	Daily	Mounthly
Vegetable	Rp. 12.000.000	Rp. 360.000.000
Fruits	Rp. 9.000.000	Rp. 270.000.000
Meat	Rp. 19.000.000	Rp. 570.000.000
Fish	Rp. 9.000.000	Rp. 360.000.000
Grocery	Rp. 15.000.000	Rp. 450.000.000
Jewelry	Rp. 15.000.000	Rp. 450.000.000
Clothings	Rp. 11.000.000	Rp. 300.000.000
Electronic	Rp. 15.000.000	Rp. 450.000.000
Shoes Shop	Rp. 10.000.000	Rp. 300.000.000
Beauty Shop	Rp. 6.500.000	Rp. 195.000.000
Stationary	Rp. 7.000.000	Rp. 210.000.000
Food Stall	Rp. 5.500.000	Rp. 165.000.000
Toys	Rp. 4.000.000	Rp. 120.000.000
Non Food	Rp. 7.500.000	Rp. 225.000.000
<b>Total</b>	<b>Rp. 114.000.000</b>	<b>Rp. 4.425.000.000</b>

Monthly amount of Rp. 4.425.000.000, then the number of turnover of Pasar Kepuh traders per year is :

$$= \text{Rp. } 4.425.000.000 \times 12 \text{ bulan}$$

$$= \text{Rp. } 53.100.000.000$$

Entry of data for circulating money per year of Rp. 53.100.000.000

a. Benefit Cost Ratio (BCR)

**Table 4.16** Data Of Traders in Pasar Kepuh

n (year)	Modal	Benefit (P)	$F = \frac{\text{Benefit}}{(1+15\%)^n}$	Cumulative Result
0	55.100.000.000			
1		7.965.000.000	6.926.086.957	6.926.086.957
2		7.965.000.000	6.022.684.310	12.948.771.267
3		7.965.000.000	5.237.116.791	18.185.888.058
4		7.965.000.000	4.554.014.601	22.739.902.659
5		7.965.000.000	3.960.012.697	26.699.915.356
6		9.558.000.000	4.132.187.162	30.832.102.517
7		9.558.000.000	3.593.206.228	34.425.308.745
8		9.558.000.000	3.124.527.154	37.549.835.899
9		9.558.000.000	2.716.980.134	40.266.816.034
10		9.558.000.000	2.362.591.421	42.629.407.455
11		11.469.600.000	2.465.312.787	45.094.720.242
12		11.469.600.000	2.143.750.250	47.238.470.492
13		11.469.600.000	1.864.130.652	49.102.601.144
14		11.469.600.000	1.620.983.176	50.723.584.319
15		11.469.600.000	1.409.550.588	52.133.134.907
16		13.763.520.000	1.470.835.396	53.603.970.303
17		13.763.520.000	1.278.987.301	54.882.957.603
18		13.763.520.000	1.112.162.870	55.995.120.473
19		13.763.520.000	967.098.147,9	56.962.218.621
20		13.763.520.000	840.954.911,2	57.803.173.532
21		16.516.224.000	877.518.168,2	58.680.691.701
22		16.516.224.000	763.059.276,7	59.443.750.977
23		16.516.224.000	663.529.805,8	60.107.280.783
24		16.516.224.000	576.982.439,9	60.684.263.223
25		16.516.224.000	501.723.860,7	61.185.987.084

$$\text{BCR} = \frac{\text{Benefit}}{\text{Cost}} = \frac{61.185.987.084}{55.100.000.000} = 1,110453486$$

BCR > 1 the project is feasible

b. Net Benefit

$$\begin{aligned} \text{Net Benefit} &= \text{Benefit} - \text{Cost} \\ &= 61.185.987.084 - 55.100.000.000 \\ &= 6.085.987.084 \end{aligned}$$

