

Proposed Business Strategy to Maximize PT PLN (Persero) UID Lampung Performance in Agriculture: Bed Dryer Product Case

Tri Bagus Prasetyo

Institut Teknologi Bandung, Indonesia

Email: tribaguspras@gmail.com

Keywords:

Business strategy; PT PLN (Persero); UID Lampung; agricultural sector.

ABSTRACT

Lampung Province is one of Indonesia's leading agricultural regions, with significant potential to support national food security through agricultural downstream development and post-harvest modernization. One of the government's key initiatives is the development of bed dryer facilities. However, despite this growing opportunity, PT PLN (Persero) UID Lampung has experienced declining industrial electricity sales and relatively low electricity utilization in the agricultural sector. This study aimed to formulate a business strategy for PT PLN (Persero) UID Lampung using a qualitative approach. The Analysis-Formulation-Implementation (AFI) framework was applied through PESTEL Analysis, Porter's Five Forces, the VRIO Framework, SWOT Analysis, the Ansoff Matrix, Segmentation-Targeting-Positioning (STP), Value Proposition Analysis, and Differentiation-Marketing Mix-Selling (DMS) to identify strategic opportunities and formulate recommendations. The study is expected to provide actionable business strategies that enable PLN UID Lampung to expand productive electricity utilization, strengthen its role within the agricultural ecosystem, and enhance long-term organizational performance while supporting sustainable agricultural development.



This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.

Copyright © 2024 by Author. Published by
Green Publisher Indonesia

INTRODUCTION

Indonesia is one of the world's largest agricultural countries, and agriculture remains a crucial sector because it supports employment absorption and contributes significantly to national GDP (Panggabean, 2025). Between 2014 and 2023, the agricultural sector contributed an average of 13.1% to Indonesia's GDP (Badan Pusat Statistik, 2026). The sector also provided substantial employment opportunities, accounting for 28.2% of total employment in 2023 (BPS, 2024). Recognizing this significant role, the Indonesian government has continued to strengthen food security, expand social programs, and accelerate national industrialization to achieve greater food self-sufficiency (Sekretaris Kabinet, 2026).

Food security is not limited to fulfilling basic needs but also involves sustainability and long-term development. According to Bayunanda (2024), food systems contribute to biodiversity loss and increased greenhouse gas emissions, indicating the need for more sustainable approaches to food-sector management. Indonesia has considerable potential to achieve food security through sustainable agricultural practices supported by collaboration among the government, private sector, and society (Abeberese et al., 2021).

The government recognizes that national stability is highly dependent on food security (Sekretaris Kabinet, 2026). Presidential Regulation (Perpres) No. 18 of 2020 concerning the National Medium-Term Development Plan (RPJMN) 2020–2024 highlights the government's commitment to ensuring sustainable and accessible food supplies throughout the country. One of the key government agendas is the establishment of a food ecosystem, namely an integrated system connecting agricultural production, processing, distribution, and consumption supported by adequate infrastructure.

Electricity infrastructure represents one of the essential supports for agricultural modernization. Reliable electricity access is required for irrigation pumping systems, post-harvest processing facilities, and agro-industrial operations that increase the value chain of agricultural products (Knight, 2025). Conversely, limited electricity capacity may delay, redesign, or cancel investment projects. These conditions demonstrate that improved electricity availability is important for technology adoption, investment expansion, and operational sustainability (Forethought, 2025).

A food ecosystem refers to an integrated system connecting activities throughout the food value chain, beginning with agricultural production (upstream activities), industrial processing, distribution, and consumption. This concept emphasizes the interconnected roles of farmers, industries, technology providers, energy infrastructure, logistics systems, and government institutions in establishing a sustainable and efficient food supply system.

Lampung Province, located on Sumatra Island with Bandar Lampung as its capital city, has strategic geographical importance. The province is bordered by South Sumatra and Bengkulu to the north, the Java Sea to the east, the Sunda Strait to the south, and the Indian Ocean to the west. Lampung also serves as a major gateway connecting Java and Sumatra (Badan Pusat Statistik Lampung, 2020).

Extending from coastal areas to highlands, Lampung Province possesses substantial agricultural potential. Major agricultural commodities produced in the province include coffee, pepper, sugarcane, cocoa, coconut, palm oil, fisheries products, rice, secondary crops, horticulture, and livestock commodities (Badan Pusat Statistik Provinsi Lampung, 2023).

During the 2019–2023 period, the economy of Lampung Province was dominated by the agricultural sector, which contributed 27.20% in 2019 (Badan Pusat Statistik Provinsi Lampung, 2023). Agriculture has also been recognized as a key driver of rural development (Bournaris et al., 2016). From an economic perspective, the agricultural sector demonstrates resilience in sustaining economic activity during periods of monetary crisis (Rosdiana, Inayati, & Murwendah, 2014). Therefore, the government has continued to promote agricultural development to strengthen food resilience and improve community welfare.

Lampung Province has a potential rice-field area of 361,699 hectares. Based on the Area Sampling Frame (KSA) data, the rice harvest area reached 518,256 hectares in 2022 and increased to 536,081 hectares in 2023, representing a growth of 3.47% or 17,825 hectares (Diskominfotik, 2023).

Rice production in Lampung reached 3.25 million tons in 2025, representing a 16.53% increase compared with 2024. This growth marked the highest production achievement recorded in the province and strengthened Lampung's position among Indonesia's major rice-producing regions. The increase reflects the contribution of farmers, government policy support, and continuous optimization of agricultural-sector development (Diskominfotik, 2025).

