



Proposed Marketing Strategy to Increase Digital Smart Poultry Market Readiness in West Java

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ABSTRACT: Coronavirus diseases (COVID-19) have been impacted to the decrease in poultry product demand in Indonesia which leads to cause oversupply and declining in this industry margin. As one of the companies that promote digital transformation in Indonesia, Indonesian ICT company develops a new subsector in its digital agricultural platform to solve the problem. This company created Minimum Viable Product (MVP) to develop its current digital platform in subsector poultry (digital smart poultry). It consisted of several features such as funding, partnership, and B2B/B2C marketplace. After planning the MVP, the problem is mainly focused on determining the market readiness for smart poultry digital platform and how to create the most suitable marketing strategy to enter the market. They also had not specified the target segment to sell the products yet. This research is aimed to explore more whether the poultry farmers need the smart poultry digital platform to solve the problem, the market readiness, and formulate the marketing strategy and implementation plan for the smart poultry digital platform that targeted on poultry farmers.

To validate the issue in the poultry industry, the authors conduct a preliminary survey by interviewing poultry farmers in West Java. Next, to gain in-depth insight into the product necessities and market readiness, the author did an environmental analysis (internal and external) as the base to formulate the SWOT-TOWS analysis. The internal analysis that has been used for this research consists of Business Model Canvas (BMC) and VRIO analysis. The author used PESTEL, Porter's Five Forces, competitor, and consumer's analysis for the external analysis. According to the analysis, the poultry farmers as the targeted consumers are considered ready and necessary to use the product. After formulating SWOT-TOWS based on the environment analysis, the author used QSPM analysis to determine the most suitable business and marketing strategy to be implemented. The author proposed several strategies and implementation plans that consisted of 1) Increase the smart poultry digital platform capabilities (especially in IoT to help solve the poultry farmers' problem). Optimize digitalization for business development and marketing (SO2), 2) Optimize the service marketing (ST1), and 3) Maximize the use of integrated marketing strategy to maximize promotion (WT3).

KEYWORDS: Agriculture applications, Digital platform, Digital transformation, Digital marketing, Marketing strategy, Market readiness, Poultry industry, Poultry farmers.

INTRODUCTION

The poultry industry contributes significantly to alleviating protein malnutrition, poverty, and fostering Indonesian economic growth.

This industry provides humans with a source of proteins that are already contained in eggs and chicken form. As a developed country, Indonesian people prefer consumed poultry products such as eggs and chicken to fulfill their protein needs since it is cheaper than meat. Hence, the Indonesian poultry market has a great prospect in the future and has become very strategic because chicken and chicken eggs have been included in the Food Law (UU) as strategic food, according to the Secretary General of the GPMT (Indonesian Feed Producers Association). The Indonesian meat market is dominated 67% by poultry meat and will continuously grow in the future. Align with the statement, currently, there is 397 poultry company that has been established with 20.414 workers in 2020, according to BPS Poultry Establishment Statistics (2020) data.

The coronavirus pandemic (COVID-19) has affected the poultry industry. It is mainly caused by the government policy to establish large scalable social restrictions (PSBB) to minimize the spread of COVID-19. This policy has a huge impact on the two main

economic pillars, which are consumption and production (Ilham and Haryanto, 2020). The decrease in poultry product demand led to oversupply and impacted the decline in margin. In the midst of the COVID-19 outbreak, digital technology can be one of the most feasible solutions. It plays an important role in connecting, boosting productivity across sectors, and expanding participation to all segments of poultry industry stakeholders.

Indonesian ICT company develops a new subsector in its digital agricultural platform to solve the problem. This company created Minimum Viable Product (MVP) to develop its current digital platform in subsector poultry. It consisted of several features such as funding, partnership, and B2B/B2C marketplace. After planning the MVP, the problem that has occurred is mainly focused on determining the market readiness for smart poultry digital platform and how to create the most suitable marketing strategy to enter the market. They also had not specified the target segment to sell the products yet. Next, the author conducted a preliminary survey to validate the issue that happened in the poultry industry. After interviewing 4 poultry farmers in West Java, it is valid that the common problem that happened in the poultry industry is consisted of: the chicken mortality rate is still high, the level of profit has been decreased because of the increase in feed price, the existence of middlemen who take too many profits, and the declines of poultry demand and prices during the pandemic.

BUSINESS ISSUE EXPLORATION

A. Research Framework

The purpose of the research framework is to briefly explain the process of generating the action plan of the research according to the theory. It consisted of finding business issues, a preliminary survey to find the actual problem, research objectives, external and internal analysis, SWOT (Strength – Weakness – Opportunities – Threats) analysis, TOWS, proposed strategy, and implementation plan.

