Strategic Use of AI Image Generators for Product Development and Market Expansion In The Bakery Business

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Abstract: *The evolution of Society 5.0, characterized by advanced technological integration, presents new opportunities for businesses to enhance operations and customer engagement. This study proposes the development of a comprehensive e-commerce website for Olson's Patisserie, integrated with AI Image Generator technology, to improve digital sales and expand market reach. The proposal is informed by strategic insights from Porter's Five Forces, Fishbone analysis, and the VRIO framework, highlighting the need for enhanced digital marketing, technological integration, and operational efficiency. The website will serve as a central hub for digital marketing, leveraging Meta Ads to boost brand awareness and reach a broader audience. AI features will enable personalized cake design, enhancing customer satisfaction and loyalty through an interactive shopping experience. The platform will also streamline operations with a comprehensive dashboard for order management and real-time analytics, supporting agile decision-making and strategic planning. By addressing identified weaknesses and capitalizing on opportunities, the integration of AI technology into Olson's Patisserie's product development process promises to strengthen its competitive position, improve customer engagement, and drive business growth in the dynamic bakery industry.*

Keyword: *AI Image Generator, Meta Ads, Custom Cake, Product Development, Website, Bakery industry*

Abstrak: Evolusi Society 5.0, yang ditandai oleh integrasi teknologi canggih, menghadirkan peluang baru bagi bisnis untuk meningkatkan operasi dan keterlibatan pelanggan. Studi ini mengusulkan pengembangan situs web e-commerce komprehensif untuk Olson's Patisserie, yang diintegrasikan dengan teknologi AI Image Generator, untuk meningkatkan penjualan digital dan memperluas jangkauan pasar. Usulan ini didasarkan pada wawasan strategis dari analisis Lima Kekuatan Porter, analisis Fishbone, dan kerangka kerja VRIO, yang menyoroti

kebutuhan akan peningkatan pemasaran digital, integrasi teknologi, dan efisiensi operasional. Situs web ini akan berfungsi sebagai pusat utama untuk pemasaran digital, memanfaatkan Meta Ads untuk meningkatkan kesadaran merek dan menjangkau audiens yang lebih luas. Fitur AI akan memungkinkan desain kue yang dipersonalisasi, meningkatkan kepuasan dan loyalitas pelanggan melalui pengalaman belanja interaktif. Platform ini juga akan menyederhanakan operasi dengan dasbor komprehensif untuk manajemen pesanan dan analitik waktu nyata, mendukung pengambilan keputusan yang gesit dan perencanaan strategis. Dengan mengatasi kelemahan yang diidentifikasi dan memanfaatkan peluang yang ada, integrasi teknologi AI dalam proses pengembangan produk Olson's Patisserie menjanjikan untuk memperkuat posisi kompetitifnya, meningkatkan keterlibatan pelanggan, dan mendorong pertumbuhan bisnis di industri bakery yang dinamis.

Kata Kunci: *AI Image Generator, Meta Ads, Custom Cake, Product Development, Website, Bakery industry*

INTRODUCTION

The concept of Society 5.0 represents an evolution beyond the Fourth Industrial Revolution, characterized by advanced technological integration into daily life. The Fourth Industrial Revolution itself is defined by the rapid advancement of digital technology, encompassing both hardware and software designed to streamline human tasks and activities. This has resulted in a preference for instantaneous or rapid solutions in various aspects of life, with digital devices becoming increasingly intelligent and futuristic due to technological progress, including developments that mimic human intelligence (Schwab, 2017).

In Indonesia, the bakery business, particularly the cake and bakery sector, is a popular choice for entrepreneurs due to its broad consumer appeal. The sector is experiencing growth across various scales of enterprises, from small to large, alongside advancements in supporting industries such as machinery and raw materials like flour. Google Trends data indicates that the keyword "Custom Cake" has maintained high interest levels with fluctuating trends over the past three years, reflecting a strong demand among the Indonesian population (Google Trends, 2023). According to Euromonitor International, the bakery market in Indonesia was valued at approximately USD 4.5 billion in 2020, driven by urbanization, increased disposable incomes, and changing consumer preferences towards convenient food options. The Indonesian Ministry of Industry reported a 7.91% growth rate in the food and beverage sector, including bakeries, in 2021. Additionally, Indonesia's status as one of the largest flour importers in Asia ensures a steady supply for domestic bakery production, supporting the industry's robust growth (Euromonitor International, 2020; Indonesian Ministry of Industry, 2021; USDA Foreign Agricultural Service, 2022).

In the competitive landscape of today's digital era, leveraging artificial intelligence (AI) technology is vital for businesses aiming to maintain a competitive edge and minimize costs. Innovative strategies are crucial for enhancing the competitiveness of products or services. According to McKinsey, by 2022, 50% of companies worldwide had adopted AI technology, a significant increase from 2017. Statista projects the AI market to grow at a compound annual growth rate (CAGR) of 15.83% from 2024 to 2030, reaching a market size of $738.80 billion by 2030 (McKinsey, 2022; Statista, 2023).