In the post-production stage, the government has implemented concrete efforts through the distribution of rice dryers to improve agricultural competitiveness and strengthen downstream development. These dryer facilities, with a capacity of 20 tons, were distributed to cooperatives and farmer groups to address post-harvest challenges, particularly high moisture content in rice and corn, which can reduce product quality and market value. The utilization of these dryers enables farmers to extend storage periods, improve commodity quality, and increase bargaining power with intermediaries and industrial buyers. The government aims to expand the availability of dryer units and modern storage facilities to support village-based agro-industrial development (Diskominfotik, 2025).

Considering Lampung's agricultural potential, the government has designated the province as one of the national food estate development areas under its strategic food security program (Supriyanto, Maharani, & Alta, 2025). This policy momentum creates opportunities for increased investment in agricultural infrastructure, including electricity supply, and positions PLN UID Lampung as an important enabler of the province's food production objectives. However, despite these opportunities, PT PLN (Persero) UID Lampung has experienced declining industrial electricity sales and relatively low electricity utilization in the agricultural sector. The gap between agricultural potential and electricity utilization highlights the need for strategic approaches to expand productive electricity use in agriculture. Research examining business strategies for electricity utilities in supporting agricultural modernization, particularly through bed dryer electrification, remains limited. This study addresses this gap by formulating a comprehensive business strategy for PLN UID Lampung.

METHOD

This study combined primary data obtained through in-depth interviews with secondary data from books, journals, and internal company records to examine PLN UID Lampung's opportunities to expand electricity services for agricultural drying, particularly bed dryer applications. Four key stakeholders were interviewed: the Senior Manager of Commerce and Customer Management, the Manager of Electrical System Planning, the Manager of Marketing Strategy, and bed dryer users. Each informant had more than 10 years of relevant experience and represented different perspectives, including sales growth, infrastructure reliability, marketing effectiveness, and the need for affordable and stable electricity supply.

The study applied PESTEL analysis to examine political, economic, social, technological, environmental, and legal factors influencing the expansion of electricity-based

drying services. In addition, Porter's Five Forces analysis was used to evaluate competitive dynamics, including the threat of new entrants, supplier and buyer bargaining power, substitute drying methods, and industry rivalry. These analytical frameworks were used to identify market opportunities, infrastructure requirements, and strategic considerations for PLN in supporting agricultural post-harvest activities through electricity services.

RESULTS AND DISCUSSION

This chapter will be discussing external and internal analysis that impact the company using PESTEL, Porter's Five Forces, and VRIO analysis. After that, generating the strategy with Ansoff-Matrix.

PESTEL Analysis

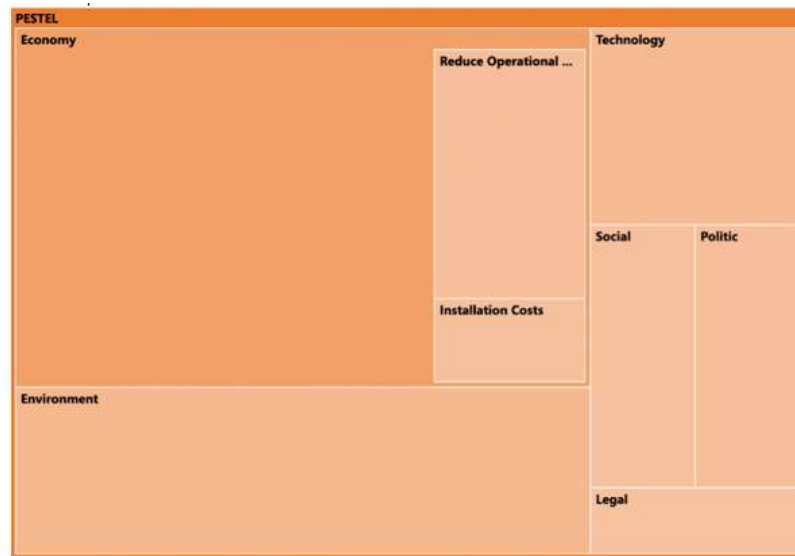


Figure 1 PESTEL Findings

PESTEL Analysis is often used in conjunction with other analytical thinking methods, which complement the analysis of the business environment. It enables us to carry out an analysis from six different perspectives: Politics, Economics, Social, Technological, Legal, and Environmental.

Based on the PESTEL findings, economic factors have the strongest influence on the adoption of electric bed dryers, the weakness of the bed dryer is due to high initial cost of PLN. Most of the respondents are attracted by the potential to reduce drying costs and make operations more efficient, but the initial cost and the expenses influence the buying decision. The findings suggest that the strongest opportunity for PLN is not only to offer a more cost-efficient drying solution, but also to help farmers reduce their dependence on weather and make the post-harvest process more reliable.

Politic Analysis

Political factors have a positive impact to the PLN because of the strong collaboration with local government and agricultural stakeholders. Government support for PLN and the Provincial Government have already translated into a concrete program and collaboration supports PLN's Electrifying Agriculture agenda. However, continued coordination with

government is important to ensure that future Bed Dryer programs are aligned with electricity infrastructure and can be sustained beyond the initial assistance. So, government collaboration and policy support provide PLN with a clear opportunity to expand productive electricity use in the agricultural sector.

Economic Analysis

Economic factors have a strong influence on the adoption of PLN's Bed Dryer solution, as farmers and operators consider to use electricity which can reduce their drying costs. The farmers see Electricity-based drying as more efficient than relying on fuel-powered equipment, particularly when harvest volumes are high. However the initial connection cost, minimum electricity charges, and available budget can still discourage adoption. The uncertainty of production volume is also a concern because the Bed Dryer may not be used consistently throughout the year, making it harder for users to justify ongoing costs. PLN has an opportunity to position Bed Dryer electrification as a cost-efficient solution, but the affordability of connection and operating costs remains important for wider adoption.

Social Analysis

Social factors that can impact the using of Bed Dryer is because the farmers familiarity, trust, and willingness to follow the experience of other farmers.