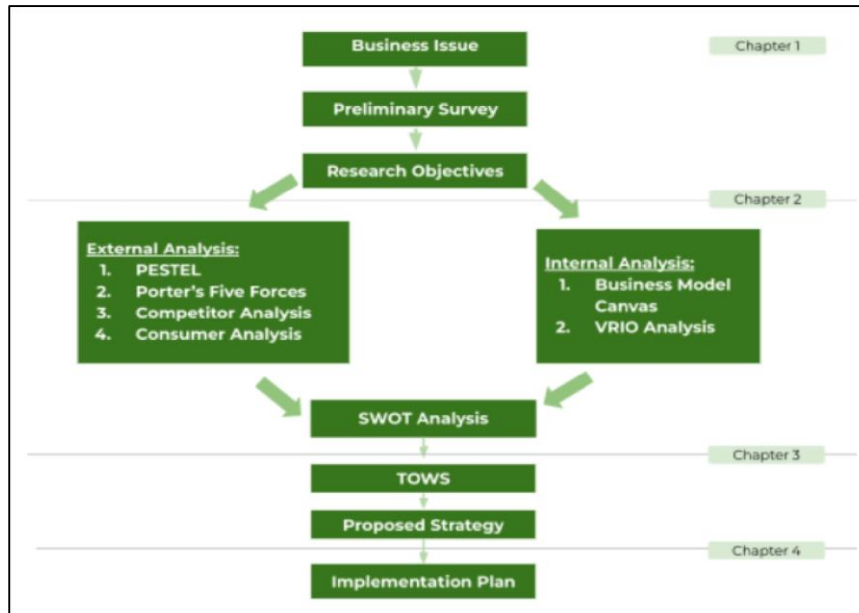


Figure 1. Research Framework

B. Research Method

The research method that has been used to formulate the most suitable solution for the company is qualitative research. According to Creswell (2012), qualitative research entails delving into and comprehending the meaning that individuals or groups attach to a human social issue. This research was conducted by the author during the internship period in one of ICT company in Indonesia. During the internship, the author gathered information about the business process of smart poultry digital platform, the internal condition of the company, and poultry industry conditions (external). Since the population of a poultry company in Indonesia is 397 (BPS, 2020), therefore 4 poultry farmers from the poultry company (which is 1% of the population) are considered to have qualified



as representative of the population. Further, the author also gathered the data from the interview and site visit to a poultry farm in West Java to gain deeper findings.

C. Data Collection Method

In collecting data, according to Doughlas (2015), the method can be categorized into two categories which are primary and secondary data. For this research, the author gathered primary data by conducting an interview using Bahasa (Indonesian languages) with poultry farmers, site-visit, and observing the conditions of the poultry farm in West Java. The secondary data for this research is collected through the website, books, articles, and Indonesian ICT company employees.

D. External Analysis

1. PESTEL analysis

According to Cadle et al. (2014), PESTEL analysis is a strategic framework that can be used for analyzing and investigating the external circumstances that affect organizations.

Table 1. Smart poultry digital platform PESTEL analysis

PESTEL analysis					
Political	Economic	Sociocultural	Technology	Environment	Legal
1.The President of Indonesia conveyed that Indonesia has promising potential for a digital economy. (Cabinet Secretariat of Republic Indonesia Official Website, 2022). 2.Indonesia's government promotes digital transformation through the momentum of Indonesia's G20 Presidency in 2022 (Kominfo.go.id, 2022). 3.In terms of the poultry industry, The Ministry of Agriculture, through the Director General of Livestock and Animal Health, has implemented several policies regarding efforts to stabilize poultry (Republika, 2022). 4.The government really appreciates and supports the presence of	1. The demand of chicken product is less than its supply (Badan Pusat Statistik dan Ditjen PKH, 2021). Therefore, there is so many chicken product oversupplied and get wasted due to a lack of supply distribution and demand in Indonesia. 2. Ministry of Agriculture, through the Director General of Livestock and Animal Health, has stated that the cumulative production potential of broiler and eggs is potentially surplus in 2022 (Republika, 2022). 3. Inflation caused by Russia's invasion of Ukraine will cause	1. The total population of Muslim People is 237.53 million as of December 31th, 2021 (Ministry of Home Affairs Indonesia, 2021) 2. Indonesian farmers have a dependency on the middleman or "tengkulak" which can affect the profit that will be earned by the farmers themselves. (Megasari, 2019)	1. As one of ICT company in Indonesia, this company is committed to assisting Indonesia in becoming a self-sufficient country in terms of food through digitalization. 2. Badan Pengkajian dan Penerapan Teknologi (BPPT) encourages millennial farmers to implement the smart farming method in Indonesia because it can improve the quality and quantity of production in	1. The impact of climate change in Indonesia can threaten the quality of poultry products. 2. Avian influenza, Mycotoxin, and other emerging diseases will slow down the supply chains and distribution process of poultry products which can cause mortality.	1. Indonesia already has a number of regulations related to digital transformation, which can be beneficial to supporting digital platform sustainability. 2. Export and import regulation of plant-based animal feed and product quality cannot be based on an internationally-approved standard but on Indonesian National Standard (SNI)



smart farming in Indonesia, especially for millennial farmers (Ministry of Agriculture of Indonesia, 2022).	an increase in corn (chicken feeds) global price. (tradingeconomics .com)		the agricultural industry (BPPT, 2022).		(Ferlito and Respatiadi, 2019).
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2. Porter’s Five Forces Porter’s five forces analysis is a method to identify the company’s competitive environment to enhance the effectiveness of marketing strategy for the industry (Cadle et al., 2014).