AI Image Generators, utilizing deep learning algorithms and large datasets, are a notable advancement in AI technology. These tools can generate images that closely resemble the original, which can be particularly beneficial in product development. By analyzing consumer data, AI Image Generators can provide design recommendations and insights into market trends for cakes, enabling businesses to make smarter and more relevant decisions. This leads to the production of products that better meet customer needs, enhance

loyalty, and reduce the risk of custom cake design failures (Goodstats, 2022).The integration of AI Image Generators in product development addresses several key issues. Firstly, AI can analyze vast amounts of consumer data to identify preferences and emerging trends. This allows businesses to design products that are more likely to resonate with their target market (Chen et al., 2020). Secondly, AI Image Generators can produce a variety of design options quickly, enabling businesses to explore creative and innovative designs without the need for extensive manual effort. This accelerates the product development cycle and allows for more experimentation (Li et al., 2021). Thirdly, automating the design process with AI reduces the need for extensive human resources and minimizes the costs associated with trial and error in product design. This efficiency is crucial for maintaining competitiveness in a rapidly evolving market (Smith & Anderson, 2022). Fourthly, by leveraging AI, businesses can quickly adapt to changing market demands. AI Image Generators can provide real-time insights into consumer preferences, allowing for timely adjustments to product offerings (Jones et al., 2023). Additionally, AI enables businesses to offer highly customized products tailored to individual customer preferences. This personalization can enhance customer satisfaction and loyalty, as consumers feel their unique needs are being met (Zhang & Liu, 2022). Lastly, AI Image Generators can simulate various design scenarios and predict potential issues before the product goes to market. This proactive approach reduces the risk of design failures and ensures higher quality products (Brown et al., 2021). By integrating AI Image Generators into their product development processes, businesses in the bakery sector, and beyond, can harness the power of AI to create innovative, consumer-focused products that stand out in the competitive marketplace.

METHOD
Data Collection Methods

In gathering data, the approach utilized is qualitative methodology, chosen for its focus on strategy formulation and comprehensive solutions. This method, which involves the collection, analysis, and interpretation of non-numeric data, provides deep insights into social contexts, individual experiences, and the meanings inherent in phenomena (Creswell & Poth, 2018). The data collection methods employed include interviews, observations, surveys, and benchmarking. Interviews and observations are particularly effective, offering in-depth exploration of individual perspectives and firsthand understanding of contexts and behaviors (Denzin & Lincoln, 2018). Benchmarking allows for comparison with industry best practices (Camp, 1989). This research aims to understand behaviors, perceptions, motivations, and actions holistically through descriptive analysis within natural contexts, focusing on a complete picture of the phenomena rather than fragmented variables (Patton, 2015).

The goal of this research includes developing a prototype system for AI in product development. To integrate this objective, interviews with industry experts, AI developers, and product designers will gather detailed insights into the requirements and challenges of AI integration. Observations of current product development processes will identify practical applications and potential improvements. Surveys will capture broader stakeholder input on AI's benefits and concerns, while benchmarking will analyze successful AI implementations in various industries. These methods collectively ensure that the AI prototype system is designed based on real-world data and expert insights, making it practical and effective for enhancing product development in the bakery sector and beyond.

Data Analysis Methods

The author employs a descriptive data analysis method to explore and transform raw data into understandable and interpretable forms. Several analytical frameworks are utilized to provide a structured approach to understanding and solving the challenges faced by Olson's Patisserie.

1. Porter's Five Forces Analysis: This tool is used to identify external factors influencing Olson's Patisserie, including the competitive rivalry, threat of new entrants, threat of substitutes, bargaining power of suppliers, and bargaining power of customers. This analysis helps in understanding the competitive dynamics and market structure, providing a basis for targeted solutions (Porter, 2008).
2. Fishbone Analysis: Also known as Ishikawa or cause-and-effect analysis, this method is used to pinpoint the root causes of issues. It facilitates a systematic approach to problem-solving by identifying potential causes of problems, categorizing them, and analyzing their effects on the business (Ishikawa, 1986).
3. SWOT and VRIO Analyses: SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis assesses Olson's Patisserie's internal and external conditions. VRIO (Value, Rarity, Imitability, Organization) analysis focuses on developing the bakery's resources and capabilities to achieve sustainable competitive advantage. These tools help in formulating strategic initiatives that leverage strengths and opportunities while addressing weaknesses and threats (Barney, 1991; Gurel & Tat, 2017).
4. STPD Analysis: This framework is employed to formulate marketing strategies, including Segmentation, Targeting, Positioning, and Differentiation. It serves as the foundation for effective and relevant Meta Ads strategies by ensuring that marketing efforts are focused on the most promising market segments and that the brand is positioned uniquely to appeal to its target audience (Kotler & Keller, 2016).

The integration of these data analysis methods aims to address the challenges faced by the bakery business with solutions that align with business needs and the owner's vision. By employing a comprehensive qualitative approach combined with strategic analytical tools, the author seeks to provide actionable insights and effective strategies for Olson's Patisserie.