Net Benefit > 0 so investment will be feasible

c. Internal Rate Of Return

**Table 4.17** Internal Rate Of Return if i = 15%

n (year)	Modal	Benefit (P)	$F = \frac{\text{Benefit}}{(1+15\%)^n}$	Cumulative Result
0	55.100.000.000			
1		7.965.000.000	6.836.909.871	6.836.909.871
2		7.965.000.000	5.868.592.164	12.705.502.035
3		7.965.000.000	5.037.418.167	17.742.920.202
4		7.965.000.000	4.323.964.092	22.066.884.294
5		7.965.000.000	3.711.557.160	25.778.441.454
6		9.558.000.000	3.823.063.169	29.601.504.623
7		9.558.000.000	3.281.599.287	32.883.103.910
8		9.558.000.000	2.816.823.422	35.699.927.332
9		9.558.000.000	2.417.874.182	38.117.801.514
10		9.558.000.000	2.075.428.483	40.193.229.997
11		11.469.600.000	2.137.780.411	42.331.010.408
12		11.469.600.000	1.835.004.645	44.166.015.053
13		11.469.600.000	1.575.111.283	45.741.126.336
14		11.469.600.000	1.352.026.852	47.093.153.188
15		11.469.600.000	1.160.538.071	48.253.691.259
16		13.763.520.000	1.195.404.021	49.449.095.281
17		13.763.520.000	1.026.097.872	50.475.193.153
18		13.763.520.000	880.770.706	51.355.963.859
19		13.763.520.000	756.026.357	52.111.990.216
20		13.763.520.000	648.949.662,7	52.760.939.879
21		16.516.224.000	668.446.004,5	53.429.385.883
22		16.516.224.000	573.773.394,4	54.003.159.278
23		16.516.224.000	492.509.351,4	54.495.668.629
24		16.516.224.000	422.754.808,1	54.918.423.437
25		16.516.224.000	362.879.663,6	55.281.303.101

$$\begin{aligned} \text{NPV} &= \frac{(\text{Benefit} - \text{Cost})}{(1+i)^n} \\ &= \frac{(55.281.303.101 - 55.100.000.000)}{(1+15\%)^{25}} \\ &= 184.877.907,7 \end{aligned}$$

**Table 4.18** Internal Rate Of Return if i = 16%

n (year)	Modal	Benefit (P)	$F = \frac{\text{Benefit}}{(1+16\%)^n}$	Cumulative Result
0	55.100.000.000			
1		7.965.000.000	6.866.379.310	6.866.379.310
2		7.965.000.000	5.919.292.509	12.785.671.819
3		7.965.000.000	5.102.838.370	17.888.510.189
4		7.965.000.000	4.398.998.595	22.287.508.784
5		7.965.000.000	3.792.240.168	26.079.748.951
6		9.558.000.000	3.923.007.070	30.002.756.022
7		9.558.000.000	3.381.902.647	33.384.658.668
8		9.558.000.000	2.915.433.316	36.300.091.984
9		9.558.000.000	2.513.304.583	38.813.396.567
10		9.558.000.000	2.166.641.882	40.980.038.449
11		11.469.600.000	2.241.353.671	43.221.392.120
12		11.469.600.000	1.932.201.440	45.153.593.560
13		11.469.600.000	1.665.690.897	46.819.284.457
14		11.469.600.000	1.435.940.428	48.255.224.885
15		11.469.600.000	1.237.879.680	49.493.104.565
16		13.763.520.000	1.280.565.186	50.773.669.750
17		13.763.520.000	1.103.935.505	51.877.605.255
18		13.763.520.000	951.668.538,8	52.829.273.794
19		13.763.520.000	820.403.912,7	53.649.677.707
20		13.763.520.000	707.244.752,4	54.356.922.459
21		16.516.224.000	731.632.502,4	55.088.554.962
22		16.516.224.000	630.717.674,5	55.719.272.636
23		16.516.224.000	543.722.133,2	56.262.994.769
24		16.516.224.000	468.725.976,9	56.731.720.746
25		16.516.224.000	404.074.118	57.135.794.864

$$\begin{aligned} \text{NPV} &= \frac{(\text{Benefit} - \text{Cost})}{(1+i)^n} \\ &= \frac{(57.135.794.864 - 55.100.000.000)}{(1+16\%)^{25}} \\ &= 49.806.300,41 \end{aligned}$$

