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Heavy Equipment Marketing Strategy Analysis With Product Life Cycle (PLC) Approach

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Abstract: Heavy Equipment business in Indonesia is quite potential considering the Indonesian government is implementing various development programs in various regions of Indonesia such as the construction of the Woosh Jakarta-Bandung fast train line, the Jakarta-Cikampek elevated toll road, the construction of infrastructure in various other regions of Indonesia, and buildings for public facilities. To maintain a sustainable competitive advantage in a situation like this, there is an approach that must be used. If the company has the technological capability and the ability to adapt to resources, the company can achieve this goal. The purpose of this study is to determine how important the concept of Product Life Cycle (PLC) is in marketing strategy. The method used in this paper is a literature study, namely by reviewing reading sources related to the concept of marketing strategy through the Product Life Cycle approach. Based on the results of several literature studies, it states that a company will generally have better capabilities than its competitors' performance if it is able to apply the Product Life Cycle concept. It can be concluded that the Heavy Equipment marketing strategy through the Product Life Cycle approach that needs to be improved is Product, Price, Place and Promotion can be utilized in the context of the product life cycle concept. At the maturity stage, the recommended marketing strategy is to differentiate services to differentiate yourself from competitors. Develop new markets to expand reach. Conduct more aggressive market penetration to maintain market share. Increase effective marketing promotions and communications.

Keyword: Marketing Strategy, Marketing, Product Life Cycle, Heavy Equipment

INTRODUCTION

Marketing is defined as the process by which individuals and groups obtain what they need and want through creating, offering, and exchanging products and values. This definition includes several important elements in marketing, namely marketing aims to meet the needs and wants of individuals and groups. Marketers try to understand what potential buyers need and want. Marketing involves creating products or services that fit market needs, offering those products or services, and the exchange between buyers and sellers. Products and values created through marketing must be able to provide satisfaction to customers. Value can be in the form of functional, emotional, or symbolic benefits from products or services. So, marketing is a

comprehensive process that involves identifying, creating, and delivering value to customers to meet their needs and wants. Marketing aims to get, retain, and grow profitable customers for the company (Edhie Rachmad et al. (n.d.)

Product Life Cycle is a concept that describes the stages that a product or service goes through while in the market. There are 4 main stages in the product life cycle, namely the Introduction Stage, the Growth Stage, the Maturity Stage, and the Decline Stage. PLC analysis helps companies understand the current stage of the product and determine the right business development strategy for each stage (Laurensia Damanik & Samsudin, 2023).

PLC Strategy and Its Implications, understanding PLC and appropriate marketing strategies is important for companies in managing their product portfolios. At the introduction stage, strategies that can be applied include competitive pricing, large investments in promotions, and building a strong distribution network. At the growth stage, strategies can be focused on improving product quality, expanding distribution, and more intensive marketing communications. At the maturity stage, strategies can be directed at product diversification, deeper market penetration, and efforts to maintain the market share that has been achieved. New-Product Development and Product Life-Cycle Strategies (n.d.)

PLC positioning is important so that companies can comprehensively identify market conditions, both internal and external, so that they can formulate the right strategy. Each PLC stage has different challenges, and the profits obtained from sales will rise and fall at various stages throughout the product life cycle. Therefore, the marketing strategy implemented must also be adjusted to the PLC stage that the product is currently experiencing. The marketing mix strategy (4P) namely *Product, Price, Place* and *Promotion* can be utilized in the context of the product life cycle concept. Product is the most important part of the marketing mix strategy. Price, promotion, and distribution also have an important influence on consumer purchasing decisions (Pritantiwi et al., 2023).

Marketing management and strategy are important elements in business activities. A good understanding of marketing management and strategy is essential for business people. There are various concepts in marketing management, such as production concept, product concept, sales concept, marketing concept, and social marketing concept. Marketing strategy approaches include environmental analysis, competitor analysis, market analysis, market segmentation, targeting, and positioning. In addition, the marketing mix strategy consisting of product, price, place, and promotion is also an important component in marketing strategy. The right marketing strategy can help companies achieve their business goals, such as increasing sales, expanding market share, and maintaining customer loyalty. A thorough understanding of marketing management and strategy will enable companies to adapt to market changes and win the competition. E-Chapter_Manajemen Dan Strategi Pemasaran Dalam Bisnis 2020 (n.d.)

