ONLINE BASED PARKING BUSINESS PLANNING WITH PARTNERSHIP CONCEPTSIN BANDUNG CITY.

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Abstract

The birth of Bukalapak is the answer to problems experienced by people when they want to shop but cannot or do not have time to directly buy the desired item. Thus, Bukalapak was present to answer the problem. Same thing with Gojek. When people, especially in urban areas, have begun to struggle to find practical transportation to reach their destinations, Gojek is here to give them convenience and security. If a short conclusion is drawn from the concise discussion, it can be concluded that the problem is a business opportunity when we can find or provide a solution. The owner of a place like the mall manager who formed a partnership with "Parkiran" will certainly get many benefits. As they no longer need to pay a third party as the parking manager and also, the safety and comfort equipment that is in their parking lot will be equipped directly by "Parking". "Parking lots" also provide an opportunity for residents around the crowd to register their vacant yard land as an alternative parking area that can be used by "Parking" users. The concept of business application from the application "Parking" can certainly be spelled out simply by using the concept of partnership with the manager of the mall or other public places as well as partnering also with residents who want to rent out land in his yard for parking.

Keywords: "Parking", Application, Parking

Introduction

Today we live amid rapid technological advances. In almost all fields, technology can replace the role of humans. In fact, many in the industrial sector have replaced employees or factory workers by using robotic systems. Of course, beyond that there are positive and negative sides. However, trying to clear your mind and look around for the impact of technological progress is the simplest way to be grateful. Many experts in the field of science were not much interested in the past, but now people like flocked to invade because now also began to grow employment opportunities in accordance with these majors.

The birth of Bukalapak is the answer to problems experienced by people when they want to shop but cannot or do not have time to directly buy the desired item. Thus, Bukalapak was present to answer the problem. Same thing with Gojek. When people, especially in urban areas, have begun to struggle to find practical transportation to reach their destinations, Gojek is here to give them convenience and security. Moreover, getting here, the features provided by Gojek are also varied. In essence, the two startups can continue to rise and be accepted in the hearts of the community because they both equally answer the problems that exist in society today.

The simple principle that we often hear about business matters is when a request or demand is answered by supply or supply (Saudi, 2018). In this case, the demand or needs of the community for a practical life must be answered with the supply or supply of goods or services that can answer the problem without causing problems.

If a short conclusion is drawn from the concise discussion, it can be concluded that the problem is a business opportunity when we can find or provide a solution. For this reason, this research tries to discuss a problem that is already quite classic in big cities. The problem is the limited parking space so it is difficult to find the location of vehicle parking, especially four-wheeled especially in shopping centers such as malls and markets.

The way to eliminate these parking problems is by applying the concept of smart parking, which is one of the embodiments of smart city (Nurmawan, Adhi Rinaldi.dkk: 2017 p1274). Drawing conclusions from the statement, then created an innovation to overcome the problem. The innovation is "Parking". "Parking" is actually almost the same as a number of applications that have a focus in a similar field, but in "Parking" is more facilitated because of some features that can greatly help both parking service users, and local communities who receive the impact. The birth of the "Parkiran" innovation was driven by the problem of the city of Bandung as a metropolitan city and had the following functions and roles: 1) As the capital of West Java province, 2) Tourist cities, 3) Trade centers, 4) Educational cities, 5) Creative cities, 6) City of struggle (Deden Sutisna, et.al.2018). The city is also one of the major cities in Indonesia with a large population and territory and is supported by high numbers of 2-wheeled and 4-wheeled vehicle ownership.

To find out the community's need for parking lots, it is necessary to identify the number of vehicles in the number of parking areas in Bandung. For the number of vehicles in the city of Bandung, can be seen in the following table:

Table 1
Data on the number of vehicles in the city of Bandung (BPS website update 2018)

Services of Revenues Unit	Four Wheels	Motor Cycles	Four and Two Wheels
	Non Public	Non Public	Non Public
Bandung City I Pjjrn	147 752	462 478	610230
Bandung City Ii Kwlyn	164 406	433 041	597447
Bandung City Iii Soeta	138 377	355 560	493937
West Bandung City Pdlg	69503	501796	571299
Bandung Reg I Rc.Ekek	54244	425878	480122
Bandung Reg Ii Soreang	61706	478859	540565
West Java	**635 988**	**2 657 612**	**3 293 600**

Sources: BPS Kota Bandung Tahun 2018.