Table 2. Porter’s Five Forces Analysis

Porter’s Five Forces				
The Threat of New Entrants	The Threat of Substitute Products	Bargaining Power of Suppliers	Bargaining Power of Buyers	Rivalry Among Existing Competitors
To build a sustainable digital poultry ecosystem, new entrants need to integrate the poultry supplier, funder, distributors, and seller all at once in one digital provider. This ecosystem requires large amounts of capital expenditure, integrated technology infrastructure (for the apps and IoT), and credible human resources/expertise to operate it.	The substitute of this platform is the online or traditional seller that sells other highprotein food at a low cost, such as fish. Although there are other alternatives for the consumer's protein consumption, poultry products had the same chance to generate revenues as their substitute.	In terms of supply, poultry farmers and offtaker are the smart poultry digital platform main suppliers. To be able to partner with poultry offtaker, poultry product needs to fit with the standard, which is to have high quality and price that fit the market price (not lower or higher price).	Although there are many substitute products that will be impacted the customer's bargaining power, poultry products will always be needed, however, the consumers tend to not be dependent on smart poultry digital platform.	Smart poultry digital platform will face existing direct and indirect competitors related to poultry suppliers, funding, and market.
LOW	MODERATE	LOW	HIGH	HIGH

3. Competitor Analysis

Smart poultry digital platform that has been developed by Indonesian ICT company had direct and indirect competitors.



Table 3. Digital Smart Poultry Competitor Analysis

Marketing Mix (4P)	Digital Smart Poultry	Pitik.id	Kandang.in	BroilerX
Product	It provides several features such as financial funding, a partnership program (integrating poultry farmers with offtaker to be partnered), and a marketplace (B2B and B2C poultry product seller).	Pitik.id provides end-to-end support to enhance Indonesian chicken farmers. The features that Pitik.id offered DOC and feed supply with buy now pay later features, full stack farm management (smart farming, algorithm, and smart climate IoT), and provide chicken offtaker facility with the most competitive price and transparent scheme.	Kandang.in provides sharia investment for poultry and fishery. This platform facilitates investors to choose poultry and fishery industry projects, monitors digitally through Kandang.in the dashboard, and distributes profits between investors and chickens.	BroilerX provides realtime monitoring through applications, production analysis efficiency, reminder, integrated IoT and cloud for the environment (temperature, humidity, CO2, and ammonia), data recording, cheap management stocktaking, and directly creating agricultural financial reports.

Table 3. Digital Smart Poultry Competitor Analysis (Continue)

Marketing Mix (4P)	Digital Smart Poultry	Pick.id	Kandang.in	BroilerX
Place	Still in the MVP process, so it hasn't started to be marketed yet, but the plan will be operated online in Indonesia.	Online. This platform has been used in 29 districts in Indonesia.	Online.	Online.
Price	Based on the agreement.	Based on the agreement.	Based on the agreement	Based on the agreement
Promotion	Still in the MVP process, so it hasn't started to be promoted yet.	Through social media such as Instagram, LinkedIn, and mailing lists.	Through social media such as Instagram, Facebook, Twitter, Google+, and mailing list.	Through social media such as Instagram, Facebook, Twitter, LinkedIn, and mailing list.

Sources: Official Website Pitik.id, Kandang.in, and BroilerX

4. Consumer Analysis

Customer analysis is purposed to determine the target customers, pain, gain, and product that can fulfill the customer needs. To gain deep consideration about customers, the author has already conducted the interview using the preliminary survey's respondents. The respondents of this interview are 4 West Java poultry farmers who are assumed to represent the sample of the population. The demography of respondents is as follows:

1. **Gender:** 75% male and 25% female
2. **Age:** 25 – 55 years old
3. **Education:** 50% from bachelor's degree, 25% from junior high school, 25% from senior high school
4. **Technology Usage:** 75% used technology, and 25% did not use the technology.



The problem that occurred in the poultry industry were: 1) lack of capital funding/investors for the poultry industry, 2) lack of well-targeted marketing strategy to sell poultry products which led to chicken stockpile, 3) inadequate livestock production facilities, 4) lack of knowledge of managing poultry, 5) low-quality control of poultry product, and 6) fluctuating price (for example chicken food or vaccines/booster) which can cause the Cost of the Good Sold (COGS) higher than the sales price and reduce the margins.

In addition, the author also surveyed the respondent's expectations towards poultry monitoring equipment/IoT if they agreed to have a partnership with the offtaker company through a partnership program. Using the Likert scale from 1 (very unimportant) to 5 (very important) as presented in **Figure 2**.

