

A preliminary intervention to improve brand awareness for smart parking apps

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Article history

Received:
1 December 2021

Received in revised form:
5 December 2021

Accepted:
10 December 2021

Published online:
22 December 2021

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Abstract

The high number of vehicles on the road and demand for secure and efficient parking space brought many introductions to online parking system globally. JomParking, is a smart parking service system, designed to deal with parking problems in Malaysia. The application is developed by a company called JomParkir, advocates green life, hoping that people will no longer use cash or receipts and move towards digitalization. The 'digitalization' of the enterprise sector is in line with the current lifestyle and the growing needs for digital products and services. However, new digital services offered are often faced with challenges. This paper presents a study to improve the brand awareness of smart parking application, and uses JomParkir as an example to illustrate the challenges that the technology company faced in its digital marketing process. Data of the study was collected through interviews and online observation. Based on the findings, recommendations to improve JomParkir's digital marketing initiatives are proposed.

Keywords: digital marketing, brand awareness, smart parking app, artificial intelligence

1. Introduction

In the era of mobile Internet, securing for a parking space is a routine activity. According to ITS America's Market Analysis, it is estimated that nearly 30% of market congestion in the market is caused by drivers cruising in search of parking spaces, and 70% of car owners encounters parking at least once a day difficult [1]. The current asymmetry between parking spaces and vehicles on the market has also caused "difficult parking and expensive parking". "One hard to find" is a real true

portrayal of many car owners during peak hours. The problem is becoming more and more obvious no matter where it is. In order to cope with the increasing number of vehicles, the scale of parking lots is getting bigger and bigger. However, when a parking lot has more than 1,000 parking spaces, more than 30% of car owners may find it difficult to find their car. This phenomenon causes inefficient use of parking spaces and wastes parking time. This has resulted in increasing traffic congestion and uncertainty in the availability and payment of parking spaces, thereby increasing the demand for smart parking service systems. A smart parking service system that will help optimize parking space usage, improve the efficiency of the parking operations and help smoother traffic flow.

Smart parking is a kind of smart parking service system that helps drivers to park safely [2]. The smart parking system optimizes parking spaces through automatic access control systems, parking guidance systems, parking reserving barriers and ticketing systems. This system uses vehicle counting equipment, video cameras, automatic number plate recognition readers and pavement sensors to determine the occupancy of the parking lot, and transmits the data to the control centre in real time. The system is designed to help smooth traffic in congested areas and provide systematic parking services [3]. It can also navigate through smartphone apps to guide users to find available parking spaces. When positioned as a system, smart parking can save time, reduce management costs, and limit illegal parking in the area[4].



Figure 1: Smart parking

Smart parking is adopted by many, so it is becoming one of the most popular smart solutions in various public and private places around the world, including airports, universities, shopping centres and urban garages. These features include the ability to easily connect to the parking lot, analysis and automate the collection of data from the equipment, and make it more effective for the market. In 2020, the global smart parking system market is worth US\$4.4 billion, and it is expected to grow at a compound annual growth rate (CAGR) of 21.5% from 2021 to 2028[5]. The chart below shows the global smart parking market forecast from 2021 to 2028[6].