PLC is the time period during which a product is developed, introduced to the market, and eventually withdrawn from the market. PLC consists of five stages: Development stage This stage occurs when a company discovers and develops a new product idea. At this stage, sales are zero and revenues are negative. Introduce stage This stage occurs when the product is first introduced to the target market. Heavy spending on promotion and advertising is common. Sales are low, production costs tend to be high, and profits are negative or very low. Growth stage This stage occurs when demand for the new product begins to increase rapidly. This is a good time to increase market share because innovators move from trial to repeat purchases if they are satisfied with the product. Sales and revenues increase, and profits also increase. Maturity stage This stage occurs when demand has reached its peak, whether planned or unplanned. Competition is most intense at this stage. Sales peak, and market share may be high. Decline stage This stage occurs when sales continue to decline sharply (Kamthe & Singh Verma (n.d.)).

The right marketing management strategy should be applied at each stage of the product life cycle. In the development stage, focus on research and development to create innovative

products. In the introduction stage, focus on building brand awareness and reaching potential customers. In the growth stage, focus on increasing market share and retaining loyal customers. In the maturity stage, focus on product differentiation, innovation, and better market segmentation. In the decline stage, focus on maximizing short-term profits and withdrawing products from the market in a regular manner. A good understanding of the product life cycle and appropriate marketing management strategies can help organizations manage products effectively. Companies must be able to anticipate changes in the market and competition, and adjust their marketing strategies according to the stage of the product life cycle they are in (Kamthe & Singh Verma (n.d.)).

Product Life Cycle (PLC) Concept, PLC is a model that explains that every product or service will go through stages in its life cycle, namely introduction, growth, maturity, and decline. Understanding the PLC concept can help companies determine the right marketing strategy according to the current stage of the product/service life cycle. At the maturity stage, the recommended marketing strategy is to differentiate services to differentiate themselves from competitors. Develop new markets to expand reach. Conduct more aggressive market penetration to maintain market share. Increase effective promotion and marketing communication (Purwanti et al., 2024).

Heavy Equipment business in Indonesia is quite potential considering that the Indonesian government is implementing various development programs in various regions of Indonesia such as the construction of the Woosh Jakarta-Bandung fast train line, the Jakarta-Cikampek elevated toll road, the construction of infrastructure in various other regions of Indonesia, and buildings for public facilities, then supported by the increase in the domestic mining sector, forestry sector, agriculture and plantation sector and the increasingly rapid industrial sector where mining is one of the sectors that dominates the demand for heavy equipment products.

In facing such a situation, a strategy is needed in an effort to maintain competitive advantage sustainably. One effort that can be done is through technological capabilities and dynamic capabilities in managing the resources owned. This literature study aims to determine the extent to which the PLC Concept plays an important role in marketing strategies in developing and providing solutions to the company's efforts to maintain its competitive advantage sustainably.

METHOD

The research is supported by a literature study methodology used to analyze the Heavy Equipment marketing strategy with the Product Life Cycle approach. Literature study is a research method that focuses on the analysis and collection of information from appropriate reference sources, such as scientific journals, and trusted E-sources. In the data collection process, researchers will conduct a systematic review of the literature that discusses marketing strategies and the Product Life Cycle.

In the literature review process, it is done to see the conceptual model of various studies on marketing strategies that focus on the Product Life Cycle approach. The process of reviewing and reviewing previous research is done by looking at various national public journal e-resources and international journal e-resources available on various websites that provide various journals related to Product Life Cycle material.

RESULTS AND DISCUSSION

Understanding Product Life Cycle

According to Book SourcesE-Chapter_Manajemen Dan Strategi Pemasaran Dalam Bisnis 2020 (n.d.). The concept of *Product Life Cycle* is the development of sales results and Profit of a product that is associated with the development of time consisting of 4 stages, namely the introduction stage, growth, maturity, and decline. The concept of *Product Life Cycle* influences decision making and is a powerful tool in implementing strategy. The

conclusion from the opinion above, that the *Product Life Cycle approach* is one of the important tools for making decisions in formulating marketing strategies.