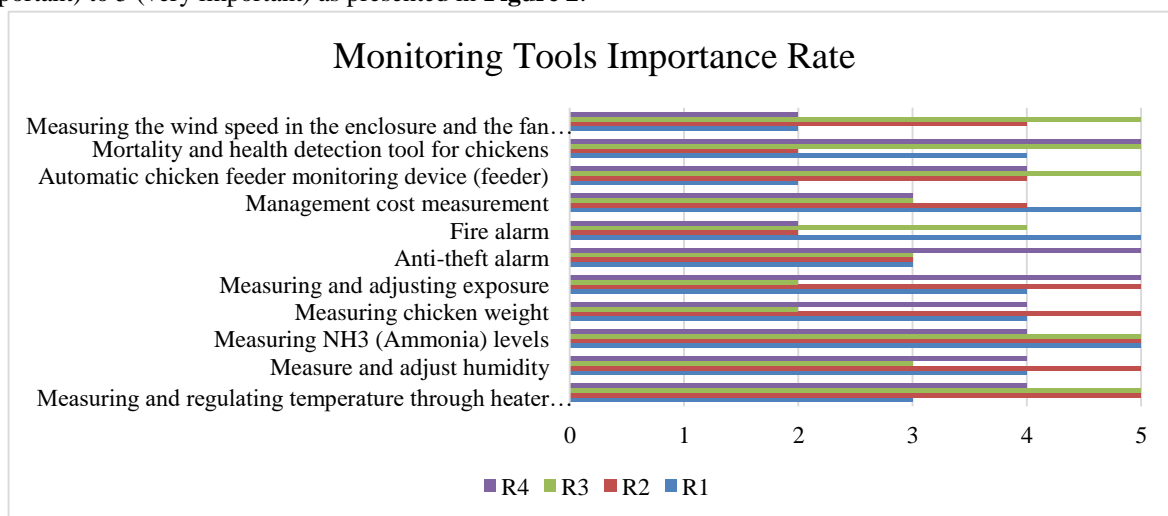


Figure 2. Monitoring Tools Importance Rate

As seen in **Figure 2**, it can be summarized that the three most important monitoring tools to be developed according to the scale average are: measuring NH3 (ammonia) level (4,75), and measuring and regulating temperature through heater and blower (4,25).

Further, the authors also surveyed the respondent's perception of smart poultry digital platform. There are 3 criteria that the respondent should be answered using the Likert scale from 1 (very unimportant) to 5 (very important). Overall, the result shows that the easiness of SOP for the partnership is important (4,25), convenience capital funding application is important (4,25), and a digital monitoring application that is easy to understand is important (4).

In terms of price value, all of the respondents have no idea the price range that they can pay when they start using it. They preferred to try it first before paying for the application to find out how important and helpful the application is for their business. However, 75% of the respondents think that the transactional method is more profitable because it can reduce the risk in the event of crop failure, while 25% of them prefer the subscription method because it can allocate funds for the needs of using the application from the start (fixed cost). In the survey, the author also gives a condition to get to know their interest if the application required the respondents to get a partnership with an offtaker company and use sharing profit system per transaction with a percentage below 1% from total harvest. Then, 50% of the respondents are interested in this deal as long as it is beneficial for both parties. Meanwhile, 50% of them can not decide yet because they should consider it with their company management.

Last, the author also surveyed the usage decision after informing the features of this application. As a result, 75% of them are interested in trying because this application can help companies to grow (R1 & R3) and provide business funding facilities. Meanwhile, 25% of the respondents, R3 (large-scale poultry farmers), said that they are not interested in trying the apps because their demand is already high, so they don't need the application. Based on the findings, for the initial marketing plan, the most suitable targeted market for this smart poultry digital platform app is small to medium-scale poultry farmers.

E. Internal Analysis

1. Business Model Canvas (BMC)

The Business Model Canvas is a strategic management tool to quickly and easily redefined and communicate business ideas or concepts.

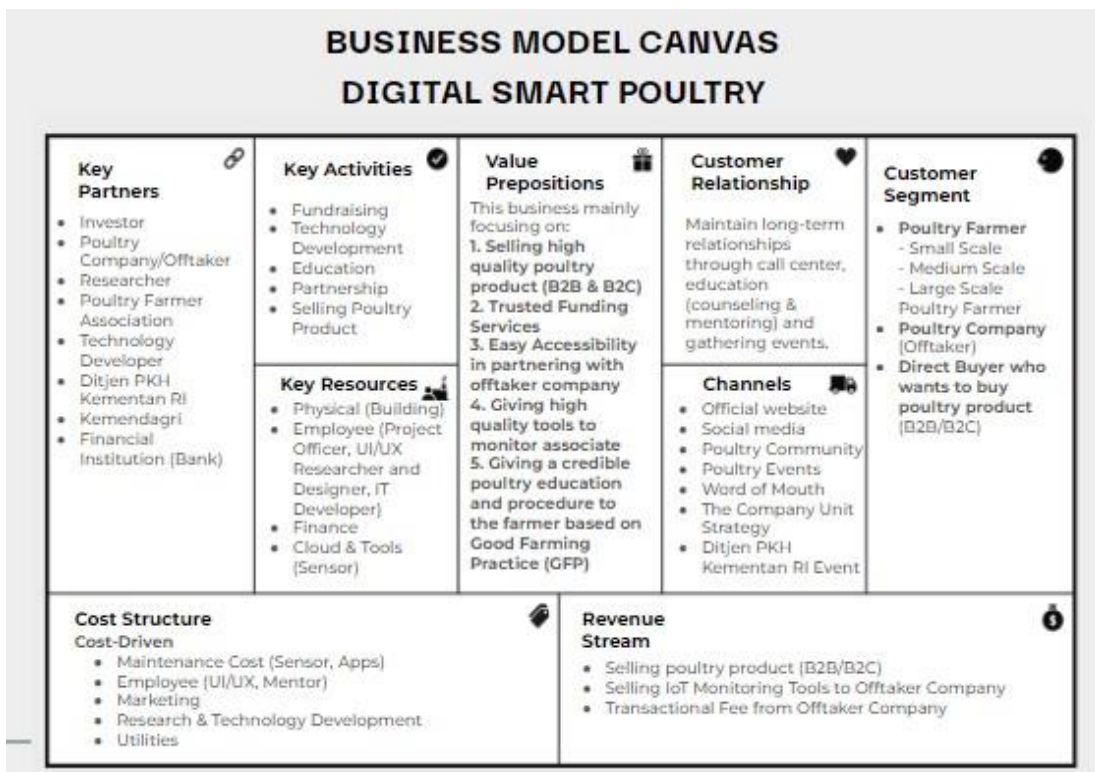


Figure 3. Digital Smart Poultry Business Model Canvas (BMC)

