IMPLEMENTATION MARKETING BUSINESS PLAN FOR ELECTRIC VEHICLE CHARGING STATION (EV-STATION) IN INDONESIA

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Abstract
The rapid growth in the use of electric vehicles (EVs) requires adequate infrastructure, including electric vehicle charging stations (SPKLU). To promote the adoption of electric vehicles and increase the use of SPKLU, careful marketing planning is needed by taking into account the elements of marketing mix (product, price, place, and promotion) as well as segmentation, targeting, and positioning (STP) practices. This study aims to develop a comprehensive marketing plan for SPKLU by integrating elements of marketing mix and STP approach. This research also seeks to understand how to identify the most relevant target segments, determine SPKLU's position in the market, and design marketing messages that suit those segments. The results of the study present an in-depth understanding of the preferences and needs of the target segment, as well as the factors influencing the decision to use SPKLU. These findings are used to formulate a marketing mix strategy that includes competitive pricing, strategic SPKLU location, promotion through various channels, and development of services that meet customer needs. The results of the study present an in-depth understanding of the preferences and needs of target segments, as well as factors that influence the decision to use SPKLU. These findings are used to formulate a marketing mix strategy that includes competitive pricing, strategic SPKLU locations, promotion through various channels, and service development that meets customer needs.

Keywords: Marketing Mix and Segmenting, Targeting, and Positioning (STP).

INTRODUCTION
Electric Vehicle (EV) development trends from 2011 to 2019 show a significant increase, reflecting the transition towards more sustainable mobility. In 2015, the number of EVs in circulation reached 102 units, and in the following four years, this figure jumped to 520 units in 2019. Meanwhile, estimates of electrical power requirements for EV consumption show rapid growth.
In 2021, the estimated need for electrical power to charge vehicle batteries will reach a peak of 4,743 Giga Watt Hours (GWh). The following year, this figure increased drastically to 11,873 GWh, and projections for 2024 indicate that electrical power requirements could reach 38,491 GWh. This phenomenon creates new challenges in providing adequate infrastructure to support this growth.

One important aspect in supporting vehicle conversion from Internal Combustion Engine (ICE) to Battery Electric Vehicle (BEV) is the availability of charging infrastructure. Data comparing supply & demand for charging stations until June 2022 shows a significant imbalance. With a total demand of 917 units, there are only 164 charging stations operating. This indicates a shortage of 753 units, which is equivalent to 82 percent of the total requirement.

This condition demands the acceleration of the construction of Public Electric Charging Stations (SPLU) and Public Electric Vehicle Charging Stations (SPKLUU). In response to this need, the “eV-Station” concept emerged as an innovative solution. eV-Station not only provides electric vehicle battery charging services, but is also equipped with a comfortable waiting room and facilities for customers.

By incorporating the concept of co-working space and coffee shop tenants, eV-Station provides a more enjoyable experience for EV users. This is especially important considering that most traditional public fuel filling stations (SPBU) currently do not provide waiting rooms or adequate facilities.

With the eV-Station, it is hoped that it can overcome these obstacles and increase comfort and efficiency for electric vehicle owners. In addition, the co-working space facilities at eV-Station can support the mobility and productivity of customers who use it, allowing them to stay connected and work without sacrificing their valuable time.

The aim of this research is to analyze and evaluate the impact of Electric Vehicle (EV) development trends from 2011 to 2019 on the need for electric power and charging infrastructure in Indonesia, as well as to design an innovative solution in the form of the "eV-Station" concept to meet these challenges.

MATERIALS AND METHODS
1. Marketing Strategy
   Marketing strategy is a marketing logic where companies hope to create value for customers and can achieve profitable relationships with customers (Silvia et al., 2020); (Nurhayaty, 2022); (Anindira & Imran, 2021); (Untari et al., 2018). While according to Kurtz (2008: 42) marketing strategy is the entire company's program in determining the target market and satisfying consumers by building a combination of elements of the marketing mix, product, distribution, and price (Yusup & Ramdani, 2022); (Nurhadi, 2019); (Manggu & Beni, 2021).
2. **SWOT**
   
analysis to obtain useful or effective strategies that are applied according to the market and public conditions at that time, opportunities and threats are used to determine the external or external environment then strengths and weaknesses obtained through analysis within the company or internally (Galavan & Horgan, 2014).

3. **Canvas Model**
   
The Lean Business Canvas Model is a one-page business plan method created by Ash Maurya, adapted from the Business Model Canvas by Alexander Osterwalder. Maurya & Mishra, (Maurya & Mishra, 2012) states that the Lean Canvas helps deconstruct a business model into nine different sub-sections which are then systematically tested in order of highest to lowest risk and are a business model validation tool.