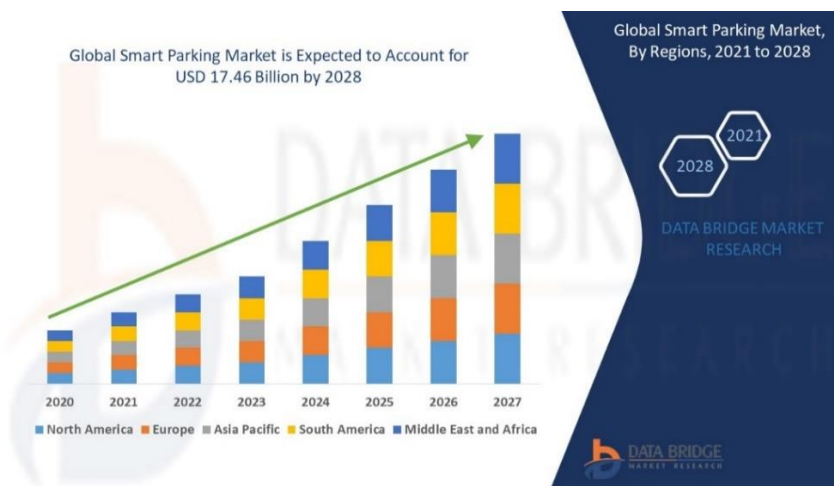


Figure 2: Industry Trends and Forecast from 2021 to 2028

Smart parking applications, as a type of application that effectively solves parking problems, have created many such applications internationally in recent years, such as: Google open spot, Parking in Motion, Streetline, ParkNow, Parking Panda, SpotHero, as well as Malaysia's JomParkir. Companies that offer this application are usually a young company with technology as its foundation. The competition of the smart parking application is fierce as many companies can offer the application in the market. Thus, efficient marketing strategy including digital marketing initiatives are important to capture the interests of customers and remain relevant in the market. This paper will present a case on JomParkir's challenges in improving brand awareness for its smart parking application.

2. Smart parking issues in Malaysia

Most of Malaysia, road traffic and parking have always been a worrying issue. In most cases, the city does not have enough space to accommodate stationary vehicles, and traffic clogging caused by smart parking has led to a narrower urban traffic environment.

In today's era, digital technology has received tremendous attention and development, and is closely integrated with various industries, making the technology continue to improve itself. However, since it is the imperfection of the development of the industry to park the application market and the industry, the Malaysian intelligent parking industry is facing many problems.

1. Smart parking applications are numerous, ordered is that the market pattern has not yet been formed.

Since the smart parking industry has developed late, the industry participants are numerous and the range of participation is not the same, causing the road to parking lot covered by various systems, causing great inconvenience to the user, causing the parking management, market managers. Very large management is difficult. For example: Sunway smart parking, Penang Smart Parking, JomParkir and so on.

2. Intelligent parking "intelligence" is not high[7].
First, the company's comprehensive operational capacity is lower. For

example, government policy support and marketing strategies. Second, intelligent technology is not high.

3. JomParkir Sdn Bhd

JomParkir Sdn Bhd was established in 2017 and is also known as JomParking, which is a street parking payment mobile application. The service purpose of this company is to bring convenience to all drivers to pay for parking, and ultimately realize cashless payment. The development of JomParking company has expanded from Malaysia to various ASEAN countries and has received a lot of financial support from its parent company AppCable. JomParkir has three main products, namely JomParking, JomForce and JomValet[8]. JomParkir's products use Internet technology to transform traditional parking lots into smart, cashless parking systems.

- I. JomParking- A smart parking application solution, and also a quick and convenient way to pay for paying, which can save users paying time.
- II. JomForce- Mobile enforcement solution. An application to ensure parking enforcers goes digital, which can save their time by providing them a device.
- III. JomValet- Valet parking on-the-go which is an application for valet parking operators to manage their parking services.

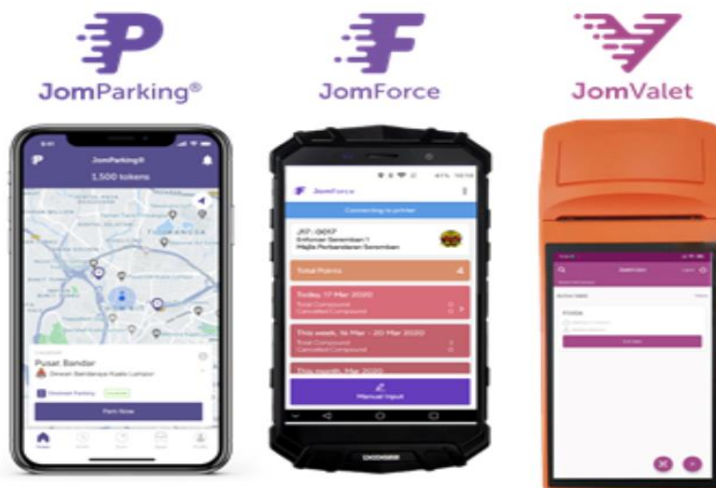


Figure 3: Products of JomParkir

As a smart parking service application, JomParkir is very clear, and its service is very clear and is loved and relied by the market users, and these are due to the main technologies it use, namely: CloudFlare, G Suite, Recaptcha. JomParkir is an important product in the smart parking application market in Malaysia and has a certain advantage in market competitiveness.