Solution Development Methods
SDLC Method
The Software Development Life Cycle (SDLC) encompasses the process of creating and modifying systems, along with the models and methodologies used for their development. It is a structured approach in software development that includes stages such as planning, analysis, design, implementation, testing, and maintenance (Royce, 1970). One derivative of SDLC is the waterfall method, often referred to as the classic life cycle. This approach reflects a systematic and sequential approach to software development, starting with determining user requirements and progressing through stages including planning, modeling, construction, and system deployment. The process concludes with supporting the completed software. The waterfall development model adopts a structured and sequential approach known as "waterfall" because each stage must await the completion of the previous one and proceeds in a linear fashion. It follows a linear pattern from the initial system development stage, planning, to the final stage, maintenance. Each subsequent stage is only undertaken after the completion of the previous one, with no possibility of going back or restarting previous stages (Sommerville, 2016).

Gartner Method
The Gartner method in Enterprise Architecture (EA) design is a process model focused on the iterative development of enterprise architecture. This Gartner Framework provides guidance to EA teams in developing effective and efficient architectures. The model comprises several viewpoints that aid in identifying and integrating various aspects relevant to enterprise architecture (Gartner, 2021). The Gartner Framework is utilized to develop business-oriented architectures that meet user needs. Therefore, this model assists in integrating various aspects

related to enterprise architecture and ensures that the developed architecture is effective and efficient in supporting both business objectives and user requirements (Sessions, 2007).

Meta Ads

Meta Ads, introduced by Meta (formerly Facebook), is a paid advertising platform that helps business owners place ads tailored to their budget, goals, target audience, and timeframe for optimal results. Features include location targeting, allowing businesses to specify geographic areas with precision. Meta Ads enhances brand awareness and sales by enabling ad customization according to business needs. The platform also offers a comprehensive analytics system to monitor ad performance, providing insights that allow businesses to make data-driven decisions and optimize their advertising strategies for better results (Meta, 2022; Statista, 2021).

Feasibility Analysis Method
Desirability, Feasibility, and Viability Method
Desirability, Feasibility, and Viability Method
The Desirability, Feasibility, and Viability (DFV) model is an evaluation framework used to assess the potential success or achievement of an initiative or project. This model aims to provide a comprehensive evaluation to ensure informed and measurable decisions regarding the feasibility and long-term success of an initiative (Brown, 2009). The DFV model consists of three main components:

1. Desirability: This aspect assesses how much the product or initiative is desired by the users or target market. It involves understanding user needs, preferences, and overall market demand (IDEO, 2015).
2. Feasibility: This component evaluates how technically, financially, and organizationally feasible it is to implement the idea or concept. It includes an assessment of the available resources, technical capabilities, and financial viability (Osterwalder & Pigneur, 2010).
3. Viability: Viability refers to the ability of a product or initiative to sustain itself and provide long-term value. This involves analyzing the business model, revenue streams, and the potential for long-term sustainability (Johnson, Christensen, & Kagermann, 2008).

By considering desirability, feasibility, and viability simultaneously, companies can make better decisions about whether an idea or concept is worth pursuing, further developing, or abandoning. This holistic evaluation framework helps in assessing the potential success and sustainability of projects or initiatives, ensuring that they meet user needs, can be implemented effectively, and are sustainable in the long run.

Black Box Testing Method

Black Box Testing is a software testing method that does not require knowledge of the internal structure or workings of the software. In this method, testing is conducted by providing inputs and observing outputs without considering the internal code structure. Black box testing evaluates the system from the outside, focusing on inputs/outputs, expected outcomes, and user interfaces to ensure that the system conforms to its specified design and requirements (Myers, Sandler, & Badgett, 2011). The primary advantage of black box testing is that it allows testers to validate the functionality of the software without needing to understand the internal code. This approach helps ensure that the software behaves as expected under various conditions and meets user requirements. Black box testing is particularly useful for functional testing, system testing, and acceptance testing, where the focus is on validating the overall behavior and performance of the software system (Beizer, 1995).

RESULTS AND DISCUSSION
Porter's Five Forces Analysis
The Porter's Five Forces analysis conducted by the author aims to assess external factors that directly or indirectly impact the cake business, The assessment to be conducted is based on interviews with the owner of the cake business and will be rated according to the following criteria:

- Low: if the score is between 0-3
- Medium: if the score is between 3.1-6
- High : if the score is between 6,1-9

Table 1. Result of Bargaining Power of Buyers Analysis

No	Variable	Indicator	Weight	Rating	Score
		Bargaining Power of Buyers			
1.	Consumer demand	Consumers make specific demands regarding the products they order.	0.3	4	1.2
2.	Price changes	Consumers are sensitive to price changes.	0.2	3	0.6
3.	Behavioral changes	Consumer purchasing behavior shifts to offline bakeries.	0.2	3	0.6
4.	Satisfaction factors	Consumers feel satisfied with the products they purchase.	0.3	7	2.1
Total			**1.0**		**4,5**

Table 2. Result of Bargaining Power of Suppliers Analysis

No	Variable	Indicator	Weight	Rating	Score
		Bargaining Power of Suppliers			
1.	Supplier products	Supplier products are crucial to the business.	0.3	7	2.1
2.	Dependency on suppliers	There is a high dependency on 1 or 2 suppliers.	0.4	2	0.8
3.	Negotiation with suppliers	We can negotiate raw material prices with suppliers.	0.3	2	0.6
Total			**1.0**		**3,5**