**Table 4.19** Internal Rate Of Return if  $i = 18\%$

n (year)	Modal	Benefit (P)	$F = \frac{Benefit}{(1+18\%)^n}$	Cumulative Result
0	55.100.000.000			
1		7.965.000.000	6.750.000.000	6.750.000.000
2		7.965.000.000	5.720.338.983	12.470.338.983
3		7.965.000.000	4.847.744.901	17.318.083.884
4		7.965.000.000	4.108.258.391	21.426.342.275
5		7.965.000.000	3.481.574.907	24.907.917.182
6		9.558.000.000	3.540.584.651	28.448.501.833
7		9.558.000.000	3.000.495.467	31.448.997.301
8		9.558.000.000	2.542.792.769	33.991.790.070
9		9.558.000.000	2.154.909.126	36.146.699.196
10		9.558.000.000	1.826.194.175	37.972.893.371
11		11.469.600.000	1.857.146.618	39.830.039.989
12		11.469.600.000	1.573.853.066	41.403.893.055
13		11.469.600.000	1.333.773.785	42.737.666.840
14		11.469.600.000	1.130.316.767	43.867.983.608
15		11.469.600.000	957.895.565,3	44.825.879.173
16		13.763.520.000	974.131.083,4	45.800.010.256
17		13.763.520.000	825.534.816,4	46.625.545.073
18		13.763.520.000	699.605.776,6	47.325.150.849
19		13.763.520.000	592.886.251,4	47.918.037.101
20		13.763.520.000	502.445.975,7	48.420.483.076
21		16.516.224.000	510.962.009,2	48.931.445.086
22		16.516.224.000	433.018.651,9	49.364.463.737
23		16.516.224.000	366.964.959,2	49.731.428.697
24		16.516.224.000	310.987.253,6	50.042.415.950
25		16.516.224.000	263.548.520	50.305.964.470

$$NPV = \frac{(Benefit - Cost)}{(1+i)^n}$$

$$= \frac{(50.305.964.470 - 55.100.000.000)}{(1+18\%)^{25}}$$

$$= -76.498.173,47$$

$$i \ 15\% = 184.877.907,7$$

$$i \ 16\% = 49.806.300,41$$

$$i \ 18\% = -76.498.173,47$$

NPV = 0 is between  $i = 16\%$  and  $i = 18\%$ , then the way to get the IRR value is as follows:

$$\text{Because IRR} = 16.78\%$$

$$\text{While the MARR value} = 15\%$$

$$\text{IRR} > \text{MARR} = 16.78\% > 15\%$$

So, the investment plan is recommended to be economically feasible to implement

$$IRR = i_1 + \frac{NPV_1}{(NPV_1 - NPV_2)}(i_2 - i_1)$$

$$IRR = 16\% + \frac{49.806.300,41}{(49.806.300,41 - (-76.498.173,47))}(18\% - 16\%)$$

$$IRR = 16,78\%$$

$$\text{Because IRR} = 16.78\%$$

$$\text{While the MARR value} = 15\%$$

$$\text{IRR} > \text{MARR} = 16.78\% > 15\%$$

So, the investment plan is recommended to be economically feasible to implement

## V. CONCLUSION AND RECOMENDATION

### V.1. CONCLUSION

1. After being discussed in the previous Pasar Kepuh Kuningan District will developed into a Semi-Modern Market by maintaining land area which is 27,161 m<sup>2</sup>.
2. Pasar Kepuh Kuningan District is a traditional market consisting of 1 floor and will planned to be developed into 3 floors with a total building area of 30.315,68 m<sup>2</sup>.
3. Planning for the number of Kiosks and Stall Pasar Kepuh in Kuningan District is planned for the next 5 years according to the number of percentage increase in traders. With a number of kiosks of 1356 units with 2 types of kiosks, that is 3m x 6m and 3m x 3m. Whereas the number of Stall 416 units with a size of 3m x 2m.
4. Planning for Pasar Kepuh Parking Facility in Kuningan District is 1256 m<sup>2</sup> for car parking and 3197 m<sup>2</sup> for motorcycle parking with a circulation of 15% so that the total parking needs are 3676.55 m<sup>2</sup>. Parking space capacity is 1076 vehicles consist of 110 cars and 966 motorcycles.
5. Planning for Disposal Sites While (TPS) Pasar Kepuh Kuningan District has 4 places with a capacity of 6m<sup>3</sup> / tub.
6. The plan of the Pasar Kepuh drainage channel in Kuningan District uses a square cross section type with  $b = 1.8 \text{ m}$ ;  $h = 0.9 \text{ m}$  and  $W = 0.7 \text{ m}$ .
7. Pasar Kepuh development project after 25 years will be reater, Rp. 61.200.000.000 from the initial capital of the project which is only Rp. 55.100.000.000 so to equalize the present value of future value with the present value of the expenditure for inveseement requires interest 16,78%.

### V.2. RECOMEDATION

1. Looking at the increasingly advanced market economy in transactions and the increasingly crowded markets which are feared to cause problems, the development of Pasar Kepuh is very necessary.

2. Transportation systems that are close to the object of research must be improved so that they can optimize the concept of developing the Pasar Kepuh Market in Kuningan District.

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