2. VRIO Analysis

VRIO is a strategic planning framework that has been developed by Jay Barney to help a company to obtain its resources and capabilities in order to uncover sustainable competitive advantages (Grant et al., 2014). Sustainable competitive advantage can be described as what the company has that can not be duplicated by the competitors in the future. It has been stated that to build firm resources, a company needs to evaluate its 4 attributes which are: valuable, rare, imitability, and organization. Based on the author's analysis, it can be seen that the VRIO analysis of smart poultry digital platform has been attached to Table 4.

Table 4. VRIO analysis

Resources Type	Valuable	Rare	Costly to Imitate	Exploited by the Organization	Competitive Implication
Tangible Resources and Capabilities					
Human	Yes	Yes	Yes	Yes	Sustained competitive advantage
Physical	Yes	Yes	Yes	No	Unused competitive advantage
Infrastructure	Yes	Yes	Yes	No	Unused competitive advantage
Intangible Resources and Capabilities					
Reputational	Yes	Yes	Yes	No	Unused competitive advantage
Knowledge	Yes	Yes	Yes	Yes	Sustained competitive advantage
Features	Yes	Yes	Yes	Yes	Sustained competitive advantage



F. SWOT Analysis

SWOT analysis stands for Strength, Weakness, Opportunities, and Threats. The purpose of SWOT analysis is to help the organization determine their strength and weakness to be able to optimize the available opportunities and minimize the risk impacted by external threats.

Table 5. SWOT Analysis

Strength	Weakness
<ul style="list-style-type: none"> • The platform is costly to imitate by the competitors (S1) → VRIO • Offer partnership features with bigger offtaker company (S2) → BMC • Giving a credible poultry education and implementing a Good Farming Practice system to the poultry farmers (S3) → BMC • Trusted by financial institution (S4) → VRIO • Closed-loop partnership system (S5) → BMC 	<ul style="list-style-type: none"> • IoT sensor still under development (W1) → VRIO – Infrastructure • Distribution sales and partnerships have not been optimized yet (W2) → VRIO - Reputational • Lack of promotions (W3) → VRIO – Reputational
Opportunities	Threats
<ul style="list-style-type: none"> • The poultry product is projected to be surplus (O1) → PESTEL - Economics • The government has developed regulations regarding stabilize poultry and promotes the digital transformations (O2) → PESTEL - Politics & Legal • Technology implementation such as digitalization and IoT for the smart farming (O3) → PESTEL • Poultry farmers started to become aware of using technology (O4) → Consumer Analysis 	<ul style="list-style-type: none"> • Fierce rivalry in the agricultural sector (T1) → 5 Forces Analysis & Competitor Analysis • Lack of chicken feeds distribution which can lead to price increase (T2) → Consumer Analysis • Climate change and poultry diseases can increase chicken mortality (T3) → PESTEL – Environment • The demand for poultry products is less than its supply (oversupply) (T4) → PESTEL – Economics • The dependency of poultry farmers on the middleman is high (T5) → PESTEL – Sociocultural

BUSINESS SOLUTION

A. TOWS Analysis

TOWS analysis is the extended tool of SWOT that can help the company to formulate the most suitable business strategy through the combination of internal and external matrix comprehensively.

Table 6. TOWS Formulation

		Strength	Weakness
		Internal Factor Analysis	S1: The platform is costly to imitate by the competitors. S2: Offer partnership features with bigger offtaker company. S3: Giving a credible poultry education and implementing a Good Farming Practice system to the poultry farmers. S4: Trusted by financial institution. S5: Closed-loop partnership system.
External Factor Analysis	Opportunities	SO Strategies	WO Strategies
	O1: The poultry product is projected to be surplus. O2: The government has developed regulations regarding stabilize poultry and promotes the digital transformations. O3: Technology implementation such as digitalization and IoT for the smart farming. O4: Poultry farmers started to become aware of using technology.	SO1: S1, S4, O1, O2, O3, O4 - Maximize poultry product sales and productivity. SO2: S2, S3, S4, S5, O2, O3, O4 - To exploit the government support related to digitalization, digital smart poultry's capability should be increased (especially in IoT). The business development and marketing digitalization should be optimized.	WO1: W2, O2 - Collaborate with poultry community, offtaker company, and middleman to stabilize the poultry price in Indonesia. WO2: W1, O2, O3 - Invest in developing poultry IoT sensor for the smart farming. WO3: W3, O1, O2, O3, O4 - Develop digital marketing strategy.
	Threats	ST Strategies	WT Strategies
T1: Fierce rivalry in the agricultural sector. T2: Lack of chicken feeds distribution which can lead to price increase. T3: Climate change and poultry diseases can increase chicken mortality. T4: The demand for poultry products is less than its supply (oversupply). T5: The dependency of poultry farmers on the middleman is high.	ST1: S1, S2, S3, S4, T1, T2, T3, T4 - Optimize the services to gain customer satisfaction. ST2: S2, S3, S4, S5, T2, T3, T4 - The partnership with offtaker company can be optimized to minimize the financial and operational risk. ST3: S3, T2, T3, T5 - Through digital education, this apps can provide knowledge related poultry industry.	WT1: W2, T1, T2, T4, T5 - Empowering the function of middlemen in providing access to chicken's feed distribution, sales distribution, and other breeder partnerships. WT2: W1, T3 - Using technology and education from digital smart poultry, the farmers can develop the facilities that have been provided to minimize the risk of death. WT3: W2,W3, T1 - Maximize the use of integrated marketing strategy to maximize the promotions.	