Table 3. Result of Threat of Substitutes

Threat of Substitutes

No	Variable	Indicator	Weight	Rating	Score
1.	Substitute Products	The business offers products with many substitutes.	0.3	4	1.2
2.	Substitute Product Offerings	Substitute products have better features and promotions.	0.4	4	1.6
3.	Market Share of Substitute Products	Substitute products have a larger market share.	0.3	3	0.9
Total			**1.0**		**3,7**

Table 4. Result of Rivalry among Existing Competitors

Rivalry among Existing Competitors

No	Variable	Indicator	Weight	Rating	Score
1.	Number of Competitors	Diverse competitors	0.3	4	1.2
2.	Increase in Number of Competitors	Increasing number of new competitors in the industry	0.2	3	0.6
3.	Product Differentiation	Product differentiation	0.2	4	0.8
4	Consumer Loyalty	High consumer loyalty	0.3	5	1.5
Total			**1.0**		**4.1**

Table 5. Result of Threat of New Entrants

Threat of New Entrants

No	Variable	Indicator	Weight	Rating	Score
1.	Specialized expertise	Specialized expertise required to run the business	0.4	7	2.8
2.	Industry growth	Rapid industry growth	0.3	4	1.2
3.	Consumer loyalty	High consumer loyalty	0.3	5	1.5
Total			**1.0**		**5,5**

The analysis of Porter's Five Forces for Olson's Patisserie suggests that integrating an AI Image Generator for product development can significantly enhance business strategy. By leveraging AI, the bakery can meet specific consumer demands and preferences, boosting satisfaction and loyalty amidst moderate buyer power. The technology can streamline procurement, optimizing resource use and reducing costs in light of lower supplier power. Given the high threat of substitutes and competitive rivalry, AI-driven personalized and innovative cake designs will differentiate Olson's Patisserie in the market. Furthermore, the significant barriers to entry for new competitors underscore the advantage of advanced AI technology in maintaining a competitive edge and solidifying market leadership.

Fishbone Analysis

The Fishbone analysis of Olson's Patisserie reveals several critical issues that can be addressed through the strategic implementation of an AI Image Generator for product development. This approach can significantly enhance various aspects of the business, including marketing, inventory management, custom cake design, and technology utilization.

Marketing Strategy

Current Issue: The brand and products are not widely known, and there is a lack of awareness in utilizing Meta Ads effectively.

AI Strategy: An AI Image Generator can create visually appealing and customized cake designs that can be showcased in Meta Ads campaigns. By leveraging AI-generated images, Olson's Patisserie can create more engaging advertisements that attract a broader audience and enhance brand visibility (Chaffey & Ellis-Chadwick, 2019).

Inventory Management

Current Issue: Lack of stock records and a dedicated team for managing raw material inventory.

AI Strategy: The AI Image Generator can be integrated with inventory management systems to forecast demand based on popular designs and customer preferences. This predictive capability ensures better stock management and reduces waste, aligning inventory levels with market demand (Krajewski, Ritzman, & Malhotra, 2016).

Custom Cake Design

Current Issue: Absence of a dedicated design team and difficulties in meeting unpredictable customer preferences.

AI Strategy: The AI Image Generator can serve as a virtual design team, creating a wide range of custom cake designs based on current trends and customer data. This tool can quickly adapt to changing preferences, allowing Olson's Patisserie to offer highly personalized and innovative designs, thereby meeting customer demands more effectively (Ulrich & Eppinger, 2012).

Technology Utilization

Current Issue: Lack of technology integration in business processes and absence of a business website.

AI Strategy: Implementing the AI Image Generator as part of a comprehensive digital strategy, including the development of a user-friendly website, can streamline operations and enhance the customer experience. The website can feature an interactive design tool powered by AI, allowing customers to customize their cakes online and visualize the final product before placing an order (Laudon & Laudon, 2020; Turban et al., 2018).

By integrating an AI Image Generator into its product development strategy, Olson's Patisserie can address key issues identified in the Fishbone analysis. This technology will not only improve marketing efforts through better advertising visuals but also enhance inventory management, streamline custom cake design processes, and boost overall technology utilization. These improvements will help Olson's Patisserie to better meet customer needs, increase operational efficiency, and strengthen its market position.

VRIO Analysis

The VRIO analysis conducted by the author aims to better understand Olson's Patisserie's resources and capabilities, and to evaluate its potential competitive advantages. The goal is to develop a strategy focused on Olson's Patisserie's competitive strengths.

Table 6. VRIO Analysis

No	Resources & Capabilities	Value	Rare	Imitability	Organize	Category
Tangible						
1.	Premium raw materials	v	v	v	v	Sustainable Competitive Advantage
2.	Business location	v	-	-	-	Competitive Parity
3.	Equipment	v	v	v	v	Sustainable Competitive Advantage
4.	Human resources	v	-	-	-	Competitive Parity
Intangible						
1.	Supplier relations	v	v	v	v	Sustainable Competitive Advantage
2.	Distribution process	v	-	-	-	Competitive Parity
3.	Promotional activities	v	-	-	-	Competitive Parity
4.	Portfolio design	v	v	v	v	Sustainable Competitive Advantage
Capabilities						
1.	Marketing skills	v	-	-	-	Competitive Parity
2.	Order management skills	v	v	-	-	Temporary Competitive Advantage
3.	Cake design skills	v	v	-	-	Temporary Competitive Advantage

The VRIO analysis of Olson's Patisserie reveals that key resources like premium raw materials, equipment, supplier relations, and portfolio design provide sustainable competitive advantages due to their value, rarity, imitability, and organizational support. Conversely, business location, human resources, distribution process, and promotional activities offer competitive parity. To capitalize on these strengths, integrating an AI Image Generator into product development can further enhance the bakery's portfolio design capabilities by creating unique, customized cake designs, thus reinforcing its competitive edge and addressing current gaps in marketing and order management skills. This strategic move will leverage existing advantages while improving overall efficiency and market responsiveness.