Some farmers are still not used to Bed Dryer technology, which can slow down adoption and make them hesitant to change from conventional drying methods. At the same time, farmers tend to look at real experiences from other users. They will trust when they see that the Bed Dryer is proven to be more efficient, faster, and cost-effective, they are more likely to adopt it.

Technology Analysis

Technology factors have a positive impact on PLN's Bed Dryer program, it is because electricity infrastructure is already available in many locations and is relatively easy to use. PLN's wide and reliable electricity network supports the operation of Bed Dryers, while electricity-based drying offers more stable drying quality, shorter processing time, easier operation, and lower operating costs compared with fuel-based alternatives.

Farmers also see electricity is very practical option since the solar fuel can be difficult to obtain and the electric bed dryers can operate whenever without noise like gensets. However, technology-related challenges remain, particularly the limited capacity of some Bed Dryers compared with the number of farmers they need to serve. Overall, the existing electricity infrastructure provides a strong foundation for PLN to expand Bed Dryer electrification, but equipment capacity and scalability need to keep pace with farmers' needs.

Environment Analysis

Environmental changes have a significant impact on the use of PLN's Bed Dryer, because conventional drying still depends heavily on weather and the availability of drying space. Farmers using sun-drying when the weather is favourable, but when weather change, it will less useful, making Bed Dryers more valuable because they can operate without depending on sunlight. At the same time, shifting from fuel-based dryers to electricity can reduce fuel consumption, carbon emissions, air pollution, and noise. Overall, weather dependency creates a strong need for more reliable drying solutions.

Legal Analysis

Local government policy has an influence on PLN's Bed Dryer program, particularly through the provincial government's focus on agricultural downstreaming, food security, and post-harvest improvement. However, the impact depends on how well government programs are coordinated with PLN's electricity infrastructure, since providing the dryer alone does not automatically ensure that farmers will use electricity to operate it. Until now, local government policy has been creating a favorable environment for PLN, still stronger integration between the Bed Dryer program and electricity provision would help turn government supports into sustainable productive electricity demand.

Porter's Five Forces

Table 1 Porter's Five Forces

Aspect	Influence	Actual Condition
Political	Medium/Opportunities	Good Relationship
Economical	Very High/Threats	Low economics condition for initial cost and monthly expenses.
Social	Medium/Threats	Unfamiliar with the Bed Dryer technology
Technological	Low/ Opportunities	Available in many locations for the Electrics
Environmental	Medium/Opportunities	Conventional drying still depends heavily on weather and the availability of drying space
Legal	Low/Opportunities	Government policy has been creating a favorable environment for PLN

The external influences can be analyzed through Porter's Five Forces as the following:



Figure 2 Porter's Five Forces

Threat of Substitutes

The threat of substitutes is relatively high, as farmers still have simple and familiar alternatives to Bed Dryer, traditional sun-drying or manual drying. These methods are more

attractive because they require little additional cost and are already part of farmers' usual practices, but when the weather is favourable. However, their effectiveness depends heavily on weather conditions and the availability of drying space, making them less productive during the rainy season or when harvest volumes are high. This gives Bed Dryer an opportunity to replace the old method for faster and more consistent drying.

Bargaining Power of Buyers

The threat is for the bargaining power of buyers is relatively high as farmers and Bed Dryer operators are sensitive to the installation cost and value they receive from using electricity. Their decision is influenced by factors such as operating cost savings, electricity bills, installation or connection costs, equipment capacity. They also compare the benefits with other alternatives and are more willing to adopt when they see clear improvements in drying speed, efficiency, and cost. PLN needs to offer a clear value proposition and ensure that the cost and connection is very reasonable to switch.

Threat of New Entrants

The threat of new entrants becomes opportunities because it is relatively is low to Medium based on the interview data, as providing an electricity-based Bed Dryer solution requires more than just the drying equipment itself. If other companies want to enter the market, they would need reliable electricity infrastructure, appropriate technical capabilities, equipment and maintenance support, and access to farmer groups or agricultural networks. PLN has some advantages with its existing electricity network, established relationships with the government and agricultural stakeholders, and experience in supporting the conversion of Bed Dryers from gensets to electricity. However, alternative technology providers could still enter, so PLN needs to maintain service reliability and strengthen its relationships with farmer groups and government partners.

Bargaining Power of Suppliers

The bargaining power of suppliers is at a low level (opportunities) for PLN. PLN is not highly dependent on a single supplier because it has access to multiple suppliers, using national procurement and local vendors. This gives PLN to compare suppliers, negotiate prices, and switch to other vendors. However, the level of dependency can become higher when PLN requires specialized technology or equipment that needs specific technical expertise from technology providers and business partners.

Rivalry Among Existing Competitors

The rivalry among existing competitors is relatively moderate, it becomes the opportunities for PLN. PLN is only competing with alternative energy and drying solutions, particularly diesel/genset-based systems and conventional drying methods. Gensets remain attractive for some farmers because they can be used without waiting for an electricity connection but the fuel is hardly to find, while sun-drying is familiar and requires little additional cost but the dependency to the weather is very high. However, PLN has an advantage through its existing electricity infrastructure, wider network, and ongoing collaboration with the government to convert Bed Dryers from gensets to electricity.

The competition is not brand-to-brand competition but more on which energy solution provides the best combination of cost, reliability, convenience, and drying performance. PLN can strengthen its position by demonstrating that electricity-based Bed Dryers provide more

stable drying, lower operating costs, less noise, and better reliability than fuel-based alternatives.