1. The operation cost is low.
The system includes parking payment systems, parking law enforcement personnel digital applications and valet parking operators manage parking services, the overall operation of this system, can avoid additional costs of parking.
2. JomParkir provides real-time data.
For governments, parking operators and companies, the system provides a wealth of data sets that can be used to identify trends, peak hours, and other

indicators that can be used for forecasting and reporting.

3. JomParkir brings convenience to the driver.
The smart parking application allows the driver to find a parking space in the shortest time and the nearest distance, which saves the driver a lot of time and improves parking efficiency.
4. JomParkir application reduces traffic flow.
When the driver specifies its destination, it can reduce the traffic flow of the road and unnecessary, and optimize the city's traffic flow.
5. JomParkir has developed new business models.
Smart parking creates the possibility of new business models, and these business models can only be achieved by technology.

When enjoying digital products and services becomes the norm in people's work and life, digitalization will no longer be a trend, but a reality. Just in time for its bandwagon, JomParkir has also entered the digital age. JomParkir uses advanced technology to develop intelligent systems and applications to lead the digitalization of the parking industry in Southeast Asia. JomParkir uses different digital social media to market the company to potential customers on those platforms. Fans of JomParkir have sprung up on social platforms such as Facebook, Twitter and Instagram, giving it a significant impact on its digital marketing.

4. Methodology- using JomParkir as an example

Collecting data to improve the brand awareness of smart parking applications, especially to allow users to accept the application in their lives, to develop a smarter system in the future, the most appropriate method is the interview. Therefore, proper interview technique is very important. Academic research is more inclined to use personal in-depth interviews, while business fields are more inclined to group interviews due to time constraints. Therefore, this study uses targeted group interviews. Such as the widespread use of smart parking applications in the market today, and research has also shown that brand awareness is related to audiences, content, channels and strategies. Therefore, the subject of this interview is the company's operation and marketing promotion, which plays an important role in enhancing the brand awareness of JomParkir.

This study interviewed the marketing and communications manager of JomParkir Kuala Lumpur, Malaysia. The interview lasted 40 minutes and recorded voices for data analysis purposes. This interview is divided into two parts, and the first part is the basic situation of JomParkir. The second part is the operation of JomParkir. Through interviews, we know that the main audience of the JomParkir application is all those who can drive in the 18-55 years old market. The products and services provided to consumers are JomParking, JomForce and JomValet. So far, JomParkir smart parking payment application has more than 400,000 registered users, involving 200,000 parking spaces. Since its inception, the growth rate of JomParkir users has exceeded 200%. Overseas, the application has entered the Saudi Arabia and the Sri Lanka market.

The focus of this interview is about the marketing situation of JomParkir. On the one hand, it is to improve the problems and challenges facing the brand, and on the other hand, there is a solution to improving the marketing effect. JomParkir did not face a major challenge during its operations, which could not create profits, but because of its core business, it is a smart parking. In order to let the public know

more about the JomParkir brand, the company still faces some challenges. For example: How to transform the user who is accustomed to paying parking costs with a coupon with a coupon. How to improve brand awareness of JomParkir.

5. The challenges faced by JomParkir

With the increasing attention to global parking issues, the growth of smart parking technology, the high implementation cost of smart parking systems and the increase in vehicle costs have all driven the demand for the global smart parking market. Since its launch in 2015, JomParkir has already had more than 500,000 user downloads, an ever-increasing number from their achievement of 1,790 users in the first year[9]. Compared to the overall global or Malaysian smart parking market, JomParkir's brand awareness in smart parking applications is not very high.

Zero brand awareness could ruin JomParkir. When no one knows they exist, no one will use or try their services. The goal of JomParkir should be to get more users to use and participate. In the current market, some people may have heard of JomParkir, but they don't know what it does. The direction of JomParkir's efforts is to let consumers know that it is an application of smart parking as soon as they hear the name. Therefore, JomParkir may also encounter technical, marketing and policy challenges in increasing brand awareness as the market develops.

