



UNIVERSITI
TEKNOLOGI
MARA



EXTENDED ABSTRACT BOOK



**2nd International Competition of
Entrepreneurship Business
Innovation**

*"Enhancing Sustainable
Halal Business Through
Digital Innovation"*

Greetings from Rector of Bandung Islamic University

Prof. Dr. H. Edi Setiadi, S.H., M.H.

Rector of Bandung Islamic University, Indonesia



Bismillaahirrahmaanirrahiim

Assalamu 'alaikum Warahamtullahi Wabarakatuh

Warm greetings and congratulations to all the organizing committee and participants of the 2d International Competition of Entrepreneurship Business Innovation (ICEBIV) 2023. This program is a manifestation of good cooperation between universities at the ASEAN level. We will maintain the good relationship between the two institutions, Unisba and UITM, to produce productive and innovative works. Universitas Islam Bandung strongly supports the implementation of this program in the future.

Unisba has expressed commitment to the internationalization program and will continue to support various activities. The experience in this program has contributed positively to the university. The big ideas instilled in ICEBIV 2023 will be fruitful with the presence of entrepreneurs who have a global outlook and have a positive impact on the surrounding community.

Unisba as an Islamic university has a moral responsibility in creating a halal business ecosystem at the global level by paying attention to the times including digital innovation. For this reason, the material presented in the form of e-proceedings will be useful for the development of innovation and science.

Highest appreciation to the Faculty of Economics and Business Unisba, Malaysian Academy of SME & Entrepreneurship Development (MASMED), and Faculty of Business & Management, Universiti Teknologi Mara (UiTM) Kedah Branch for their smart and passionate work to implement the MoA between the two institutions. I hope this collaboration will bring many innovations, especially in the field of entrepreneurship which is increasingly in demand by young generation. International cooperation is increasingly needed to read the global needs and challenges of the times. May Allah bless the good steps to create benefits for universities and society.

Wassalamu 'alaikum Warahamtullahi Wabarakatuh.

Prof. Dr. H. Edi Setiadi, S.H., M.H.

Rector

Universitas Islam Bandung

Greetings from Rector of UiTM Kedah Branch



Assalamualaikum Warahmatullahi Wabarakatuh

It is my great pleasure to acknowledge and congratulate the organizing committee of iCEBIV 2023 for their work and determination to make this competition a reality and a successful endeavor. I must also commend the organizing team on their success in keeping their word to make iCEBIV a meaningful event to highlight the innovative ideas, talents, and skills of would-be entrepreneurs.

The theme chosen for this competition, “Enhancing Sustainable Halal Business Through Digital Innovation” is indeed relevant in our context as academics, researchers, administrators, and decision-makers, as we are now facing new challenges and new ways of creating and managing businesses. Adapting and changing to digital innovation are some of the ways to harness the everchanging approaches to businesses to success and sustainability.

Currently, the Halal industry is gaining currency globally, especially within the realm of food security. As we are facing a shortage in food supply around the world due to the pandemic and environmental factors, the Halal industry needs to step up to be one of the dominant players in the global market. Halal businesses must be innovative and creative to position themselves and to be the leaders in the wider market. Obviously, digital innovation is the game changer. Hence, it is timely to move towards digitalization and innovation but with a human-centered approach in Halal businesses. With this competition, it is hoped that we can uncover ways to address the issues of sustainability by using innovation and creativity in entrepreneurship.

I hope this competition will substantially contribute to the universal ventures of finding the best, most practical, and most effective ways to embrace the new norms of knowledge and practice in entrepreneurship, especially in the Halal industry. It is my sincere wish that this competition will be the impetus to more discussions and greater collaborative efforts among the university, industry, and community in the future.

Professor Dr Roshima Haji Said

Rector
UiTM Kedah Branch

Welcoming Speech by Chairman of iCEBIV 2023

DR. ASNITA FRIDA B. R. SEBAYANG, S.E., M.SI.

Chairman of iCEBIV 2023



Bismillahirrahmanirrahim,
Assalamu alaikum wr.wb.