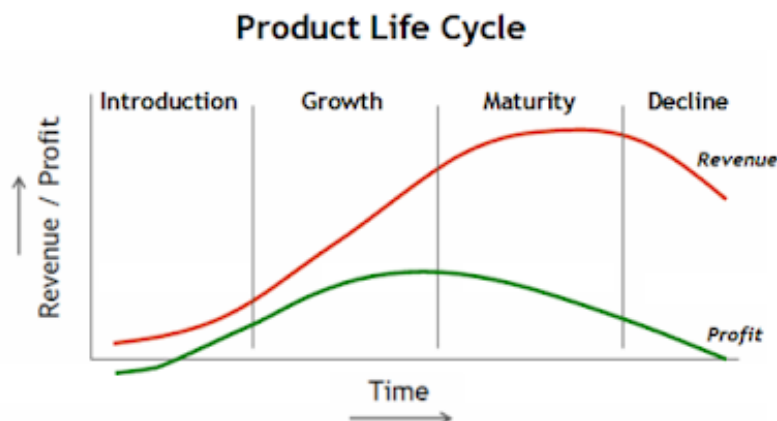


Source: <https://connectedtechnologysolutions.co.uk/navigating-strategies-in-product-lifecycle-management/>

Figure 1. Product Life Cycle

The benefits of *the Product Life Cycle* are to Predicting the problems faced in marketing a product at each stage so that the company can create a marketing strategy, they must know where the product is currently located or in which direction the product is moving. To find out how far the company can implement the Plan that has been implemented, as a tool for the decision-making process related to the development of marketing strategies.

The stages in *the Product Life Cycle* are 4 stages that must be considered, namely the introduction stage, growth stage, maturity stage, and decline stage. The introduction stage *at* this stage sales growth is slow because the product has just been introduced to the public. Production costs are high, so it does not generate profits. The growth stage *at* this stage the market can accept new products quickly so that sales soar and generate large profits. The maturity stage *The* maturity stage is a period where sales growth tends to be slow and can even start to decline. Because the product has been accepted by the market. Profit will usually be stable or even tend to decline due to competitors. The decline stage *In* this period sales decline sharply and are followed by shrinking profits.



Source: <https://www.kajianpustaka.com/2020/03/product-life-cycle-pengertian-tahapan-karakteristik-dan-strategi.html>

Figure 2. Product Life Cycle Stage Curve

Characteristics Product Life Cycle, at the stages in the Product Life Cycle has characteristics, namely the introduction stage low sales, high cost per customer, negative profits, innovator customers, and few competitors. The growth stage sales increase rapidly, average cost per customer, profits increase, early adopter customers, and the number of

competitors increases. The maturity stage *is* at the peak of sales, low cost per customer, high profits, the majority of customers are in the middle, and the number of competitors is stable and begins to decline. While at the decline *stage* there is a decline *in* sales, low cost per customer, decreasing profits, late adopter customers, and the number of competitors decreases. At each stage, there are different problems and opportunities related to marketing strategies and profit potential. Management can make the right marketing plans and strategies by knowing where the product is or will be headed.

The following table describes the features of each stage of the product life cycle.

Table 1. Characteristics Product Life Cycle Source (Kotler, 1997)

Characteristics	Introduction	Growth	Maturity	Decline
Sale	Low	Increasing Rapidly	Peak sales	Decrease
Cost	Tall	Currently	Low	Low
Profit	Negative	Increase	Tall	Decrease
Customer	Innovative	Adoption beginning	Majority in the middle	The person left behind
Competitors	A little	Increase	Stable start decrease	Decrease
Marketing Objectives	Increase product awareness and experimentation	Optimizing market share	Optimizing profits while maintaining market share	Reduce expenses and milk the brand

Product Life Cycle Approach

Strategy Marketing in Introduction Stage

Marketing management must increase or decrease all marketing factors, including price, promotion, product, and distribution, when launching a new product. It can then follow one of the following four strategies: The Quick Screen Strategy, using high prices and heavy promotion to gain as much gross profit as possible. However, heavy promotion aims to convince customers of the high value of the product, even though the price is high. This strategy is successful if (1) Most of the potential market does not know the product exists, (2) potential buyers can afford to pay any price, (3) the company faces potential competitors and wants to build preference for its brand.

Then Strategy Filter Slow, to implement this strategy, high prices are set and low promotions are set. High prices are intended to generate the highest possible gross profit per unit, and low promotions are intended to reduce marketing costs. This strategy can be successful if (1) The market is very limited, (2) Most of the market recognizes the existence of the product, (3) Buyers are willing to buy at a high price, (4) There is no potential competition.