Continuing from the TOWS analysis, the author used the Quantitative Strategic Planning Matrix (QSPM) as a tool to select the most suitable approach to be implemented in this smart poultry digital platform. The Quantitative Strategic Planning Matrix (QSPM) is a business method that has the purpose of assessing and comparing the attractiveness of various feasible alternative strategies based on internal and external analysis. It consisted of strategic alternatives, key factors, weight, attractiveness score, total attractiveness score, and sum total attractiveness score. The score of attractiveness are range from 1 = not acceptable, 2 = possibly acceptable, 3 = probably acceptable, and 4 = most acceptable. Before formulating the QSPM, the author has already constructed Internal Factor Evaluation Matrix (IFE) and External Factor Evaluation Matrix (EFE) based on SWOT that was already constructed before.

Table 7. IFE and EFE for Digital Smart Poultry

IFE Matrix					
No	Strength	Weight	AS	TAS	
1	S1	The platform is costly to imitate by the competitors	10%	3	0.3
2	S2	Offer partnership features with bigger offtaker company	15%	4	0.6
3	S3	Giving a credible poultry education and implementing Good Farming Practice system to the poultry farmers	15%	3	0.45
4	S4	Trusted by financial institution	15%	4	0.6
5	S5	Closed-loop partnership system	10%	3	0.3
No	Weakness		Weight	AS	TAS
1	W1	IoT sensor still under development	10%	3	0.3
2	W2	Distribution sales and partnership have not been optimized yet	15%	4	0.6
3	W3	Lack of promotions	10%	3	0.3
Total			100%		3.45
EFE Matrix					
No	Opportunities	Weight	AS	TAS	
1	O1	The poultry product is projected to be surplus	10%	3	0.3
2	O2	The government has developed regulations regarding stabilize poultry and promotes the digital transformations	15%	4	0.6
3	O3	Technology implementation such as digitalization and IoT for the smart farming	15%	3	0.45
4	O4	Poultry farmers started to become aware of using technology	10%	3	0.3
No	Threats		Weight	AS	TAS
1	T1	Fierce rivalry in the agricultural sector	10%	3	0.3
2	T2	Lack of chicken feeds distribution which can lead to price increase	10%	4	0.4
3	T3	Climate change and poultry diseases can increase chicken mortality	10%	3	0.3
4	T4	The demand of poultry product is less than its supply	10%	4	0.4
5	T5	The dependency of poultry farmers on the middleman is high	10%	4	0.4
Total			100%		3.45



After identifying the external and internal factors that the company already had, it can be seen that the total attractive score for Smart poultry digital platform's internal factor is **3.45**. Meanwhile, for its external factor, Smart poultry digital platform's total attractive score is **3.45**. Overall, the internal and external factor of Smart poultry digital platform is **probably acceptable**. Based on IFE and EFE data, the Quantitative Strategic Planning Matrix (QSPM) weighted can be generated. To determine the best strategy alternatives among 11 strategies, an attractiveness score will be calculated. The attractiveness score for each strategy is specified directly by the expert judges from the internal ICT company team through discussion. In the same step as before, the judges will define every strategy based on terms 1 = not acceptable, 2 = possibly acceptable, 3 = probably acceptable, and 4 = most acceptable. The attractive score that the judges give is objectively identified based on the relatedness, resources, capabilities, and needs of each strategy. The result of the Smart poultry digital platform Quantitative Strategic Planning Matrix (QSPM) can be seen in **Table 8** below.

Table 8. The Quantitative Strategic Planning Matrix (QSPM) for Digital Smart Poultry based on SWOT-TOWS