SWOT Analysis

The SWOT analysis conducted by the author aims to analyze the strengths and weaknesses of Olson's Patisserie, followed by identifying opportunities and threats that can be derived from these aspects.

Strengths

Olson's Patisserie's strengths, such as the use of premium raw materials and a comprehensive cake design portfolio, can be further enhanced by the integration of an AI Image Generator. This technology can elevate the quality and variety of designs offered, making the most of high-quality ingredients and equipment to create visually appealing and innovative products. The strong supplier relationships ensure a steady supply of raw materials necessary for experimenting with new designs generated by AI. Moreover, the loyal customer base can be

leveraged to gather feedback on AI-generated designs, improving product offerings continuously (Chaffey & Ellis-Chadwick, 2019).

Weaknesses

The weaknesses identified, particularly in digital marketing management and unpredictable customer preferences, can be mitigated through the implementation of an AI Image Generator. By utilizing AI, Olson's Patisserie can create engaging and tailored marketing content for Meta Ads, thereby increasing brand visibility and reach. Furthermore, AI can analyze customer data to predict preferences and trends, helping the business to anticipate and meet customer demands more effectively (Kietzmann et al., 2018).

Opportunities

The bakery industry in Indonesia presents significant opportunities, driven by the widespread popularity of cakes among all age groups. The continuous growth of the bakery sector positions it as a promising and marketable business. Advancements in technology, particularly AI such as AI Image Generators, offer potential benefits in product development by creating innovative digital designs. Affordable social media platforms provide effective promotional tools, enabling the business to expand its reach and attract a broader audience. Integrating AI can streamline design processes and enhance product customization, making the most of these growth opportunities (Davenport & Ronanki, 2018).

Threats

Despite these opportunities, Olson's Patisserie faces threats from the increasing entry of new competitors with superior expertise in the cake and bakery industry. Additionally, the bargaining power of buyers poses a challenge, as consumer demand and satisfaction significantly influence the sustainability of business operations. Addressing these threats requires strategic adaptation, including leveraging technological advancements like AI to differentiate products and improve customer engagement. Enhanced digital marketing strategies using AI can also strengthen market positioning and mitigate the impact of competitive pressures (Porter, 2008).

System Needs Analysis

User Interface

The UI design for the website system is created in the form of a desktop application with web-based implementation. The author develops a modern design to meet the company's needs by adopting cutting-edge technology. In UI development, the author regularly conducts testing to ensure that the interface design integrates well with other systems and is user-friendly. The following applications are used in the design process:
- Wireframe: Figma
- Prototype: Figma
- Web UI Design: HTML, CSS, and JavaScript

Software Interface

In this aspect, the software interface focuses on the optimal capabilities of the integrated system. The required software specifications include:
1.   Admin
   - Operation System: Windows, MacOs,Linux
   - Browser: All Browser
   - Database Management System: MySQL
   - Integrated Development Environment: Visual Studio Code 116
   - Programming Language: PHP, HTML, JavaScript, CSS.

- Framework: Laravel 10

Hardware Interface
In the hardware interface aspect of developing the web application system for Inventory, emphasis is placed on flexibility, hardware dependency, and update availability. The application is designed to operate on various types of hardware, ensuring readiness to accommodate changes and hardware updates in the future.

    Minimum Specifications:
- Processor (CPU): Dual-core 1.6 GHz or equivalent.
- RAM: 4 GB.
- Storage: 20 GB free storage.
- Network: Standard internet connection.

    Recommended Specifications:
- Processor (CPU): Quad-core 2.5 GHz or higher.
- RAM: 16 GB or more.
- Storage: SSD 100 GB or more for high performance.
- Network: Fast internet connection with high bandwidth.

Communication interface
    The Communication Interface in this application consists of administrators managing transaction data and customers performing transactions. Choosing a web-based application provides high flexibility, enabling users to quickly access the application.