Further explained Strategy Breakthrough Fast, setting low prices and heavy promotion is the way to implement this strategy. It is expected that this approach can achieve the fastest market penetration and capture the largest market share. This strategy can be successful if (1) The market size is very large, (2) the market cannot realize presence products, (3) Buyers are very price conscious, (4) There are indications of extraordinary competition, (5) If the scale of production and production experience increases, the cost of production tends to fall.

Then there is the Slow Penetration Strategy, this strategy sets low prices and promotions are part of this strategy. Low promotions are intended to increase the company's net profit income, and low prices are intended to make the product more quickly accepted by customers. This strategy can be successful if (1) The market is very broad, (2) The market is aware of the presence of the product, (3) The price level is very sensitive to the market and (4) Potential competitors tend to be few.

Strategy Marketing in Growth Stage

Increasing sales indicate continued growth. This group of adopters are pioneers who are satisfied with the new product, and the majority of consumers follow their lead. Many new competitors have entered the market because of the profit opportunities and mass production. The price of the stable profit amount continues to rise high due to the higher volume and the downward-sloping sales curve effect. During this period, there are a number of strategies that can be used to ensure rapid market growth for as long as possible.

As it grows, the company uses various approaches to maintain rapid and sustainable market growth, namely In addition to improving product quality, the company adds new and more attractive products. New models and accompanying products have been added by the company, including products in various sizes and flavors. The company enter segment market new. Companies increase their distribution and launch new methods of distribution. Companies lower prices to attract price-sensitive consumers.

Stage growth differentiated become two, that is Rapid Growths after the product is accepted and demanded by the market, sales levels increase rapidly. To meet market demand, more distribution locations will be needed. At this point, marketing strategies focus on building wide distribution and stronger markets. While prices are low to premium to attract new consumers, product quality is improved and product lines are expanded. Advertising focuses on mass media to increase reach and grow brand preference. As more competitors emerge, marketers will continue to gather information about competitive activities and seek new market segments.

While Slow Growth is Sales increase at this stage, but the growth rate declines. Since most customers have started using the company's products, most of the market has been reached. At this stage, marketing strategies are largely focused on improving and maintaining market position and cultivating consumer and dealer loyalty. Since the market is saturated and uninterested in promotions, price becomes the primary competitive tool for retaining customers. Promotions bring customers to dealers and provide after-sales service. Marketing intelligence begins to concentrate on better products, exploring new markets, and changing and refreshing production themes.

Strategy Marketing In Stage Maturity

At the maturity stage some companies abandon products that they feel are not strong enough. They choose to focus on more profitable products and on new products. Companies must think about a systematic way of market strategy as follows Market modification, companies try to increase the market for their established brands in three ways (1) Converting non-users, (2) Entering new market segments, (3) attracting competitors' customers. Product modification, managers have the ability to try to increase sales by changing product features through quality improvements. Marketing mix modification, Product managers can also try to increase sales by changing various parts of the other marketing package.

Meanwhile, at the maturity stage, 2 marketing strategies can be used, namely Defensive Strategy, the goal is to avoid attacks by substitute products and maintain market share from competitors. This strategy is in the form of modifying the marketing mix to increase sales. This defensive strategy focuses more on reducing production costs and overcoming product weaknesses. Distributors play an important role in this strategy because the company's promotional efforts to encourage distributors are more than consumers. By setting competitive prices. However, defensive strategies have a major weakness, namely that they are very easy to imitate by competitors. Especially by improving services, mass distribution, and lowering prices. Because the company's competitors will respond to every step of the company, the benefits obtained are not significant.

While Offensive Strategy focus on change to achieve a better level. This strategy is in the form of Market Modification, namely attracting non-user demographics, attracting non-

user customers, and capturing competitors' customers. Product modification is changing the characteristics of the product so that it offers new benefits to attract current customers to buy. The goal is to increase purchases and more frequent users. The alternatives used are quality improvement strategies, feature improvement strategies and model improvement strategies.

In addition to Defensive Strategy and Offensive Strategy, there are still approaches that are widely used in the maturity stage, namely Take Off Strategy, this strategy aims for the new consumer acceptance phase. There are four strategies for mature products that can extend the Product Life Cycle, namely promoting current users to use the product more often. Developing more utilization for current users. Market expansion to attract new customers. Determining new ways to use raw materials.