VRIO

Table 2 VRIO Analysis

Capability (PLN'S Strength)	V	R	I	O	Result
Wide electricity distribution network	V	V	V	V	Sustained Competitive Advantage
Integrated electricity service capability	V	V	V	V	Sustained Competitive Advantage
PLN brand & institutional trust	V	V	V	V	Sustained Competitive Advantage

The VRIO analysis was conducted to identify whether PLN has internal resources and capabilities that can provide a sustainable competitive advantage in developing the Bed Dryer electrification program. The analysis focuses on three key capabilities identified from the interview findings: PLN's wide electricity distribution network, integrated electricity service capability, and PLN's brand and institutional trust. Each capability was assessed based on Valuable, Rare, Inimitable, and supported by the Organization (VRIO).

Wide Electricity Distribution Network

PLN's wide electricity distribution network is a valuable capability in supporting the development of electricity-based Bed Dryers. The availability and reliability of the electricity network are very fundamental because Bed Dryers require a stable power supply to operate, while most of farmers said that they consider the availability of electricity around their location when deciding whether to adopt the technology. The interview findings indicate that PLN's existing electricity infrastructure in Lampung is considered adequate, supported by a broad network and improving system reliability.

The capability is also considered rare because PLN already has electricity distribution network that reaches agricultural areas, while alternative Bed Dryer solutions such as gensets or other energy providers do not have enough electricity distribution infrastructure. This capability is also difficult to imitate, as replicating it needs technical expertise, infrastructure development, and a long period of time. Furthermore, PLN is organized to capture the value of this resource through its existing distribution structure, technical personnel, network planning capabilities, and customer service system. Therefore, PLN's wide electricity distribution network fulfills all VRIO criteria and provides a sustained competitive advantage for the Bed Dryer electrification program.

Integrated Electricity Service Capability

PLN's integrated electricity service capability can be a sustained competitive advantage. It comes from PLN's ability to provide more than electricity itself. For Bed Dryer customers,

the process may involve assessing electricity requirements, determining the appropriate power capacity, facilitating new connections or capacity increases, providing technical support, and maintaining electricity availability. This integrated capability can reduce the complexity faced by farmer groups.

This capability is considered rare because alternative energy solutions may provide equipment or fuel, but they generally do not offer the same combination of electricity infrastructure, technical planning, connection services, and continuous electricity supply within one system. It is also difficult to imitate, since replicating this capability requires not only technical expertise but also an established organizational structure and supporting infrastructure. PLN is already organized to utilize this capability. So, this capability satisfies all VRIO criteria and represents a sustained competitive advantage for PLN.

PLN Brand and Institutional Trust

Finally, PLN's brand and institutional trust provide as capability in developing the Bed Dryer program. Trust is valuable because clients are making decisions that involve electricity infrastructure and potentially long-term operational commitments. An established and trusted electricity provider can reduce uncertainty. The relationship between PLN and government institutions help strengthens this trust, especially when Bed Dryer is implemented as part of a government-supported agricultural program.

PLN's institutional position is considered rare because its role as the established national electricity provider cannot easily be replicated by private equipment or energy providers. It is also difficult to imitate, as institutional trust has been built over a long period through PLN's infrastructure, customer base, government relationships, and service presence across Indonesia. PLN is organized through its established customer service channels, local operating units, government partnerships, and marketing functions. As a result, PLN's brand and institutional trust fulfil the VRIO criteria and contribute to a sustained competitive advantage.

So, the VRIO analysis indicates that PLN has several capabilities that can provide a sustained competitive advantage. Its strongest advantages do not come from the Bed Dryer equipment itself, but from the combination of extensive electricity infrastructure, integrated electricity services, and strong institutional trust. PLN is in a strong internal position to expand Bed Dryer electrification, although maximizing this advantage will require some integration of these capabilities to be more systematically with the programs and the specific needs of farmer groups.

Marketing Mix Analysis

The Marketing Mix strategy is developed to translate PLN's differentiation into a market offering that is relevant to the targeted customer segments. From the Product perspective, PLN should position the Bed Dryer as an integrated electricity-based post-harvest drying solution rather than as a standalone drying machine. The offering can include the Bed Dryer, electricity connection, capacity assessment, infrastructure support, capacity planning, and technical assistance. This is relevant for Gapoktan because the value of the solution depends not only on the equipment but also on whether the electricity infrastructure and capacity can support the group's drying requirements during peak harvest periods.

From the Price perspective, affordability is one of the key adoption barriers identified in the interviews. Customers expressed concerns related to installation costs, monthly electricity

payments, and minimum monthly charges, particularly given the seasonal nature of agricultural production. So, PLN could explore a more flexible payment structure that is aligned with farmers' seasonal utilization and cash flow. One potential approach is a seasonal payment or electricity credit mechanism, where payments during low-utilization periods could potentially be accumulated and used to offset higher electricity costs during peak harvest periods. For Gapoktan, shared cost arrangements could also be considered to distribute the financial burden across multiple users. It is to create a payment structure that is more compatible with the seasonal characteristics of agricultural operations.

From the Place perspective, the Bed Dryer solution should be distributed through the agricultural ecosystem rather than relying only on PLN's conventional customer channels. Gapoktan, farmer groups, local governments, agricultural agencies, and agricultural extension networks can function as important access points for reaching potential users. The adoption of the agricultural technology is influenced by farmers' experiences and recommendations from other farmers. Existing successful Bed Dryer users can therefore serve as reference points for introducing the solution to other farmer groups.

From the Promotion perspective, communication should focus on demonstrating the practical value of the Bed Dryer rather than relying only on technical product information. For Genset or Diesel users, PLN should emphasize reduced dependence on fuel, operational convenience, and potential efficiency improvements. For farmers who rely on sun drying, communication should highlight reduced dependence on weather, faster drying, and more consistent drying conditions. Demonstration activities and farmer-to-farmer communication are effective because gain trust from farmers easily when its benefits have been directly experienced and demonstrated by other farmers.