Quantitative Strategic Planning Matrix (based on SWOT-TOWS)																										
No	Key Factors	Weight	SO1		SO2		WO1		WO2		WO3		ST1		ST2		ST3		WT1		WT2		WT3			
			AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS		
1	Strength	S1	The platform is costly to imitate by the competitors	5%	4	0.2	3	0.15	2	0.1	2	0.1	3	0.15	3	0.15	3	0.15	2	0.1	3	0.15	2	0.1	3	0.15
		S2	Offer partnership features with bigger off-taker company	7.5%	3	0.225	4	0.3	4	0.3	2	0.15	2	0.15	4	0.3	4	0.3	2	0.15	4	0.3	2	0.15	4	0.3
		S3	Giving a credible poultry education and implementing Good Farming Practice system to the poultry farmers	8%	3	0.225	4	0.3	2	0.15	4	0.3	2	0.15	3	0.225	3	0.225	4	0.3	3	0.225	4	0.3	3	0.225
		S4	Trusted by financial institution	8%	4	0.3	4	0.3	2	0.15	3	0.225	2	0.15	4	0.3	4	0.3	2	0.15	2	0.15	3	0.225	2	0.15
		S5	Closed-loop partnership system	5%	3	0.15	3	0.15	3	0.15	3	0.15	2	0.1	3	0.15	3	0.15	2	0.1	3	0.15	2	0.1	3	0.15
1	Weakness	W1	IoT sensor still under development	5%	2	0.1	4	0.2	4	0.2	4	0.2	2	0.1	3	0.15	3	0.15	2	0.1	4	0.2	2	0.1	4	0.2
		W2	Distribution sales and partnership have not been optimized yet	8%	2	0.15	3	0.225	2	0.15	2	0.15	2	0.15	2	0.15	2	0.15	4	0.3	2	0.15	4	0.3	2	0.15
		W3	Lack of promotions	5%	2	0.1	3	0.15	2	0.1	2	0.1	4	0.2	3	0.15	2	0.1	3	0.15	3	0.15	3	0.15	3	0.15
1	Opportunities	O1	The poultry product is projected to be surplus	5%	3	0.15	3	0.15	3	0.15	2	0.1	3	0.15	3	0.15	2	0.1	2	0.1	2	0.1	2	0.1	3	0.15
		O2	The government has developed regulations regarding stabilize poultry and promotes the digital transformations	8%	2	0.15	4	0.3	4	0.3	3	0.225	4	0.3	4	0.3	3	0.225	3	0.225	4	0.3	3	0.225	4	0.3
		O3	Technology implementation such as digitalization and IoT for the smart farming	8%	3	0.225	3	0.225	3	0.225	2	0.15	3	0.225	3	0.225	3	0.225	3	0.225	3	0.225	3	0.225	3	0.225
		O4	Poultry farmers started to become aware of using technology	5%	4	0.2	4	0.2	2	0.1	3	0.15	4	0.2	4	0.2	3	0.15	2	0.1	2	0.1	4	0.2	4	0.2
1	Threat	T1	Fierce rivalry in the agricultural sector	5.0%	3	0.15	3	0.15	2	0.1	3	0.15	3	0.15	4	0.2	3	0.15	3	0.15	3	0.15	3	0.15	3	0.15
		T2	Lack of chicken feeds distribution which can lead to price increase	5.0%	4	0.2	4	0.2	2	0.1	3	0.15	2	0.1	3	0.15	3	0.15	3	0.15	4	0.2	3	0.15	4	0.2
		T3	Climate change and poultry diseases can increase chicken mortality	5.0%	4	0.2	3	0.15	2	0.1	2	0.1	2	0.1	3	0.15	3	0.15	3	0.15	3	0.15	3	0.15	3	0.15
		T4	The demand of poultry product is less than its supply	5.0%	4	0.2	4	0.2	2	0.1	2	0.1	3	0.15	4	0.2	4	0.2	2	0.1	4	0.2	2	0.1	4	0.2
		T5	The dependency of poultry farmers on the middleman is high	5.0%	4	0.2	4	0.2	4	0.2	4	0.2	2	0.1	3	0.15	3	0.15	4	0.2	4	0.2	3	0.15	3	0.15
Sum Total Attractiveness Score			100%		3.13	3.55	2.68	2.70	2.63	3.30	3.03	2.75	3.10	2.88	3.20											

As seen in **Table 8** above, it can be summarized that the most suitable strategy based on QSPM result is smart digital poultry platform should increase its capability to implement smart poultry farming using IoT and optimize digitalization for business development and marketing (SO2) with a total attractiveness score **3.55**, optimize their services to gain customer satisfaction (ST1) with total attractiveness score **3.30**, and maximize the used of integrated marketing strategy to maximize this platform promotion (WT3) with total attractiveness score **3.20**.



B. Proposed Strategy

1. Increase the smart poultry digital platform capability by implementing smart poultry farming using IoT and optimize digitalization for business development and marketing (SO2)

The internal capabilities that smart poultry digital platform should consider are: develop IoT, create enterprise data strategy and data practice about the poultry industry, recruit specialized talent to handle the IoT for monitor poultry, develop cyber security to protect data privacy, and deploy IoT program based on the consumer's needs. According to the consumer analysis interviews, the IoT equipment most needed by farmers is NH3 (ammonia) level measurement. In terms of business development, it can be optimized by digitalization to explore the untapped business potential that can grow new income streams. For marketing, since 75% of poultry farmers are technology savvy (based on consumer analysis interview), a promotion online can be the most effective and efficient strategy.

2. Optimize their services to gain customer satisfaction (ST1)

Service marketing is a marketing approach that is used by a company to serve its customers so that sales and awareness will increase. The objectives of service marketing are to provide valuable services (intangible) and to build a good relationship with the customer.