Based on these data, it is known that the number of 2-wheeled vehicles and in the city of Bandung is 2,657,612 units while the 4-wheeled number is 635,988 units.

While the growth of vehicles in the city of Bandung alone reached 11% per year. That means, the estimated number of vehicles at the end of 2020 can be predicted as shown in the table below:

Table 2
Data on the Number of Vehicles in the City of Bandung (Predict the end of 2020, assuming an increase of 11% per Year)

Services of Revenues Unit	Four Wheels	Motor Cycles	Four and Two Wheels
	Non Public	Non Public	Non Public
Kota Bandung I Pjjrn	182 045	569 819	751 864
Kota Bandung Ii Kwlyn	202 565	533 550	736 114
Kota Bandung Iii Soeta	170 494	438 085	608 580
Kab. Bandung Barat Pdlg	85 635	618 263	703 897

Kab. Bandung I Rc.Ekek	66 834	524 724	591 558
Kab. Bandung Ii Soreang	76 028	590 002	666 030
Jawa Barat	**783 601**	**3 274 444**	**4 058 045**

Source: **BPS Kota Bandung Tahun 2020.**

Based on the calculation of the increase in the number of vehicles in Bandung by 11% per year, it is known that the number of 2-wheeled vehicles and in the City of Bandung at the end of 2020 amounted to 3,274,444 units while the 4-wheeled numbered 783,601 units.

As for the number of parking areas in the city of Bandung compiled from Bandung City BPS data is shown in the following table:

Table 3

Location of Public Road Parking in Bandung by Region

Zone	Number of Parking Locations
City Centre	67
Buffer Zone	146
Peripheral Zone	23

Source : **BPS Provinsi Jawa Barat.**

Based on these data, it can be seen that the location of public parking in the Bandung City Center is very limited. So that the Parking application is the right solution for residents of the city of Bandung in particular to be able to easily find parking locations. Because, the yard of a local resident's house near the location that we want to go to can be registered as a parking space that is integrated with the Parking application. Of course, this adds options for motorists who want to park but have difficulty finding proper parking. Of course the Parking application considers the registered location so that motorists who want to park get a proper location to park their vehicles.

2. Theoretical Review

The business concept which is the foundation of the "parking lot" is actually closely related to the good partnership to the community directly and also the manager of a place that has a parking lot. That means that this concept will benefit the parties involved in it. The partnership process is also of course with a different process between the owner of the place with the parking lot or parking building itself and also partnership with the community.

For the owner of a place with a separate land or parking building, the "Parkiran" will prepare the land as well as possible both in terms of security such as signs and also lighting to comfort aspects such as proper lighting. Of course, before it is decided to become a "parking lot" land, a survey will be conducted first on the building that will be used whether it is still feasible and sturdy enough or is not suitable to be used due to the safety factor of parking users themselves.

The owner of a place like the mall manager who formed a partnership with "Parkiran" will certainly get many benefits. As they no longer need to pay a third party as the parking manager and also, the safety and comfort equipment that is in their parking lot will be equipped directly by "Parking". Thus, the mall manager no longer needs to pay the cost of the janitor to the manager because it has been well managed by "Parking". And the indirect effect is the convenience of the mall visitors themselves. Because they can get the experience of visiting a mall without having to bother thinking about a parking lot that they can see for themselves from the application "Parking" on their mobile phones.

Things like this are usually always sought by managers of malls or shopping centers. Because they as the manager will certainly be as good as possible to maintain the comfort of visitors to their mall or shopping center. Because of the comfort of visitors will cause a sense of wanting to return to the place. Of course, if viewed from a business perspective, this will have a positive impact on managers. Because more and more visitors come back again and back again, the mall or shopping center that they manage will be more crowded. So that the attraction will attract entrepreneurs to invest in malls or shopping centers that they manage, such as renting shops or empty space.

In addition there is also a second option, namely the concept of land leasing. That means the manager will receive payments periodically from the "Parking" itself. This payment is in accordance with the land and facilities provided. But the drawback is, the "parking lot" does not fully facilitate the area and is the responsibility of the manager of the mall or shopping center itself.