Selling Analysis

The selling strategy should support the adoption of the Bed Dryer through a consultative selling approach, because the target customers have different drying methods, operational scales, and financial concerns. First, PLN should understand the customer's behavior and business process, including their drying method, harvest volume, harvesting season, energy source, current operating costs, available drying capacity, and electricity infrastructure. This diagnostic approach allows PLN to identify the specific problem faced by each customer before proposing an appropriate solution.

For Genset or Diesel users, the sales discussion can focus on fuel costs, fuel availability, and operational convenience. For sun-drying users, the discussion can emphasize weather dependency, drying time, and the potential impact on product quality. For Gapoktan, the discussion should focus on collective drying demand, insufficient capacity during simultaneous harvest periods, electricity requirements, and the feasibility of shared utilization. PLN can subsequently propose a tailored solution consisting of the Bed Dryer, appropriate electricity infrastructure, capacity planning, and a suitable payment arrangement.

So, the objective is not simply to convince farmers to purchase or use an electricity-based Bed Dryer, but to demonstrate how PLN's solution can address their specific economic and operational challenges. This approach is particularly important for Market Penetration and in Years 3–4 when PLN expands the existing Bed Dryer solution to new market segments.

CONCLUSION

This final project analyzed the development of electricity services provided by PT PLN (Persero) UID Lampung to support the adoption of bed dryer technology in Lampung's agricultural sector. The analysis combined PESTEL, Porter's Five Forces, VRIO, STP, Value Proposition, Ansoff Matrix, and DMS frameworks to identify key factors affecting the program and formulate a business strategy relevant to the needs of farmers and farmer groups.

The analysis showed that the development of PLN UID Lampung's electricity-based bed dryer program was influenced by external market conditions and PLN's internal capabilities. Economically, installation costs, monthly electricity expenses, minimum charges, and seasonal utilization patterns were identified as the main barriers to adoption, while government support, technological readiness, and environmental benefits created potential opportunities. Socially, limited familiarity with bed dryer technology indicated that trust, peer experiences, and demonstrated benefits were important factors in encouraging adoption. Technologically, PLN's extensive electricity network, infrastructure capacity, and Electrifying Agriculture capabilities provided a strong foundation, although capacity planning needed to be aligned with peak harvest demand. Porter's Five Forces analysis further indicated strong pressure from substitute drying methods and price-sensitive buyers, while PLN's infrastructure, experience, and institutional trust represented sustained competitive advantages based on the VRIO analysis. The STP analysis positioned PLN not merely as a provider of electricity or bed dryer equipment, but as an integrated agricultural electrification partner that delivered reliable, efficient, and scalable drying solutions.

The recommended business strategy followed a phased Ansoff approach. In Years 1–2, PLN should focus on Market Penetration by strengthening the existing bed dryer market through seasonal payment mechanisms, shared electrification arrangements for Gapoktan (Gabungan Kelompok Tani), and improved capacity and infrastructure planning. In Years 3–4, PLN should pursue Market Development by targeting new customer segments, particularly farmers who still rely on sun drying or manual drying methods. The DMS strategy supported this roadmap through clear differentiation, a flexible and customer-oriented marketing mix, and consultative selling approaches. Therefore, PLN should strengthen and validate the existing bed dryer model before expanding its implementation to broader agricultural markets across Lampung.

REFERENCES

- Abeberese, A. B., Ackah, C. G., & Asuming, P. O. (2021). Productivity losses and firm responses to electricity shortages: Evidence from Ghana. *The World Bank Economic Review*, 35(1), 1–18.
- Aboye, B. H., Gebre-Egziabher, T., & Kebede, B. (2024). Peri-urban food insecurity and coping strategies among farm households in the face of rapid urbanization in Sub-Saharan Africa: Evidence from Ethiopia . *Research in Globalization* .
- Agusto, H. (2026). Perpadai Lampung Minta Bantuan Dryer Pemerintah Tepat Sasaran . Lampung: TribunLampung.com.
- Alexander Chernev, K. L. (2016). *Marketing Management*. Pearson.