Gratitude to Allah SWT for the implementation of the 2nd International Student Competition of Entrepreneurship Business Innovation (iCEBIV) 2023. The journey of this activity is not only as a collaborative activity but also an activity that has a big dream related to the birth of a new spirit of innovation as a key in facing changing times. The theme raised this year is "Enhancing Sustainable Halal Business through Digital Innovation". There are two key phrases conveyed this year, namely Halal Business and Digital Innovation. These two entities are the colours of Universitas Islam Bandung which are conveyed to the academic community in facing changing times with extraordinary challenges. Human resources are always required to produce innovative work that also has strong roots in local values.

Business innovation is not just a word but also a manifestation of a change in mindset to present a fundamental change and then influence the behaviour of both consumers and producers following the rules of value for money. Digitalisation must be addressed as a tool to achieve a lot of good for human values. ICEBIV is expected to be a forum for innovative and productive competition, bringing the mindset of an entrepreneur who is rich in big ideas and able to realise these ideas to become a trend setter, recognised for its benefits by the community. These innovators will bring a big expectation for the realisation of community welfare in the long run.

I would like to express my gratitude for the support of the leaders at Unisba and the UITM Kedah Branch for facilitating this activity. My highest appreciation to all the committee members who have worked hard to organise this event. We will feel the fruitful of this activity in the coming years, for the existence of a generation that is always at the forefront of innovation. Change is a word and action that cannot be avoided, because change for the better is always a necessity in every era. We welcome this year of digitalisation with the spirit of innovation, may the Almighty Allah always facilitate our steps to make proper changes.

Thank you
Billahi taufiq wal hidayah

Greetings of the Game Changer
Dr. Asnita Frida Sebayang

Chairman

2nd International Competition of Entrepreneurship Business Innovation (ICEBIV) 2023

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SMART E-WASTE MANAGEMENT SYSTEM (SEMS)

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Abstract

Abstract - In our digital society, electronic gadgets are indispensable, but the surge in electronic waste (e-waste) poses a severe environmental threat. This abstract introduces the Smart E-Waste Management System (SEMS), leveraging advanced technology, notably the Internet of Things (IoT), to establish an efficient e-waste management system. SEMS integrates real-time monitoring, predictive analytics, and user-friendly interfaces to improve e-waste collection, recycling, and disposal, optimizing waste collection routes, reducing environmental harm, and promoting recycling. As electronic gadgets proliferate, e-waste accumulation becomes a global concern. SEMS offers an innovative approach to e-waste management, capable of mitigating its adverse environmental and health effects. This abstract underscores SEMS' potential in shaping a greener and more sustainable future in our digital age.

Keywords - SEMS, e-waste, environmental, management

I. INTRODUCTION

In an era where technology advances at an unprecedented pace, outstripping our capacity to responsibly dispose of electronic gadgets, the urgency of E-Waste Smart Management has never been clearer. These devices have revolutionized our lives, rendering communication, work, and entertainment more convenient than ever before. Yet, beneath their convenience lies a hidden cost that extends far beyond their initial utility. As humans delve deeper into the realm of electronic waste, it becomes evident that the impact of our digital lifestyles reaches far beyond our screens and devices. This issue raises fundamental questions about consumption patterns, environmental stewardship, and the legacy we are bequeathing to future generations.

Embarking on this journey with an astounding statistic seems to unravel the far-reaching implications of electronic waste and explore multifaceted solutions that can transform this burgeoning challenge into an opportunity



for transformation. This project takes a bold step by applying E-Waste Management principles to a digital system, heralding a superior method to enhance e-waste disposal and replace antiquated practices that relied on manual, physical contributions from the public. This innovative approach not only extends the reach of technology but also holds the potential to raise public awareness about the perils of improper e-waste disposal and the rewards of responsible practices. At the heart of this project lies a pivotal feature: the integration of IoT-enabled collection bins with a dedicated website and a user-friendly mobile application. This implementation involves the careful orchestration of programmable IoT devices and components, meticulously managed through a laptop interface and its requisite libraries. The ultimate goal is to deploy these intelligent bins to various branches of the Smart Green of Politeknik Mersing, empowering the agency to administer e-waste disposal more efficiently while fostering a heightened sense of environmental responsibility.