   **Segmenting, Targeting, Positioning**

   a. **Segmenting**
      
      segmentation is the process of dividing the overall market of a product or service into several segments that have similarities in terms of interests, purchasing power, geography, purchasing behavior and lifestyle (Rahmawati & Aulawi, 2020); (Nopianto & Paningrum, 2014). Segmentation is the process of dividing the overall market of a product or service into several segments that have similarities in terms of interests, purchasing power, geography, purchasing behavior and lifestyle (Ubaidillah, 2019).

   b. **Targeting**
      
      Targeting is evaluating various segments to decide which segment is the target market. A series of marketing programs carried out must be in accordance with the characteristics of the target market to be addressed.

   c. **Positioning**
      
      Positioning is how a product is in the eyes of consumers that distinguishes it from competitors' products. With efforts to identify, develop, and communicate distinctive advantages and competitive advantages

   d. **Marketing Mix (B2c)**
      
      B2C is the process of selling products and services directly from businesses to consumers who are end users. There is no intermediary between the company and the customer. The company distributes its products or services directly to customers.

   e. **Sales**
      
      Philip Kotler describes sales as the process of persuading customers to buy a company's product or service. In the strictest sense, sales can be considered part of a promotion

   f. **Revenue Stream Projection**
      
      Revenue stream is a term used to describe revenue streams, having a very broad meaning. Especially for funds used related to business by a company, these funds are
used to develop the company's business. Revenue streams come from various sources which are then channeled to the business

RESULTS AND DISCUSSION
Based on the description of marketing planning in the material and methods above, the following are the results of marketing planning discussions

a. Marketing Strategy
Marketing Strategy is a fundamental tool in achieving the goals of a company in developing advantages in competing to win market segmentation. Changes in digital needs due to COVID-19 provide space in creating new patterns of life in society by utilizing more information and communication technology. eV-Station utilizes digital marketing technology as a marketing strategy for SPKLUU businesses that have attractive facilities. Digital marketing marketing activities include branding that uses various media. eV-Station's digital marketing strategy includes blogs, websites, e-mail, adwords, advertising services and various kinds of social media networks, especially over the top (OTT) media services such as tiktok, netflix, video, youtube and others.

In addition to online strategies, we realize that offline strategies also cannot be abandoned, especially with our participation later in seminars or exhibitions held for MSME players and also direct marketing to electric vehicle communities, special events and special promos for membership that will be expected to attract consumers and eV-Station also offers cooperation for investment with attractive profits / returns for investors eV-Station

b. SWOT
SWOT Matrix is an important matching tool that can help managers to develop 4 types of strategies; SO strategies (Strengths - Opportunities), WO strategies (Weaknesses - Opportunities), ST strategies (Strengths - Threats) and WT strategies (Weaknesses - Threats) (Mahfud, 2019). Figure 4.3 below shows the development of the eV-Station strategy.
Implementation Marketing Business Plan for Electric Vehicle Charging Station (EV-Station) in Indonesia

**Images of 1.SO-WO Strategy eV-Station**

**Figure 2. ST-WT Strategy eV-Station**
c. Lean Canvas

Lean Canvas

Figure 3. Lean Canvas Model eV-Station

d. Problem

The problem identified by eV-Station is that currently there are limited places for fast electric vehicle battery charging, have a complete choice of connectors and have waiting rooms, public facilities such as toilets, comfortable prayer rooms, and co-working spaces for business activities.

e. Customer Segments

The eV-Station customer segment is electric vehicle owners, electric car communities, freelancers or start-ups who need a co-working space for work and coffee lovers.

f. Unique Value Proposition

eV-Station is equipped with a comfortable waiting room, Co Working Space with beautiful aquascape interior, Robotic Car Wash, electric Massage Chair, Coffee Shop Tenant, Nitrogen filling and ATM gallery.

g. Solution

Providing a car electric vehicle charging station (SPKLU) with fast charging / ultrafast charging battery facilities and providing a complete type type connector.
Providing charging stations with waiting rooms that have complete and comfortable facilities, by renting space to well-known coffee tenants. Providing a comfortable Co Working Space and providing robotic car wash facilities

h. **Channels**
   - Online: Website, Social Media, Advertising Services.
   - Offline: Community Partnerships, Regular Events, Members.

i. **Revenue Streams**
   eV-Station revenue streams come from battery charging services, coffee shop tenant rentals, co-working space rentals, private coworking space rentals, event tickets and outdoor and indoor event space tenants, ATM machines and Robotic Car Wash