System Prototype
    This prototype was created using the Figma application, and its design was then handed over to the developer. It's important to note that this is not the final design of the cake business's website because there have been some adjustments made by the developer to accommodate user feedback after testing the website together.
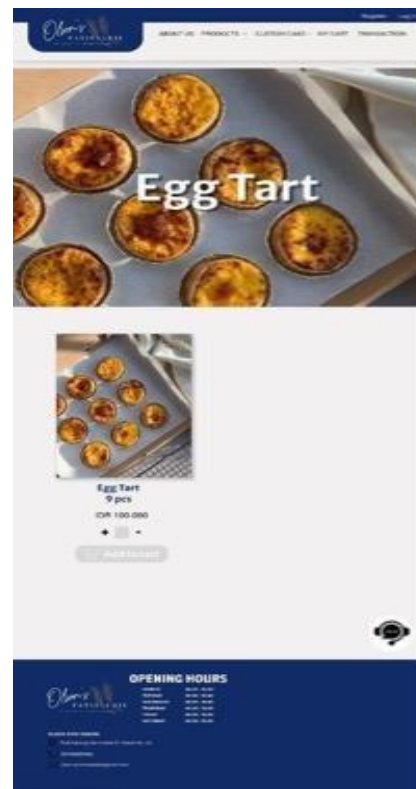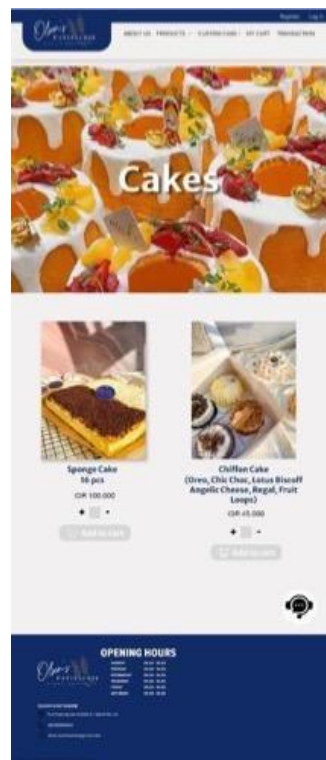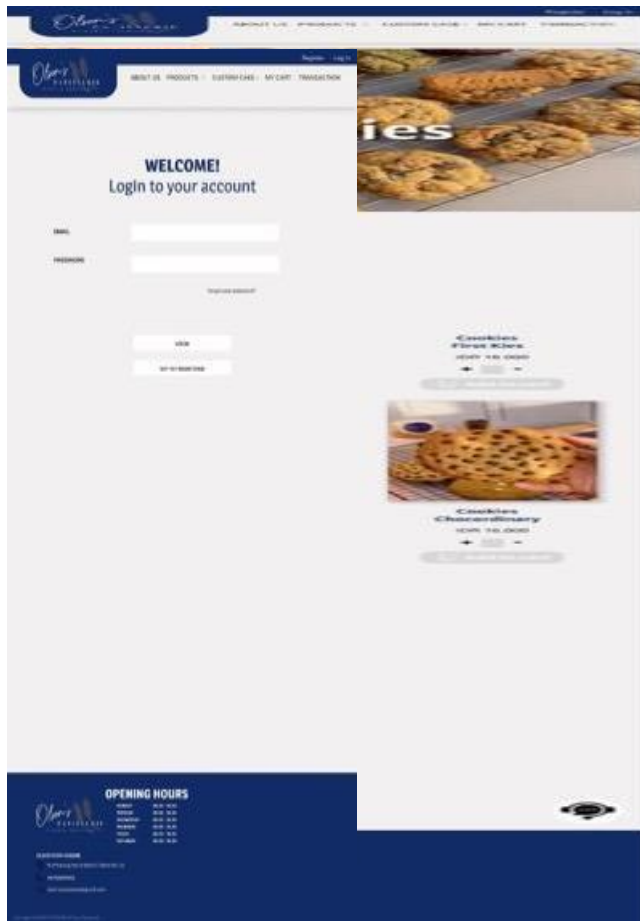