If in a mall or shopping center has a manager who can become the second party in charge of the area, it is different from the concept of partnership with residents' homes. "Parking lots" also provide an opportunity for residents around the crowd to register their vacant yard land as an alternative parking area that can be used by "Parking" users. Of course, not the village road let alone the highway. The land provided must be outside the area of   public roads or other public facilities.

The concept of partnership with the community is to use land from the community around the crowded place which will later be put on a sharing system and funds can be withdrawn periodically.

3. Research Methods

This study is a study of business planning under the name PARKIRAN by taking a case in the city of Bandung with the technical analysis method of application assisted with IT and Financial Aspects.

4. Discussion

4.1 Aspects of Application Systems

A. Application System Information

The application is built on an Android-based operating system. This application was designed using the help of the Android Studio IDE by using the XML language to create interfaces and Java for the logic process (Adwindea, Ardanadan et al. 2018).
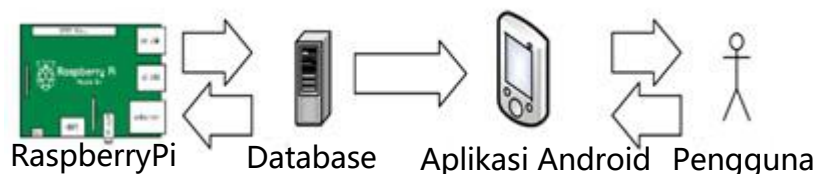

RaspberryPi   Database   Aplikasi Android Pengguna

Figure 1. Figure/Application Design (Adwindea, Ardanadan dkk. 2018)

an be seen from Figure 1, the flow when using this application on a smartphone, that is, when a user accesses this application and uses the features contained in the application. The application will access data from the data base in real-time or at that moment. The results of the data are then displayed on the user interface. The system built is an application that runs on a mobile device environment. There are some limitations that are found on mobile devices even though the operating system used is Android.

To see some functions that exist in the system, use case diagrams are used. This diagram will illustrate the functions that are in the system itself. This diagram focuses more on system features from the perspective of the application user. Please notice Figure 2, the image is a diagram of the Use Case application "Parking":
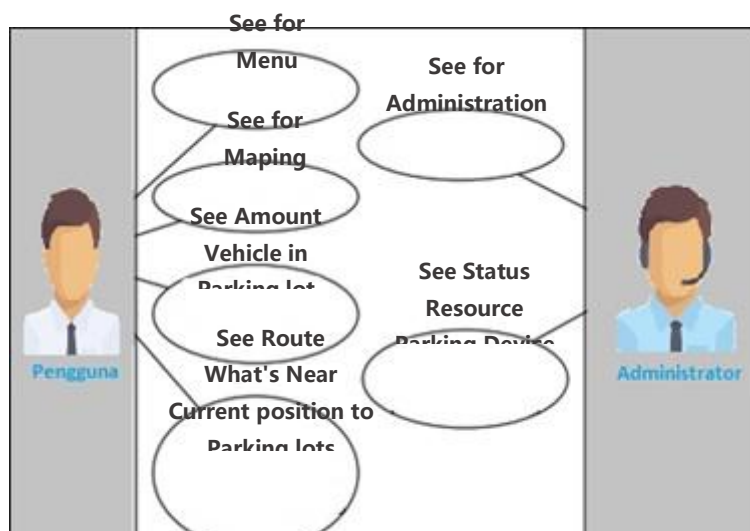
Figure 2. Diagram Expose to Use Case "Parkiran" (Adwindea, Ardanadan dkk. 2018)