**STP**

1. **Market Segmentation**
   a. **Geographic**
      eV-Station focuses on marketing where as a starting foothold it will start in the city of Bekasi. In line with the long-term goals and objectives that have been set, Ev-Station will also expand marketing to gain a larger market reach in West Java
   b. **Psychographics**
      eV-Station focuses its marketing on the upper middle economic status segment, *Gen X, Y & Z* with an age range of 20 – 55 years
   c. **Targeting**
      After carrying out a market segmentation strategy, ev-Station will then choose and set marketing targets which are in accordance with the customer segment on the *Lean Canvas Model* eV-Station is electric vehicle owners, freelancers or start-ups who need co-working space to work and coffee lovers. In accordance with the target and target market, Ev-Station is not only in the Bekasi area, but will expand in the West Java area as an area that has the potential to meet consumer needs in electric vehicle charging services
   d. **Positioning**
      In positioning, eV-Station places service positions according to sources of excellence that competitors do not have (*sustainable unfair advantage*). Therefore, referring to the strategy taken from the *Lean canvas model*, eV-Station is positioned as a service that has location advantages, service integration and safety experts supported by complete facilities. In this marketing strategy, of course, it cannot be separated from the determination of the *Quantitative Strategic Planning Matrix* (QSPM) contained in chapter 4 as the main strategy determination
Marketing Mix (B2C)

Marketing mix carried out by eV-Station as a business that makes the target market business to consumer (B2C). As a service industry company Ev-station will carry out marketing strategies through the concept of business to customer (B2C) to use the 7P concept including Product, Price, Place, Promotion, People, Process, Physical Evidence

1. Product

Some of the products and services we provide include fast charging technology, the waiting room design provided by eV-Station is made to meet customer comfort. One of them is the provision of a beautiful aquascape gallery, the provision of fast and stable internet and the availability of branded coffee tenants, Robotic Car Wash facilities, ATM gallery facilities & convenience at the time of payment supported by digital payment. In addition, eV-Station also provides co-working space facilities. This facility is intended for customers who do not want to lose even a second of time to carry out business activities. Waiting for the battery to be fully charged while still feeling happy and comfortable and being able to carry out all activities

2. Price

Price is one of the factors in the success of the Ev-Station business. Electrical energy for charging stations is supplied by PT PLN as a single supplier with prices following the tariffs set by the government (around 2,475 / KWH)

Table 1. eV-Station Pricing
Implementation Marketing Business Plan for Electric Vehicle Charging Station (EV-Station) in Indonesia

3. Place

In determining the business location, eV-Station will choose a strategic location, especially in the area around Bekasi, West Java. The choice of location is in line with the selection of VRIO where Ev-Station will collaborate with well-known developers such as Sumarrecon Bekasi. Here are some other considerations of eV-Station for site selection:

1. The location is very easily visible will make the place of business quickly known by the public.
2. In choosing a business location, it is very important to consider the access path traversed. By choosing a location that many people pass by and easily will open up opportunities for more SPKLUU visitors who come.
3. Opening a charging station close to consumers will make it easier for visitors to the location. In addition to saving time and energy, usually a location close to consumers will be the first choice.

   eV-Station contracts exclusively with well-known regional developers so that in the area only eV-Station as an electric vehicle battery charging facility.

4. Promotion

Digital marketing marketing activities include branding that uses various media. eV-Station's digital marketing strategy includes the implementation of Search Engine Marketing (SEM) consisting of SEO &; PPC, corporate websites, e-mail marketing, adwords, advertising services and various kinds of social media networks, especially media services such as Instagram, facebook, tiktok, youtube, linkedin and others.

5. Browse

   eV-Station also forms human resources within the company. In addition, the technical Ev-Station is also equipped with a Certificate of Competency for Electrical Engineering Personnel. For more details about our human resources.

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### No | Items | Price | Remarks
---|---|---|---
1 | Ev Charging Std (6-12 jam) | 2,475 | Qty Dispencer 4
| Medium (3-4 jam) | 2,475 | Asumsi isi 50 Kwh (Full 60 Kwh)
| Fast (1/2 jam) | 2,970 | |
2 | Sewa Coworking space reguler | 15,000 | Sewa / Jam
| Sewa Private Coworking space | 25,000 | Sewa / Jam
3 | cuci robot | 50,000 | Harga 1 unit per kedatangan

Source: writing team (2023)
6. Process

The process here includes how the eV-Station SPKLUU serves the requests of each consumer, starting from the consumer ordering (order). Here is the process of the Ev-Station transaction flow:

![Figure 5. Process](image)

7. Physical Evidence

The building must be able to create a pleasant atmosphere, so as to provide experience to visitors and can provide added value:

![Figure 6. eV-Station Layout](image)

Sales

To realize all planned marketing activities, here are the details for the sales budget of SPKLUU eV-Station:
Revenue Stream

The 1st to 5th year ev-station revenue stream scenarios and assumptions are assumed with the following table scenarios:

### Table 2. Sales Budget

<table>
<thead>
<tr>
<th>Items</th>
<th>Tahun-1</th>
<th>Tahun-2</th>
<th>Tahun-3</th>
<th>Tahun-4</th>
<th>Tahun-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Website</td>
<td>3,500,000</td>
<td>500,000</td>
<td>500,000</td>
<td>500,000</td>
<td>500,000</td>
</tr>
<tr>
<td>Paket Business Dev</td>
<td>2,000,000</td>
<td>500,000</td>
<td>500,000</td>
<td>500,000</td>
<td>500,000</td>
</tr>
<tr>
<td>UI/UX Themes Design</td>
<td>1,500,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Digital Advertising</td>
<td>58,700,000</td>
<td>525,000</td>
<td>530,250</td>
<td>535,553</td>
<td>540,908</td>
</tr>
<tr>
<td>Paket SEM (Search Engine Marketing) &amp; Digital ads</td>
<td>54,000,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Email Marketing</td>
<td>4,200,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Social Media</td>
<td>500,000</td>
<td>525,000</td>
<td>530,250</td>
<td>535,553</td>
<td>540,908</td>
</tr>
<tr>
<td>Event &amp; Gathering</td>
<td>3,000,000</td>
<td>48,300,000</td>
<td>53,130,000</td>
<td>58,443,000</td>
<td>64,287,300</td>
</tr>
<tr>
<td>Event</td>
<td>-</td>
<td>30,000,000</td>
<td>33,000,000</td>
<td>36,300,000</td>
<td>39,930,000</td>
</tr>
<tr>
<td>Hadiah &amp; Souvenir</td>
<td>-</td>
<td>15,000,000</td>
<td>16,500,000</td>
<td>18,150,000</td>
<td>19,965,000</td>
</tr>
<tr>
<td>Flyer, Brosur &amp; Banner</td>
<td>3,000,000</td>
<td>3,300,000</td>
<td>3,630,000</td>
<td>3,993,000</td>
<td>4,392,300</td>
</tr>
<tr>
<td>Research &amp; direct sales</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>30,000,000</td>
</tr>
<tr>
<td>Grand Total</td>
<td>65,200,000</td>
<td>49,325,000</td>
<td>54,160,250</td>
<td>59,478,553</td>
<td>65,328,208</td>
</tr>
</tbody>
</table>

Source: Author (2023)

### Table 3. Projected Number of Customers

<table>
<thead>
<tr>
<th>Keterangan</th>
<th>Tahun-1</th>
<th>Tahun-2</th>
<th>Tahun-3</th>
<th>Tahun-4</th>
<th>Tahun-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>eV Charging</td>
<td>31,680</td>
<td>34,848</td>
<td>37,858</td>
<td>38,993</td>
<td>42,344</td>
</tr>
<tr>
<td>Std (6-12 jam)</td>
<td>2,880</td>
<td>3,168</td>
<td>3,326</td>
<td>3,426</td>
<td>3,563</td>
</tr>
<tr>
<td>Medium (3-4 jam)</td>
<td>5,760</td>
<td>6,336</td>
<td>6,653</td>
<td>6,852</td>
<td>7,195</td>
</tr>
<tr>
<td>Fast (1/2 jam)</td>
<td>23,040</td>
<td>25,344</td>
<td>27,878</td>
<td>28,715</td>
<td>31,586</td>
</tr>
<tr>
<td>Reguler co-working space</td>
<td>9,720</td>
<td>10,692</td>
<td>13,329</td>
<td>17,250</td>
<td>18,975</td>
</tr>
<tr>
<td>Private co-working space</td>
<td>3,240</td>
<td>3,564</td>
<td>4,443</td>
<td>5,750</td>
<td>6,325</td>
</tr>
<tr>
<td>Robotic Car Wash</td>
<td>18,000</td>
<td>19,800</td>
<td>20,790</td>
<td>22,869</td>
<td>34,304</td>
</tr>
</tbody>
</table>