Figure 1. Home

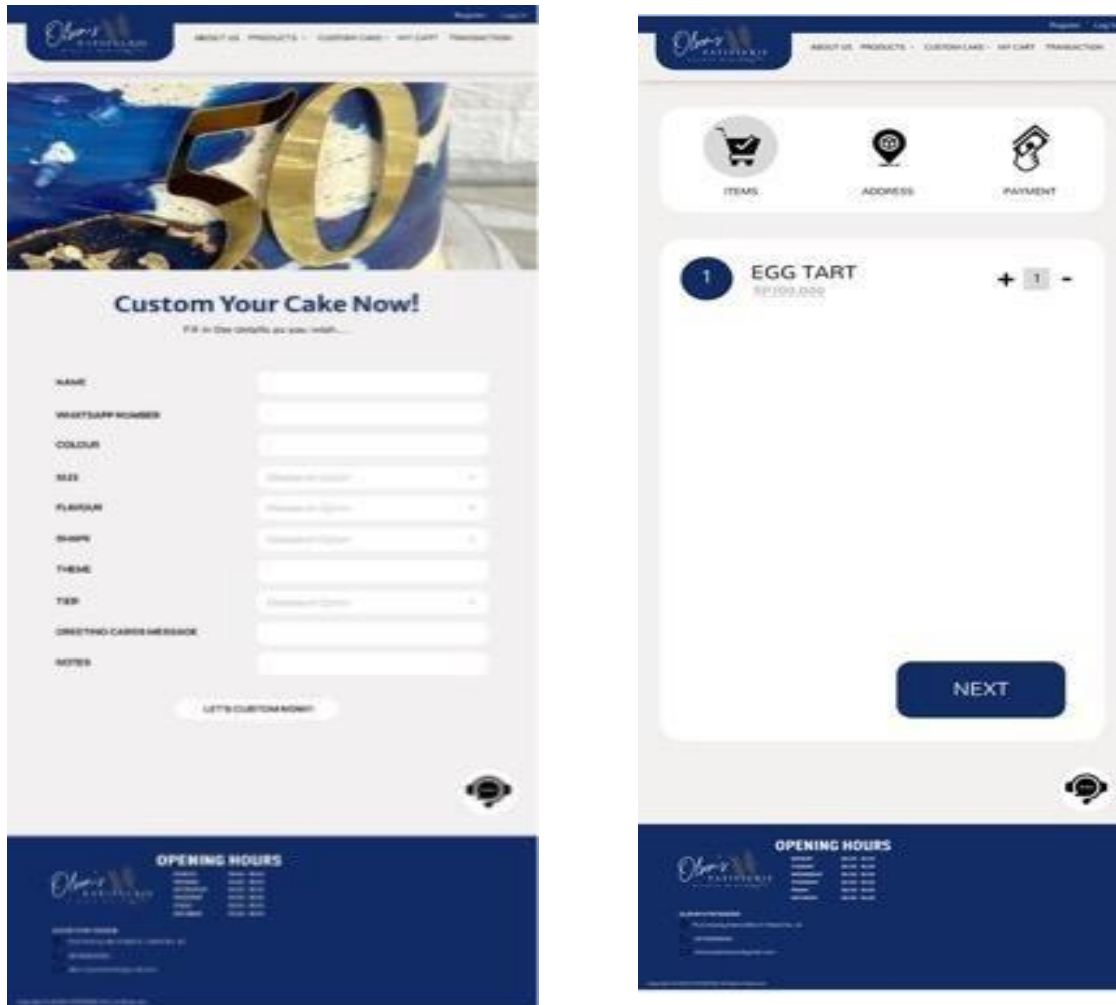**Figure 2. Login & Product**
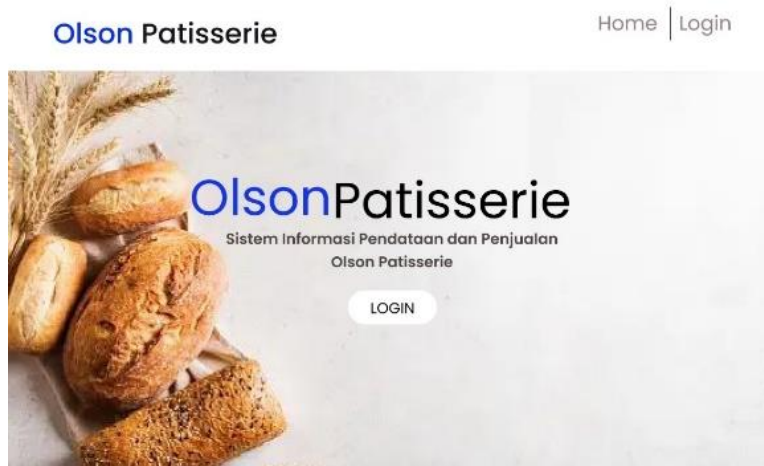
Figure 3. Custom Cake (Form) & Transaction

Figure 4. Homepage

Customer Process

When customers visit the Olson's Patisserie website, they are greeted with an inviting homepage that showcases the latest cake designs and featured products. To get started, customers can easily log in or create an account if they are new users. Once logged

in, they can browse through a diverse range of cake products, organized into categories for easy navigation. Each product page provides detailed descriptions, high-quality images, and customer reviews. For those interested in custom cakes, there is a dedicated "Custom Cake" section where customers can fill out a form specifying their preferences, including cake flavor, size, design elements, and any special requests. After finalizing their custom cake order, customers proceed to the checkout page, where they can review their order, select their preferred payment method, and complete the transaction securely.
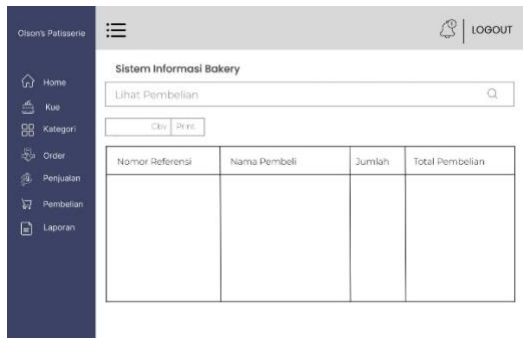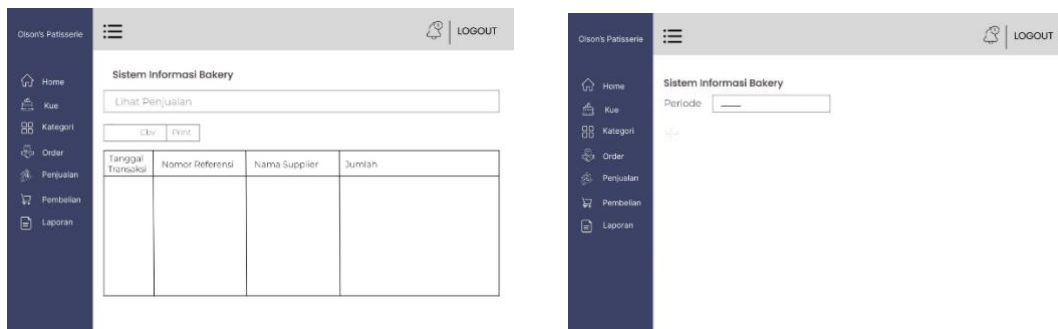