5.1 Technological innovation

The reliability of the JomParkir smart parking system requires support for multiple technologies. The operation of the JomParkir parking system is starting from the parking space available from the detected purpose, and the detected optimized information is sent to the user in real time, and then allows the user to pay the service online. The techniques you need to use during this operational process of parking systems are: Parking Guidance and Information System (PGIS), Transit-based Information System, Smart Payment System, E-Parking and Automated Parking[10]. With the development of 5G technology in the market, technological innovation is essential in order to better help the system's utility and greater time and cost of the company's operations.

- ✓ Parking Guidance and Information System (PGIS): When there is a parking lot with thousands of parking lots, the perfection of parking induction and parking technology is very necessary.
- ✓ Transit-based Information System: Based on cloud computing, it is important to provide data for smart parking, and data transmission technology is important.
- ✓ Smart Payment System: When the user uses the scan payment, the two-dimensional code has a low identification rate, and the scan code technology needs to be improved.
- ✓ E-Parking: Intelligent parking automation services will be unmanned services and require more advanced technical support.
- ✓ Automated Parking: This technology involves computer control mechanisms, and cooperating with computer technology.

Therefore, innovative smart parking technology is a challenge for the development of JomParkir.

5.2 Selection of marketing methods

According to interview, JomParkir is now using the marketing method is on ground marketing and online marketing, which is especially facing problems and challenges, respectively.

✓ On ground marketing

Some users of on ground marketing do not understand technology savvy due to age. In general, these users refuse to download the app, but at the same time want to park on JomParking's site. In this case, JomParking offers these users a service on the website in the parking lot outside, allowing users to park in the traditional way. However, as JomParking is smart enough to provide 10-15 outdoor parking spaces, it cannot meet the larger market demand. In addition, certain regions and users may have a large portion of the population without a smartphone that can't use the app properly. Therefore, providing reasonable on ground marketing to this audience is a challenge.

✓ Online marketing

The challenge with online marketing is to get more users engaged. JomParkir, as a smart parking app brand, works with tech companies to attract more users to download and register applications. With the development of online digital technology, JomParkir also has to cooperate with various online channels to carry out marketing activities to publicize and market its products and services.

✓ In today's digital age, JomParkir must make full use of various channels to promote its products and services, so that people have a deeper understanding of the brand and use of services. In order to maintain JomParkir's brand awareness and market share, the company has been adjusting its marketing strategy to enable JomParkir to maintain innovative and effective promotional activities in the market. Therefore, JomParkir's digital marketing strategy is facing the challenges of a new era.

5.3 Change the habit of consumers

In the past few decades, consumers are accustomed to traditional parking, and it may seem strange to many people to suddenly switch to a fully automated setting. This habit change is two aspects, one is mental changes; the second is the change in payment method.

✓ Mental change

The change from traditional parking mode to smart parking system is gradual, and the level of consciousness must be improved according to these changes. Meanwhile, the convenience factors and benefits of smart parking need to be emphasized, so that consumers can get used to this kind of parking mode.

✓ Change in payment method

JomParkir's core business is a payment service for parking and operates with the goal of increasing brand awareness of the JomParking. Its parking payment service is primarily electronic, so getting consumers accustomed to the change from cash to cashless payments is also a challenge.

5.4 Enforcement of smart parking regulations

The promotion of brand awareness of JomParkir smart parking system requires local policies and regulations and the assistance of multiple organizations. However, because JomParkir's current team is not very large, getting councils involved is

time-consuming. Councils typically take two to three years to think about or adopt a new proposal, so most councils are stuck in their comfort zone with their current parking schemes[11]. In addition, local authorities need cumbersome procedures to ensure that the use of JomParkir does not violate their rules. It takes a long time to change state regulations, so what JomParkir has to do is get all parties to have enough confidence about the application.

6. Solutions and recommendations

6.1 Improve digital marketing channels to boost brand awareness

Digital marketing is the best marketing strategy in the era of information technology when looking for solutions to improve brand awareness. Under the consideration of JomParkir reality, avoiding the growing competitors in the market, and creating important competitive advantages, the most effective solution is to use a combination of marketing methods to improve the digital marketing program.