Source: Author (2023)
Table 4. Revenue Stream Projection

<table>
<thead>
<tr>
<th>Revenue Generator</th>
<th>Year 1 (Harga Total Rev)</th>
<th>Year 2 (Harga Total Rev)</th>
<th>Year 3 (Harga Total Rev)</th>
<th>Year 4 (Harga Total Rev)</th>
<th>Year 5 (Harga Total Rev)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ev Charging Std (6-12 jam)</td>
<td>2,475 -</td>
<td>2,475 -</td>
<td>2,475 106,920,000</td>
<td>2,475 213,840,000</td>
<td>2,475 320,760,000</td>
</tr>
<tr>
<td>Medium (3-4 jam)</td>
<td>2,475 106,920,000</td>
<td>2,475 213,840,000</td>
<td>2,475 320,760,000</td>
<td>2,475 427,680,000</td>
<td>2,475 534,600,000</td>
</tr>
<tr>
<td>Fast (1/2 jam)</td>
<td>2,970 2,566,080,000</td>
<td>2,970 3,079,296,000</td>
<td>2,970 3,592,512,000</td>
<td>2,970 4,105,728,000</td>
<td>2,970 4,618,944,000</td>
</tr>
<tr>
<td>Co Working Space Reguler</td>
<td>15,000 1,555,200,000</td>
<td>16,500 1,814,400,000</td>
<td>18,150 2,073,600,000</td>
<td>19,965 2,332,800,000</td>
<td>21,962 2,592,000,000</td>
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<tr>
<td>Private</td>
<td>25,000 162,000,000</td>
<td>27,500 189,000,000</td>
<td>30,250 216,000,000</td>
<td>33,275 243,000,000</td>
<td>36,603 270,000,000</td>
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<tr>
<td>Auto Car Wash</td>
<td>50,000 648,000,000</td>
<td>50,000 756,000,000</td>
<td>55,000 864,000,000</td>
<td>55,000 972,000,000</td>
<td>60,000 1,080,000,000</td>
</tr>
<tr>
<td>Sewa Event Space Outdoor</td>
<td>2,000,000 68,000,000</td>
<td>2,100,000 72,000,000</td>
<td>2,205,000 96,000,000</td>
<td>2,315,250 120,000,000</td>
<td>2,431,013 144,000,000</td>
</tr>
<tr>
<td>Tenant Coffee</td>
<td>60,000,000 60,000,000</td>
<td>63,000,000 63,000,000</td>
<td>66,150,000 66,150,000</td>
<td>69,457,500 69,457,500</td>
<td>72,930,375 72,930,375</td>
</tr>
<tr>
<td>Sewa tenant Gallery ATM</td>
<td>80,000,000 80,000,000</td>
<td>21,000,000 84,000,000</td>
<td>22,050,000 88,200,000</td>
<td>23,300,000 92,600,000</td>
<td>24,310,125 97,240,500</td>
</tr>
<tr>
<td>Total Revenue</td>
<td>5,226,200,000</td>
<td>6,271,536,000</td>
<td>7,424,142,000</td>
<td>8,577,115,500</td>
<td>9,730,474,875</td>
</tr>
</tbody>
</table>

Source: Writing Team (2023)

1. In 1 day the number of arrivals to charge electricity is targeted at 42 units of cars (with the availability of 4 dispensers and assumed to charge 30 KWH, where the full load ± 40 – 45 KWH.
2. Electrical energy for charging stations is supplied by PT PLN as a single supplier with prices following the tariffs set by the government (around 2,475 / KWH).
3. Coworking Space Rental Price is Rp. 15,000 / hour (regular) and Rp 25,000 (private). Where the total availability is 48 seats.
4. For the price of washing robots of IDR 50,000 / car. Where for the work until the end of the drying work ±10 minutes.
5. Indoor and outdoor event rentals are used for MSMEs and also the eV Cars community.
6. eV-Station also provides an ATM gallery at a cost of Rp 20 million (incl. VAT) with 4 bank availability slots, electricity availability and security.

CONCLUSION

This research has comprehensively discussed business planning for Electric Vehicle Charging Stations (SPKLU) with a focus on key aspects that include market analysis, marketing strategy, revenue model, and operational sustainability. Based on the findings from this study, it shows that the growth of electric vehicles continues to increase, creating great opportunities for the development of charging stations.

The segmentation strategy must be purposeful. Target customers should be clear. Thus, the company's human resources can work efficiently and effectively, it must also be able to take the right positioning to attract customers and minimize competition. In-depth market analysis is a key step in SPKLU business planning. The use of smart, value-focused
marketing strategies is key in increasing SPKLU awareness and adoption. Effective communication about the benefits of SPKLU, proper promotion, and strategic partnerships can help achieve marketing goals.

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