Strategy Marketing in Decline Stage

In the end, the sales results of almost all brands and products will decline. As a result, companies must immediately take action and decisions to handle the products they currently have, the first step that can be taken is to identify product Which weak, in finding products that are not of good quality, things that need to be considered, namely the formation of a product review committee team which includes marketing, production and finance departments. The committee compile team system identification product weaknesses in the market. Part bookkeeping collect product data. The responsible manager is informed of the list of questionable products. Each questionable product is evaluated and recommended by a review committee.

Set strategy marketing, in a study that focuses on the approach applied to the type of industry that is experiencing a decline, there are several alternative strategies that can be used, such as Add investment company. Maintain the company's investment level until the uncertainty about the industry is resolved. Selectively reduce the investment level by abandoning less profitable customers while continuing to add capital to loyal and profitable customers. Explore new markets. Exit the business and sell its assets.

Decision interesting product, there are several decisions that must be taken by the company after deciding to withdraw its product from the market, namely The brand and product formula are sold or transferred to someone else or removed. The product is withdrawn from the market, either immediately or slowly. It must be determined how many spare parts are available and what services will be provided to customers who have already used the product.

Marketing concepts related to marketing strategies can be described, namely the Production Concept, Focus on producing products with superior quality. Trying to meet market demand according to needs. *Product* Concept Offering superior and quality products. Maintaining product quality as the main strategy. Selling Concept *Setting* normal prices according to company policy. Conducting promotions through seminars and Expos. Marketing Concept *Trying* to understand and meet customer needs for heavy equipment. Offering competitive prices by providing discounts. Expanding distribution channels by opening new branch offices. Expanding promotions through electronic media such as social media, TV and print media. Societal Marketing Concept *participates* in providing sponsorship to customers or the community. Considering the effects of marketing activities on society and the environment. In general, the marketing concept that needs to be improved is one that focuses on meeting customer needs competitively and sustainably.

Marketing Management Functions

In building a company to continue to grow, we must understand the importance of the concept of business marketing management. Some important aspects of business marketing management include: Product delivery function (distributing), this marketing management function is very important because it aims to make a product known to the general public, which makes them interested in buying it. If this first function does not exist, how will the

public know about the business product. Trading function In order to gain profit from the process of buying and selling the products they have, producers must make purchases, which is an activity of product transactions, both goods and services, carried out by producers with consumers. If marketing management truly applies these principles, then both will benefit.

Facilitating function The third function includes various elements to improve the smoothness of production. This includes communication, warehousing, and sorting products according to standards. In addition, there is a *research* function. Marketing management must ask customers what they need to be successful in their marketing process. *Processing* function. This processing function is the process of changing something into something that has added value, which in turn will increase its selling value. If the marketing management of the business is right, consumers will be attracted. The company will be destroyed if there is no good marketing management. Likewise, proper marketing management is needed for businesses that want to make big profits, move forward, and beat competitors.

Important Elements In Marketing Management

What companies need to pay attention to is an important element in marketing management, namely Market oriented; oriented to consumer desires. Manufacturers will offer various products and services to make consumers king. Marketing planning, making marketing activities comprehensive. All things related to marketing, starting from strategy, implementation, analysis, supervision, and others, must be arranged comprehensively. Consumer satisfaction, achieving consumer satisfaction levels. Consumer satisfaction is measured by the quality of the product and the company's marketing strategy.

Based on a comprehensive analysis of relevant literature, this study found that a *Product Life Cycle* analysis helps companies understand product stages and determine the right business development strategy for each stage. *Product Life Cycle* is a concept that describes the stages that a product or service goes through while in the market.

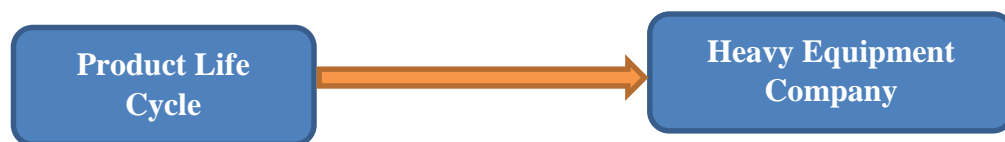


Figure 3. Conceptual Framework

Implications of *Product Life Cycle* for company development

There are 4 main stages in the product life cycle, namely Introduction Stage At this stage, new products are introduced to the market. Sales are still low because the product is not widely known. Marketing and promotion costs are high to build brand awareness. Profits tend to be low or negative. Growth Stage *Sales* increase rapidly because the product is known and in demand by consumers. Competitors begin to emerge. Profits increase along with increased sales. The company makes investments to expand production capacity. Maturity Stage *Sales* and profits peak. Competition is getting tougher, so companies must innovate. Companies focus on production and marketing efficiency. Decline Stage *Sales* and profits begin to decline. The product faces increasingly strong competition from new products. The company must decide to withdraw the product from the market or innovate.