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Through the picture above can be briefly known the features that exist in the application so that it can be an illustration of what can be done by users using the application "Parking". But to be more in-depth regarding "Parking" then it will be discussed in the next section, namely Application Design.
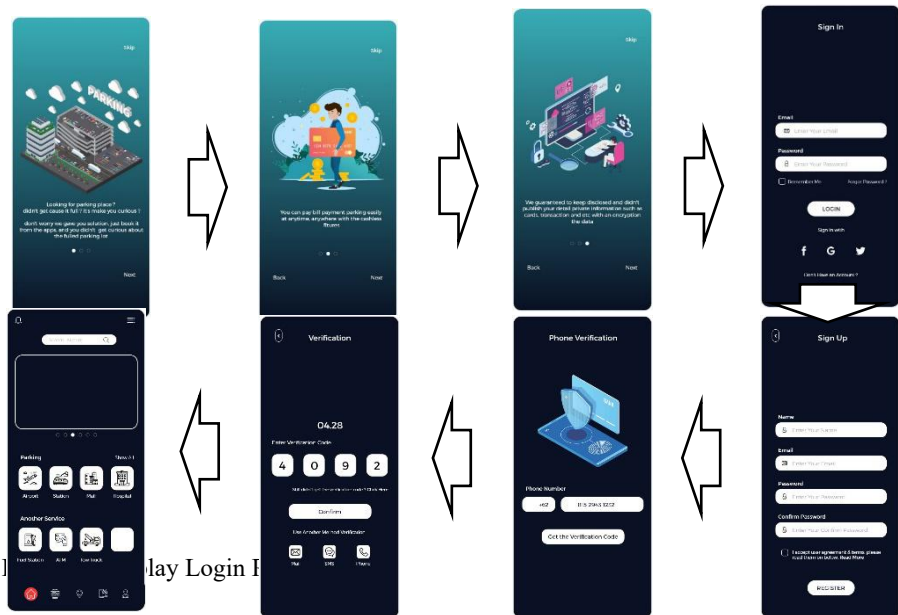
B. Application Design

In maintaining customer comfort, of course the interface design must be really considered. Convenience in using the application is very influential on the rising rating of the application in the community. The more comfortable an application is used, the longer and more often the public will use it. It can even provide feedback in the form of indirect promotion where the public will recommend the application from the mouth of the mouth which would certainly save company expenses for promotional needs.

Figure 3. Logo "Parkiran"

Next is the start page which is the login page of the application itself:

Figure 4. Display Login Page

On this start page there is an option to login. The application is designed so simple that it makes it easy for users to use this application. To use it, after registering the initial display is to enter the User Name and Password. The User Name itself is created when we register the application and is connected to the phone number and email address that we registered as can be seen from the sign up menu above. After all is done, will enter the main page display with several options on the main menu.

gram of t ... selecting ... ation

There is a menu option to start parking and several preferred locations with a function to make parking bookings that will be directly linked to the parking book page. Then it will be directly connected to Location Check to open a map connected to Google Maps to see which locations have been partnered or managed by "Parking". The application automatically reads the existing location if we are already within the reach of the application.

Figure 6. Parking Book Menu up to payment

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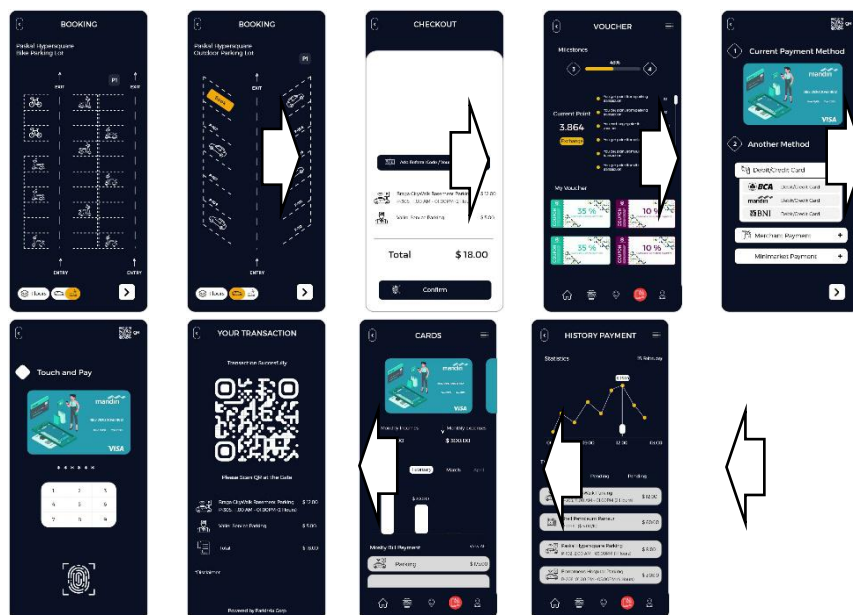
4.2. Financial aspect

The concept of partnering the parking management business is not the first thing in Indonesia, but it is still relatively new because there are still very few players. In Indonesia, the crowd still relies on the services of the manager who still manages conventional parking lots that still depend on payments using physical form of money, although some also turn to electronic money, but still must print and scan barcodes that are meaning that it still requires the printing process on paper and is done manually.