✓ Affiliate marketing-Influencer

In the world of Internet marketing, JomParkir could consider hiring influencers from different backgrounds around the world for publicity and marketing. Influencers can be housewives who are influential in their communities, Internet celebrities, corporate entrepreneurs, and other professionals from different backgrounds, such as lawyers, engineers, doctors, teachers, etc. Through this joint marketing method, JomParkir can be diverted or sold, which has achieved the effect of promoting brand awareness.

✓ Rich content marketing

JomParkir uses interactive content with infographic feature, you can create a marketing plan that is not only rich, visualized, and then promotes marketing through social media, email, SEO or even PPC activities and conducts some associated information connection. Such marketing methods can be more widely exposed to audiences and can propose credible value recommendations. For example: JomParkir uses video to showcase information with vehicle sales.

In addition, JomParkir may consider developing effective and creative content strategies in order to move towards early and late mainstream development. Fletcher and Nusbaum propose five components of competition, namely competition for tangible rewards, competition for intangible rewards, recognition, status, and the competitive influence of colleagues, to measure competition in the workplace[12]. By launching content creation competitions to other users through various marketing channels, this could further stimulate user engagement.

✓ Targeted social media marketing

The business model of JomParkir especially in marketing roles is to gain a competitive advantage and increase revenue by gaining higher user participation and spreading brand awareness. By implementing targeted social media marketing, this measure may assist JomParkir further on creating user engagement, gain brand recognition, generating brand reputation and form brand loyalty. JomParkir can set some high-end accounts on social media platforms such as Twitter, Facebook, Instagram, YouTube, Snapchat, Pinterest. In addition to finding some professional personnel to manage these social media accounts, placing interesting content, analysing feedback and putting advertising to attract

potential customers, can also release some life experiences related to JomParkir.

✓ Customize display advertisement

JomParkir can design a very refreshing promotional information or ideas for potential users aged 18-55 when conducting advertising publicity. At the same time, JomParkir can also introduce ideas related to smart parking or advanced technology in advertising publicity pages. This advertising design can also give potential users a special impression to improve brand awareness.

6.2 Strengthen the application of artificial intelligence in smart parking service

Smart parking solutions based on artificial intelligence have become an important part of our daily lives. The role of artificial intelligence in the smart parking service system is mainly reflected in the following aspects: large data integration analysis, parking guidance, reverse car search, unmanned service, parking space reservation, mobile payment, etc[13]. They are important and beneficial for both parking managers and parking users.



Figure 3: Artificial intelligence in smart parking solution

- ✓ Automatic vehicle identification: JomParkir is based on artificial intelligence recognition technology to scan and read license plates, and can automatically enter the parking lot.
- ✓ Real-time parking occupancy and availability: The JomParkir smart parking app uses artificial intelligence technologies such as big data and the IoT to calculate the number of cars parked in the parking lot and detect empty parking spaces, and sends the information to the management platform.
- ✓ Predictions and forecasts on the parking occupancy rate: The AI-based smart parking solution also includes an algorithm that automatically generates predictions and predictions about parking conditions and future parking occupancy, and can automatically learn by analyzing past information.
- ✓ Dynamic pricing: Dynamic parking pricing is an artificial intelligence-based system that can calculate changes in parking prices in real time.

Smart parking solutions based on artificial intelligence can use hardware and software to analyse the vacancy situation and provide the best solution for users[14]. These highly efficient smart parking services are more susceptible to consumers, and even change and improve the brand awareness of JomParkir.

7. Conclusion

In summary, JomParkir uses the improvement of digital marketing programs and technologies of various channels to users and law enforcement officers to enhance brand awareness, which may bring more people in the market. Many miracles. The JomParkir brand is also committed to providing smart, connection, and secure customer experience for our vast users.

From the investigation and research found some of the challenges faced in today's markets and in the development of the rise. The JomParkir smart parking app is not well known and it is not fully popular in life. Because smart parking can solve a lot of problems in life, its development is necessary and meaningful. This article also puts forward a certain suggestion for enhancing the brand awareness of smart parking applications. Therefore, this paper has great potential to improve the brand awareness of smart parking applications.

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