3. Maximize the use of integrated marketing strategy to maximize the promotion (WT3)

As a newcomer in the digital poultry industry, this app is still in progress to raise brand awareness for its targeted consumer. In increasing awareness, various promotional media or advertisements are needed so that potential consumers can easily remember and get used to using the apps. One of the ways that can be implemented to raise product awareness is to construct an integrated marketing strategy. By using this strategy, all the promotions will be integrated and unified.

CONCLUSION AND IMPLEMENTATION PLAN

A. Conclusion

1. Coronavirus diseases (COVID-19) have been affected to the decrease in poultry product demand which leads to oversupply and declining in the margin. As one of the companies that promote digital transformation in Indonesia, Indonesian ICT company develop a new subsector in its current digital agricultural platform to solve this problem. This company created Minimum Viable Product (MVP) for smart poultry digital platform apps. The features that have been offered consist of financial funding, partnership opportunity with an offtaker company, and selling poultry products to another business (B2B) or direct customers (B2C). The current problem that occurred in this project mainly focused on determining market readiness for smart poultry digital platform and creating the most suitable marketing strategy for targeted consumers to enter the market.
2. The author also validates the poultry issue that has occurred and how necessary the smart poultry digital platform be implemented in order to solve the poultry farmers' problem. Based on a preliminary survey that has been conducted by interviewing poultry farmers in West Java, it is valid that the common problem that happened in the poultry industry are: the high chicken mortality rate, the increase in feed prices causing the decline in profit margin, the existence of middleman who harms poultry farmers in reducing the selling profit, and the declining of poultry product demand and price.
3. Continuing from the preliminary survey, the author did a customer analysis to gain deeper insight related to the smart poultry digital platform necessities. In summary, the respondent's perception of smart poultry digital platform matched the features that this platform offered and considered important to them. Moreover, 75% of the targeted consumers are technology savvy and interested in trying the application because they think it can help companies to grow and provide business funding facilities. Therefore, **this digital platform can be considered necessary and ready to be implemented in the poultry industry market.**
4. After knowing the business problems that occur in the company, the author conducted an environmental analysis to formulate various alternative strategies based on internal and external analysis. The internal analysis uses the business model canvas (BMC) and VRIO analysis to determine the company's internal capabilities (strengths and weaknesses). As for external analysis, PESTEL analysis, Porter's Five Forces analysis, consumer analysis (based on interviews with 4 poultry farmers as targeted consumers) are used, and competitor analysis to identify opportunities and threats from an external perspective. Therefore, the SWOT-TOWS matrix can be formulated to generate an alternative business strategy for this app. By using QSPM analysis, the most suitable business and marketing strategy that can be implemented for the targeted poultry farmers are **1) Increase the smart poultry digital platform capabilities (especially in IoT to help solve the poultry farmers' problem). Optimize**



digitalization for business development and marketing (SO2), 2) Optimize the service marketing (ST1), and 3) Maximize the use of integrated marketing strategy to maximize promotion (WT3).

B. Implementation Plan

The proposed strategy to be implemented in smart poultry digital platform can be categorized into 4 main objectives based on the goals of each focused area. The implementation plan consisted of 1) increasing the company capabilities by implementing IoT (development from strategy no 1 – SO2), 2) optimizing business development digitalization (development form strategy no 1 – SO2), 3) optimizing integrated marketing strategy (development form strategy no 1 – SO2 and no 3 – WT3), and 4) optimize the service marketing strategy (development from no 2 – ST1).

Table 9. Digital Smart Poultry Proposed Implementation Plan

No	Proposed Strategy	Implementation Plan	Aug 22				Sept 22				Oct 22				Nov 22				Dec 22				Jan 23				PIC	Key Performance Indicator (KPI)
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
1	Increase capability for using IoT (from strategy no 1 – SO2)	Cost Budgeting																							Finance	The project development cost already budgeted		
		Create enterprise data strategy and practice related poultry industry																								IT	Data enterprise strategy and practice has been created	
		Recruit specialized talent to build IoT system and sensor																								IoT	Specialized talent and IoT has been recruited	
		Develop cyber security to protect data privacy																								IT	The cyber security system has been established	
		Deploy IoT sensor based on customer's need																								IoT	IoT sensor has been deployed	
2	Optimize business development digitalization (from strategy no 1 – SO2)	Digitize physical data/activities that can convert to be digital																							Business Strategy and Development	Physical data and activities has been digitized		
		Explore untapped business potential																								Business Strategy and Development	Identified new and feasible business features	
		Develop new features																								Business Strategy and Development	New features has been developed	
		Cost Budgeting																								Finance	New features development cost already budgeted	
		Cost Budgeting																								Finance	Marketing cost already budgeted	
3	Optimize integrated marketing strategy (from strategy no 1 – SO2 and no 3 – WT3)	Website/Apps Development																							Marketing	New website/Apps development is already established		
		Build-in Chatbot in Website/Apps																								IT	Chatbot in website/apps is already established	
		Search Engine Optimization																								Marketing	The website is placed at the top of the search engine	
		Hire Public Relation																								Human Resource	Public relation has been hired	
		Expand new partnership																								Marketing	New partner has been expanded	
		Create interactive advertisement																								Marketing	The website traffic has been increased	
		E-mail marketing																								Marketing	The website traffic has been increased	
		Social media marketing																								Marketing	Social media engagement rate has been increased	
		Event Gathering with Poultry Community																								Marketing & CSR	The apps user has been increased	



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