- Amit, R., & Schoemaker, P. J. (1993). Strategic Assets and Organizational Rent. *Strategic Management Journal*.
- Amuakwa-Mensah, S., & Surry, Y. (2022). Association between rural electrification and agricultural output: Evidence from Sub-Saharan Africa. *World Development Perspectives*.
- An, J., Xie, H., b, J. Y., Wei, H., Wu, Y., & Liao, X. (2024). A review of applications of energy analysis: Grain, fruit and vegetable drying technology Author links open overlay panel . *Energy Reports*.
- Anderson, J. C., Kumar, N., & Narus, J. A. (2007). *Value Merchants*. Harvard Business School Press.
- Anish. (2026). Anish Pharma. Retrieved from Anish Pharma: <http://anishpharma.com/blog/what-is-a-fluidized-bed-dryer#:~:text=A%20Fluidized%20Bed%20Dryer%20is,solid%20particles%20for%20further%20processing>.
- Ansoff, I. (1957). *Strategies for Diversification*. Harvard Business Review.
- AntaraNews. (2025). Pemprov Lampung Kembangkan Lima Area Industrial dan Production Estate. Bandar Lampung: AntaraNews.
- Badan Pusat Statistik Lampung. (2020). BPS. Retrieved from BPS: <https://web-api.bps.go.id/download.php?f=6AhuXT1xnjAzqjPPjVHvHUdUSUNNbFNfFcE9SaXBpVGFpbVkwTYxZm9HU0ZQVGJMbFVna2d5VjZ1S0ROQWhLbEhnajBWM1hiUSs1dDQ1MEtBcnpLdmJ5OGY5cXZrNWZZYTlzMVhMwazkycHhoekNJWEkyWfNON2RHZzhGamQ0MTMzZ21LV1FJRdJCMVvtMEZXc1lrUVB4UEZ2YUFQSkxrRG>
- Badan Pusat Statistik Provinsi Lampung. (2023). Retrieved from <https://web-api.bps.go.id/download.php?f=oO/ZbUI9URJhyKXH8C4ldEROTERnckVJTVl6Tm1BU0ZUUVPqZloyUHF4MnI5THJqS0JEcVZteTRzN205czlxQ0JqZHpYZlZmaGE5S0ZPUG9WUjVSyTFRVW5mUUQyTHYwUEZwdXFIYVJhTGI5QlpvY1RUd2hJdThzcjJ5MWpCRWQ5MnpPdWJKV2c2Nzg1SWVvRlZxaUtkT2tleGFkcFh6R0>
- Badan Pusat Statistik. (2025). Direktori Perusahaan Industri Besar dan Sedang Provinsi Lampung. Retrieved from BPS:
- Badan Pusat Statistik. (2026, May 5). BPS . Retrieved from BPS: <https://www.bps.go.id/id/statistics-table/2/MTA2IzI=-/seri-2010--distribusi-pdb-menurut-lapangan-usaha-seri-2010-atas-dasar-harga-berlaku--persen-.html>
- Bapennas. (2026). Apa Itu Food Systems? Retrieved from Dashboard Sistem Pangan Indonesia: <https://dsp.bapennas.go.id/information>
- Barney, J. (1986). *Strategic Factor Markets: Expectations, Luck, and Business Strategy*. Management Science.
- Barney, J. (2014). *Gaining Competitive Edge with a Comprehension of Complex System of Self-Organized Startup Businesses*. Pearson Higher.
- Barney, J. B., & Clark, D. N. (2007). *Resource-Based Theory: Creating and Sustaining Competitive Advantage*.
- Barney, J., & Hesterly, W. S. (2019). *Strategic Management and Competitive Advantage: Concepts, Global Edition*. Pearson Education.

- Bayunanda, A. (2024, November 12). Beyond Basic Needs: How Our Food Security Plan Can Achieve More . Retrieved from WWF: <https://www.wwf.id/id/blog/beyond-basic-needs-how-our-food-security-plan-can-achieve-more>
- Becker, S. V., Aromaa, E., & Eriksson, P. (2015). Client-consultant interaction: the dynamics of and conflicts in value co-creation and co-destruction. *International Journal of Services Technology and Management*.
- Bel, R. (2017). A property rights theory of competitive advantage. *Strategic Management Journal*.
- Bernard, T. (2012). Impact Analysis of Rural Electrification Projects in Sub-Saharan Africa. The World Bank Research Observer.
- Biro Administrasi Pimpinan Pemprode Lampung. (2025). Provinsi Lampung Proyeksi Lonjakan Produksi Padi Tembus 3,5 Juta Ton di 2025. Lampung: Biro Administrasi Pimpinan Pemprode Lampung.
- Bournaris, T., Moulougianni, C., Arampatzis, S., Kiomourtzi, F., Wascher, D., & Manos, B. (2016, February). Science Direct. Retrieved from Science Direct: <https://www.sciencedirect.com/science/article/abs/pii/S0195925515300147>
- Chana, P., & Siripipatthanakul, S. (2021). Service Marketing Mix (7Ps) and Patient Satisfaction in Clinics: A Review Article. *International Journal of Trend in Scientific Research and Development*.
- Chen, Z., Shen, S., & Zou, H. (2025). Stakeholder Orientation, Product Market Competition, and the Cost of Equity. Oxford Academic.
- Christensen, K., McLean, L. A., Putbrese, B., & Pigman, E. (2015). Gynecologic Emergencies: Findings Beyond US and Advances in Management. *Current Radiology Reports*.
- Corigliano, O., & Algieri, A. (2024). A comprehensive investigation on energy consumptions, impacts, and challenges of the food industry Author links open overlay panel. *Energy Conversion and Management: X*.
- Creswell, J. a. (2018). Qualitative Inquiry and Research Design Choosing among Five Approaches. . SAGE Publications, Inc.
- Damanpour, F. (1991). Organizational Innovation: A Meta-Analysis of Effects of Determinants and Moderators. *The Academy of Management Journal*.
- DANA, L.-P., Rounaghi, M. M., & Enayati, G. (2021). Increasing productivity and sustainability of corporate performance by using management control systems and intellectual capital accounting approach. *Green Finance*.
- Daniel Egerson, E. E.-F. (2025). Understanding food (In) security through land and livelihoods: Evidence from longitudinal household data. *Journal of Rural Studies*.
- Diskominfotik. (2023). Sekdaprode Lampung Dampingi Menteri Pertanian RI Pada Gerakan Tanam Sistem Akselerasi Percepatan Masa Tanam di Kabupaten Lampung Tengah. Lampung: Diskominfotik Provinsi Lampung.
- Diskominfotik. (2025). Lampung Melesat di Sektor Pangan! Lampung: Diskominfotik.
- Disperindag Provinsi Lampung. (2026, April 5). Optimalkan Pemanfaatan Bed Dryer, Pemprov Lampung Gelar Pelatihan Operator Bed Dryer dan Manajemen Bisnis . Retrieved from Disperindag Provinsi Lampung:

- <https://disperindag.lampungprov.go.id/detail-post/optimalikan-pemanfaatan-bed-dryer-pemprov-lampung-gelar-pelatihan-operator-bed-dryer-dan-manajemen-bisnis>
- Elam, L. I. (2025). Entrepreneurial ecosystems in the food industry: a systematic literature review through the lens of complex adaptive system theory. *Journal of Small Business and Enterprise Development*.
- Fang, Q., Wang, Z., & Dang, L. (2025). Audit effort in the digital Era: Uncovering the dynamic interplay of business strategy and digital transformation. *International Journal of Accounting Information Systems*.
- FAO. (n.d.). Natural and Solar Drying.
- Ferreira, J. J., Fernandes, C. I., & Ferreira, F. A. (2021). What makes organizations unique? Looking inside the box.
- Forethought. (2025, April). Retrieved from <https://www.aer.gov.au/system/files/2025-12/PAL%20RRP%20ATT%20SE%2001%20%E2%80%93%20Electrification%20of%20agriculture%20%E2%80%93%20Dec2025%20%E2%80%93%20Public.pdf>
- Furuncu, Y. (2013). PESTEL and SWOT analysis of hydrogen economy in Turkey Author links open overlay panel . *International Journal of Hydrogen Energy*.
- Gao, Y., & Serrenho, A. C. (2023). Greenhouse gas emissions from nitrogen fertilizers could be reduced by up to one-fifth of current levels by 2050 with combined interventions. *National Library of Medicine* .
- Ghaisan. (2025). Kawasan Industri Lampung: Potensi, Lokasi, dan Peluang Investasi. *Megatama Cipta Karya*.
- Grönroos, C., & Ravald, A. (2011). Service as business logic: implications for value creation and marketing. *Service Management*.
- Gu, Y., & Wenzel, T. (2026). Product differentiation, economies of scale and entry. *Economics Letters*.
- He, Z., Guo, W., Song, L., & Zhang, P. (2023). Techno-economic analysis of a refrigerated warehouse equipped with on-shelf phase change material for cold storage under different operating strategies. *Energy Conversion and Management*.
- Heifer International. (2022). Hello Tractor, Heifer International Unveil Pay-As-You-Go Tractor Financing for Agripreneurs in Nigeria. Retrieved from Heifer International: <https://www.heifer.org/press-release/hello-tractor-heifer-international-unveil-pay-as-you-go-tractor-financing-for-agripreneurs-in-nigeria>
- Hinterhuber, A., & Snelgrove, T. C. (2022). *Value First then Price*. New York: Routledge.
- Howard, D. A., Jørgensen, N., & Ma, Z. (2023). Multi-Method Simulation and Multi-Objective Optimization for Energy-Flexibility-Potential Assessment of Food-Production Process Cooling. *Energies*.
- Islam, M. T., & Polonsky, M. J. (2020). Validating scales for economic upgrading in global value chains and assessing the impact of upgrading on supplier firms' performance. *Journal of Business Research*.
- Jillian C Sweeney, G. N. (2001). Consumer perceived value: The development of a multiple item scale. *Journal of Retailing*.

- Jimoh, K. A., Hashim, N., Shamsudin, o., Man, H. C., Jahari, M., & Onwude, D. I. (2023). Recent Advances in the Drying Process of Grains. *Food Engineering Reviews*.
- Jin, R. (2024). Analysis of Marketing Strategies for Optimizing Commercial Performance under STP Theory. *Advances in Economics Management and Political Sciences*.
- Johnson, G., Scholes, K., & Whittington, R. (2008). *Exploring Corporate Strategy*. England : Pearson Education Limited.
- Kambil, A., Ginsberg, A., & Bloch, M. (2008). Re-inventing Value Propositions. NYU Working Paper No. 2451/14205.
- Kanaf, R. I. (2025). PLN Lampung sebut 4.251 lokasi telah terima "electrifying agriculture". Bandarlampung: Antara Lampung.
- Knight, A. (2025, September 19). Heifer International. Retrieved from Heifer International: <https://www.heifer.org/blog/why-is-electricity-important-in-agriculture.html>
- Lampung Prov. (2025). Sinergi Pemprov Lampung, Kementan, dan PLN Wujudkan Pertanian Berbasis Teknologi dan Energi. Bandar Lampung: Lampung Prov.
- Lee, K., Miguel, E., & Wolfram, C. (2020). Does Household Electrification Supercharge Economic Development? *Journal of Economic Perspectives* .
- Li, Q., & Wang, T. (2026). Corporate agile responsiveness, product differentiation, and investor confidence Author links open overlay panel . *Finance Research Letters*.
- Lin, Q., Zong, X., Lin, H., Huang, X., Wang, J., & Nie, S. (2023). Based on quality, energy consumption selecting optimal drying methods of mango slices and kinetics modelling Author links open overlay panel . *Food Chemistry: X*.
- Lynch, T. F. (2020). *Strategic Assessment 2020: Into a New Era of Great Power Competition*. Washington, D.C. : NDU Press.
- Marín-Orantes, T. J., Río-Rama, M. d., Aguila-socho-Montoya, D., & Álvarez-García, J. (2025). Impact of marketing mix dimensions on the competitiveness of university centers. *Social Sciences & Humanities Open*.
- Mohamed-Katerere, J., & Smith, M. (2013). The role of ecosystems in food security. *Unasyuva*.
- Nashiroh, A. A., Shiddiqy, I. A., & Hidayat, M. N. (2024). Exploring the Depths of Digital Marketing: A Systematic Literature Review on Segmentation, Targeting, Differentiation, and Positioning Strategies. *International Journal of Business, Law, and Education*.
- Newbert, S. L. (2008). Value, Rareness, Competitive Advantage, and Performance: A Conceptual-Level Empirical Investigation of the Resource-Based View of the Firm. *Strategic Management Journal*.
- Osterwalder, A., Pigneur, Y., Bernarda, G., Smith, A., & Papadakis, T. (2014). *Value Proposition Design: How to Create Products and Services Customers Want*.
- Otley, D. (2016). *The Contingency Theory of Management Accounting and Control*. Management Accounting Research.
- Ouikhalan, M., Lakbita, O., Delhali, A., Assen, A. H., & Belmabkhout, Y. (2022). *Toward Net-Zero Emission Fertilizers Industry: Greenhouse Gas Emission Analyses and Decarbonization Solutions*. ACS Publications.
- Panggabean, R. (2025, May 21). Urgent Need to Safeguard Indonesia's Agriculture Future. Retrieved from WRI Indonesia: <https://wri-indonesia.org/en/insights/urgent-need-safeguard-indonesias-agricultural-future>