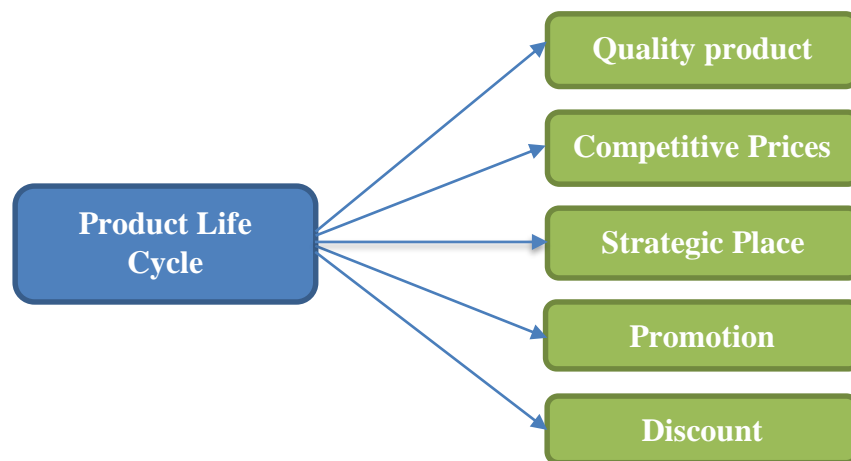


Figure 4. Product Life Cycle Implications

The results of the study indicate that a product is in the growth stage *in* the PLC approach. The growth stage is characterized by rapid market acceptance and substantial profit increases. In addition, the results of the study also show that the strategy implemented is in accordance with its position in the product life cycle, namely seeking innovative strategies to maintain and even increase sales growth that includes market, product, and marketing mix modifications.

PLC positioning is important so that companies can comprehensively identify market conditions, both internal and external, so that they can formulate the right strategy. Each PLC stage has different challenges, and the profits obtained from sales will rise and fall at various stages throughout the product life cycle. Therefore, the marketing strategy implemented must also be adjusted to the PLC stage that the product is currently experiencing.

Marketing strategy (4P) It can be concluded that the *Heavy Equipment marketing strategy* through the *Product Life Cycle approach* that needs to be improved is Product, Price, Place and Promotion can be utilized in the context of the *Product Life Cycle concept*. Product is the most important part of the marketing mix strategy. Price, promotion, and distribution also have an important influence on consumer purchasing decisions.

CONCLUSION

According to research in several literatures, a company will usually perform better than its competitors if it can apply the Product Life Cycle concept. Thus, it can be concluded that heavy goods marketing strategies can be used by applying the Product Life Cycle approach, which includes elements of *the Product Life Cycle*, namely Product, Price, Place, and Promotion. To differentiate itself from competitors, the recommended marketing strategy at the maturity stage *is* to provide unique services. Develop new markets to expand reach and maintain market share. Improve marketing communications and promotions.

Based on the analysis of the referenced journals, here are some recommendations for further research, namely analyzing the application of the *Product Life Cycle* (PLC) concept to special *Heavy Equipment products*; conducting case studies on one or more types of heavy equipment products. identifying the PLC phase currently experienced by the product. evaluating the marketing strategy used by the company at each stage of the PLC and providing the most suitable suggestions for each stage of the PLC.

Furthermore, a comparative analysis of the application of the PLC concept to local versus imported heavy equipment products can be conducted. This analysis will compare the application of the PLC concept to local versus imported heavy equipment products. identify different marketing strategies for each product category. evaluate the variables that influence

these differences, such as market preferences, competition, and regulations. This further research is expected to provide a deeper understanding of the application of the PLC concept in the marketing strategy of heavy equipment products. These results can help companies design marketing strategies that are more in line with the PLC stages experienced by their products.

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