Figure 5. Dashboard & Purchase

Figure 6. Sales & Report

Dashboard, Purchase, Sales, and Report Process

For business users, the website offers a comprehensive dashboard that provides an overview of all activities. Upon logging in, users can access the Dashboard, which displays real-time analytics on website traffic, sales trends, and customer interactions. The "Purchase" section allows users to manage incoming orders, track the status of custom cake requests, and ensure timely fulfillment. In the "Sales" section, users can review detailed sales reports, including revenue breakdowns, popular products, and seasonal trends. Additionally, the "Reports" section offers customizable reports that provide insights into business performance, helping users to make informed decisions. This streamlined system ensures that Olson's Patisserie can efficiently manage operations, enhance customer satisfaction, and optimize business growth.

Discussion

The author proposes designing a comprehensive e-commerce website for Olson's Patisserie to enhance digital sales and reach a broader target market. This strategic move addresses several key insights from the previous analyses, including Porter's Five Forces, Fishbone analysis, and VRIO framework, while leveraging relevant theoretical frameworks to ensure effectiveness.

Strategic Benefits of the Website and Integration of Artificial Intelligence

Creating an e-commerce platform directly addresses the weaknesses identified in the Fishbone analysis, such as the lack of digital marketing management and the need for technology integration. By having a dedicated website, Olson's Patisserie can significantly boost brand awareness and streamline sales operations. The website will serve as a hub for digital marketing strategies, including the utilization of Meta Ads to target a wider audience more effectively (Chaffey & Ellis-Chadwick, 2019). This aligns with the opportunity identified in the SWOT analysis regarding the increasing popularity of cakes and bakeries in Indonesia and the potential of leveraging social media for business expansion.

Incorporating AI features into the website, such as an AI Image Generator, will enhance customer engagement by allowing personalized cake design. Customers can visualize and customize their cakes based on size, details, colors, characters, and delivery dates, making their shopping experience more interactive and immersive (Davenport & Ronanki, 2018). This addresses the identified weaknesses of unpredictable customer preferences by using AI to predict trends and customer desires, thus improving customer satisfaction and loyalty.

Addressing Competitive Forces and Enhancing Capabilities

From the perspective of Porter's Five Forces, the integration of AI and the e-commerce platform can mitigate several threats and enhance competitive advantages. The AI-driven customization and superior customer experience can differentiate Olson's Patisserie from new entrants and substitutes, addressing the high threat of competitors with superior expertise. Furthermore, the strong supplier relationships and comprehensive cake design portfolio highlighted in the VRIO analysis provide sustainable competitive advantages that the website can further capitalize on (Porter, 2008).

Operational and Strategic Enhancements

The website will also feature a comprehensive dashboard for operational management. This will enable Olson's Patisserie to efficiently manage orders, track sales, and generate detailed reports, aligning with the findings from the VRIO analysis that emphasize the importance of organized capabilities. The dashboard will provide real-time analytics and insights, facilitating informed decision-making and strategic planning (Laudon & Laudon, 2020).

CONCLUSION

The proposal to design a comprehensive e-commerce website for Olson's Patisserie, integrated with advanced AI features, presents a strategic solution to enhance digital sales and expand market reach. This initiative effectively addresses key insights from the Fishbone analysis, such as the need for improved digital marketing management and technology integration. By leveraging an AI Image Generator, the website can provide a personalized and interactive shopping experience, improving customer satisfaction and loyalty. This strategic move aligns with the opportunities identified in the SWOT analysis and mitigates threats from competitive forces as highlighted in Porter's Five Forces framework. The integration of AI and a robust e-commerce platform enhances operational efficiency, differentiates the brand in a competitive market, and capitalizes on the sustainable competitive advantages identified in the VRIO analysis.

To realize these benefits, Olson's Patisserie should develop an intuitive e-commerce platform that showcases a diverse range of cake designs and allows for easy navigation. It is essential to optimize the platform for mobile devices to reach a broader audience effectively. Incorporating advanced AI features, such as an AI Image Generator, will enable customers to visualize and customize cakes in real-time. This feature should allow for adjustments in size,

design details, colors, characters, and delivery dates, providing a highly personalized shopping experience.

Leveraging digital marketing is crucial to boost brand awareness and reach a wider audience. Utilizing Meta Ads and other digital marketing strategies will help achieve this. Regular updates to the website with new content and promotions will keep customers engaged and coming back for more. Enhancing operational management is another key recommendation. The website should feature a comprehensive dashboard to manage orders, track sales, and generate detailed reports. Real-time analytics will inform decision-making and strategic planning, ensuring the business remains agile and responsive to market changes. Focusing on customer engagement is vital. Gathering feedback from customers on their experience with the AI customization tool and overall website functionality will provide valuable insights. Using this feedback to make continuous improvements will ensure the platform meets customer expectations and maintains high levels of satisfaction. Lastly, maintaining and building on strong supplier relationships is essential to ensure a steady supply of high-quality raw materials. This will support the production of premium products that align with the personalized designs generated by the AI tool.By implementing these recommendations, Olson's Patisserie can effectively leverage digital technology to enhance its market presence, improve customer satisfaction, and drive business growth in the competitive bakery industry.

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