- Papulová, Z. (2014). The Significance of Vision and Mission Development for Enterprises in Slovak Republic. *Journal of Economics Business and Management*.
- Payne, A., Frow, P., & Eggert, A. (2017). The Customer Value Proposition: Evolution, Development, and Application in Marketing. *Journal of the Academy of Marketing Science*.
- Payne, A., Frow, P., Steinhoff, L., & Eggert, A. (2020). Toward a comprehensive framework of value proposition development: From strategy to implementation. *Industrial Marketing Management*.
- Pidduck, R. J., & Epler, R. (2026). Entrepreneurial selling: Advancing value-based sales through entrepreneurial psychology. *Industrial Marketing Management*.
- Poretti, C., Weisskopf, J.-P., & Régie, P. d. (2024). Innovative business strategies, corporate performance, and firm value in the travel and leisure industry. *International Journal of Hospitality Management*.
- Porter, M. E. (1985). *The Competitive Advantage: Creating and Sustaining Superior Performance*. NY: Free Press.
- Pueyo, A., & Maestre, M. (2019). Linking energy access, gender and poverty: A review of the literature on productive uses of energy. *Energy Research & Social Science*.
- Ren, C., & Rosa, L. (2025). Global energy and carbon emissions of irrigation and fertilizers management for closing crop yield gaps. *IOP Publishing*.
- Rintamäki, T., Kuusela, H., & Mitronen, L. (2007). Identifying competitive customer value propositions in retailing. *Journal of service Theory and Practice*.
- Ritala, P., Keränen, J., Fishburn, J., & Ruokonen, M. (2024). Selling and monetizing data in B2B markets: Four data-driven value propositions. *Technovation*.
- Rogers, E. M. (1983). *Diffusion of Innovations*. New York.
- Rosdiana, H., Inayati, & Murwendah. (2014). *Science Direct*. Retrieved from Evaluation of Fiscal Policy on Agropolitan Development to Raise Sustainable Food Security (A Study Case in Bangli Regency, Kuningan Regency and Batu Municipality, Indonesia): <https://www.sciencedirect.com/science/article/pii/S187802961400070X>
- Saguansap, V., Wongbumru, T., Saguansap, P., & Mruksirisuk, P. (2025). Factors influencing housing rental decisions across major cities in Thailand: an analysis of marketing mix elements. *Sustainable Futures*.
- Sanchez, P., Swaminathan, M., & Yuksel, P. D. (2005). Halving hunger: it can be done. *MilleniumProject*. Retrieved from Task Force.
- Saputra, N., Putera, R. E., & Zetra, A. (2024). Capacity building for organizational performance: a systematic review, conceptual framework, and future research directions. *Cogent Business & Management*.
- Sayed Ahmed, S. C. (2026). Building food security: The role of social entrepreneurship and agripreneurial ecosystems. *Research in Globalization*.
- Schmitz, B., Schmalstieg, J., Plötner, O., Eggert, A., & Habel, J. (2025). Selling radical innovations. *Industrial Marketing Management*.

- Sekretaris Kabinet. (2026). Setkab. Retrieved from Setkab: <https://setkab.go.id/en/president-prabowo-subianto-highlights-food-self-sufficiency-social-programs-and-industrialization-achievements-at-parliamentary-plenary/>
- Sha, X. (2024). Application of Management Accounting Tools and Enterprise Value Creation Based on the Value Chain. SageJournals.
- Silveira, F. d., Smania, G. S., Landaverde, R., Osiro, L., Bolfe, É. L., & Luciana Alvim Santos Romani, J. G. (2026). Exploring the drivers of responsible scaling of Agriculture 4.0 technologies for transformative impact in the modern agri-food ecosystem: An ISM-based analysis. *Agricultural Systems*.
- Supriyanto, R., Maharani, A., & Alta, A. (2025). Indonesia's Food Estate in Context: Bridging Past, Present and Future for National Food Security. Indonesia: CIPS.
- Termine, P. (2024, 12 3). Committee on World Food Security. Retrieved from FAO: <https://www.fao.org/cfs/cfs-hlpe/insights/news-insights/news-detail/ensuring-food-security--why-agency-and-sustainability-matter/en>
- Thoumrungroje, A., & Racela, O. C. (2022). Innovation and Performance Implications of Customer-Oriented across Different Business Strategy Types. *Journal of Open Innovation: Technology, Market, and Complexity*.
- Trivedi, S. K., & Griffin, J. J. (2013). Rothaermel's Strategic Management: Concepts and Cases, 1st Edition. *Journal of Business Ethics Education*.
- Ukhti, F. (2026). Evaluasi Desaku Maju, Pemprov Lampung Tambah Bed Dryer Jadi 82 Lokasi dan POC 800 Titik. Lampung: RMOL Lampung.
- United Nations Sustainable Development Group. (2023). Energy access and affordability: Powering ahead to 2030. United Nations Sustainable Development Group.
- Weng, H.-H. (., Chen, J.-S., & Chen, P.-C. (2015). Effects of Green Innovation on Environmental and Corporate Performance: A Stakeholder Perspective. *Sustainability*.
- World Bank Group. (2020). Doing Business 2020. World Bank Group.
- Yadav, V. S., Singh, A., Raut, R. D., Mangla, S. K., Luthra, S., & Kumar, A. (2022). Exploring the application of Industry 4.0 technologies in the agricultural food supply chain: A systematic literature review. *Computers & Industrial Engineering*.