For this reason, this business calculation will look a little simple because with concepts such as conventional parking management, with the following discussion:

a) Calculation of basic investment needs

b) Projection of profit and loss per month

c) Projection of profit and loss partnership with malls and public places

d) Projection of profit and loss partnership with individual communities

1. Calculation of basic investment needs.

As an initial investment from the parking business requires initial investment costs as follows:

Table 1: Base Assets Needs

Assets		
Current Assets		
Cash		100.000.000
Aplikasi dan software		10.000.000
Total Current Assets		110.000.000
Fixed Assets		
Building	10.000.000	
Acc. Dep	(2.000.000)	8.000.000
Office Supplies	20.000.000	
Acc. Dep	(4.000.000)	16.000.000
Domain	1.000.000	
Acc. Dep	(200.000)	800.000
Fixed Assets Total		24.800.000

1. **Proyeksi laba-rugi per bulan**

Tabel 2: Proyeksi Laba-Rugi Per Bulan

Fixed Assets	
Rent Office	Rp. 10.000.000,-
Wages (3 IT Tec, 1 Admin and 1 CS)	Rp. 30.000.000,-
Number	Rp. 40.000.000,-
Other Cost	
Office Ellectric and Field Maintenance	Rp. 7.000.000,-
Internet and telefone	Rp. 5.000.000,-
Design Cost Parking Land	Rp.50.000.000,-
Expenditure Total	Rp.102.000.000,-
Income	
Rp. 79.625.000	Rp. 159.250.000,-
2 Asumsion	
Income Total	Rp. 159.250.000,-
PROJECTION INCOME/LOSS	
Income Total	Rp. 159.250.000,-
Expenditure Total	Rp. 102.000.000,-
NET PROFIT	Rp. 57.250.000,-

2. **Projection of partnership revenue with malls and public places**

Table 3. Calculation of Profit on the Concept of Partnership with Mall or Public Place

Hour Sample	Prediction Op Volume	Prediction Percent Volume	Average Tarif (Auto)	Number
11.00 – 12.00	2lt (@100/lt)	20%	Rp.10.000/Mbl	Rp. 400.000
12.00 – 14.00	2lt (@100/lt)	50%	Rp.10.000/Mbl	Rp. 1.000.000
14.00 – 16.00	2lt (@100/lt)	70%	Rp.10.000/Mbl	Rp. 1.400.000
16.00 – 18.00	2lt (@100/lt)	85%	Rp.10.000/Mbl	Rp. 1.700.000
18.00 – 21.00	2lt (@100/lt)	95%	Rp.10.000/Mbl	Rp. 1.900.000
Total /Day				**Rp. 6.400.000**

If seen from these calculations, it can be calculated that the projection of monthly revenue is 30 days x 6,400,000 = 192,000,000 / mo

4. Projection of partnership income with the community

Table 4. Calculation of Profit on the Concept of Partnership with individual communities

Hour Sample	Prediction Op Volume	Average Tarif (Auto)	Number
11.00 – 21.00	1 unit (7x auto exchange	Rp.10.000/Auto	Rp. 70.000
Total / Day			**Rp. 70.000**

If it is seen from these simple calculations, it can be assumed that the houses of residents whose land can be rented or used as parking lots will get a net profit of Rp. 70,000 per day or Rp. 2,100,000 per month. Surely these results will fluctuate following the state of the crowded parking area around the housing. From this assumption, there is a monthly routine expense of Rp. 200,000 for cleaning costs. While this income does not include calculation of taxable income because it is still less than Rp. 36,000,000 per year (assuming the homeowner does not have another job).

5. Conclusions

The concept of business application from the application "Parking" can certainly be spelled out simply by using the concept of partnership with the manager of the mall or other public places as well as partnering also with residents who want to rent out land in his yard for parking.

In terms of profit, for one parking building with the assumption of managing only 2 floors with an estimated capacity to accommodate 200 cars, it can already get a profit of Rp. 6,400,000 per day or 192,000,000 / mo. As for the residents' homes which are used as parking lots, residents will benefit around Rp. 70,000 / day or Rp. 2,100,000 per month. Based on the results of the above study, the business plan "Parking" with the application of information technology assisted is feasible.

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