This project follows a thorough roadmap and is divided into four major phases: planning, designing, developing, and testing. The planning phase entails the precise delineation of project requirements, coding the IoT device configurations, and ensuring seamless compatibility with the website and mobile app ecosystem. As we progress to the designing phase, the focus shifts to the creation of an intuitive user interface for the website and mobile application. Subsequently, the development phase encompasses the intricate integration of the IoT device with the system, culminating in a comprehensive testing phase to ensure the seamless functionality and effectiveness of this groundbreaking Smart E-Waste Management System. The final phase, which is testing, entails the identification, rectification, and debugging of any issues within the system. This process aims to optimize current usability and enhance overall system performance. Given the opportunity, supplementary features and capabilities can be incorporated to provide an elevated user experience.

II. PROBLEM STATEMENT

Based on the Utusan Borneo Online newspaper published on October 3, 2020, in Kuching, Sarawak. The issue of electrical and electronic waste disposal is becoming more prevalent around the world. Sim Yian Chai, director of GVE Sdn Bhd, stated that many people are still unaware of the dangers of e-waste. E-waste should never find its way into landfills or garbage dumps; instead, it should undergo thorough processing and meticulous classification. Plastic materials, for example, will be segregated and delivered to a plastic management firm, while desirable components will be sold as used spare parts, and those that cannot be sold will be sent to Malacca and Penang for full recovery. In the meantime, Hamzah Mohamad, the director of DOE Sarawak, stated that "E-waste is a waste that is controlled under the rules of the Environmental Quality Regulation (used waste) 2005."



According to a digital newspaper excerpt from the Utusan Borneo Online, dated October 29, 2021, in Kota Kinabalu, Sabah, it is imperative to manage electronic waste (e-waste) in compliance with established legislation due to its greater complexity and dissimilarity to domestic solid waste management. The Deputy State Government Secretary (Development), IR. Richard Jomiji Kinsil, emphasized that e-waste contains hazardous chemicals, including lead, cadmium, chromium, and others, which can pose health risks and indirectly harm the environment when not properly managed. Improper disposal of e-waste in landfills can result in the release of toxic gases and the production of pollutants, further endangering our water supply sources and human health.

According to a press release from Bernama on April 22, 2021, in Kuala Lumpur, electronic devices such as mobilephones, laptops, tablets, and similar gadgets have finite life spans that depend on how they are operated and maintained by users. Prof. Dr. Ahmad Fariz Mohamed, a Senior Fellow at the Institute of Environment and Development (LESTARI) at the National University of Malaysia (UKM), explained that properly stored, unused, and undamaged devices typically pose no threats to human health or the environment. However, the situation changes when devices are exposed to harsh environmental conditions like hot weather, rain, or humidity, as these conditions can trigger the production of toxic substances. Improper disposal, such as throwing electronic devices into regular trash cans or non-specialized landfill areas, can lead to the degradation of these toxic substances, allowing them to enter the ecosystem through the soil and groundwater. These toxic substances can then contaminate rivers and affect soil quality, potentially impacting agricultural products. Moreover, these substances can enter the human body through activities like drinking water and farming.

Prof. Ahmad Fariz highlighted that recycling methods are among the most effective approaches for managing electronic waste, including devices. This is because electronic devices are typically composed of various materials, including metals, plastics, minerals, and chemicals like chromium, mercury, cadmium, lead, beryllium, phthalates, polyvinyl chlorides (PVC), brominated flame retardants, and antimony. According to Ts. Murugan A/L Krishnan, Project Manager Smart Green of Politeknik Mersing, typically, students at Politeknik Mersing tend to dispose of electrical and electronic equipment, or e-waste, by placing it in the general trash bin alongside other solid waste. Furthermore, Ts. Murugan has expressed a strong desire to initiate this project but has not had the chance to do so as of now.

III. OBJECTIVES

The project involves the creation of an innovative Smart E-Waste Management System (SEMS) that utilizes state-of-the-art Internet of Things (IoT) technology and is exclusively developed for the Smart Green at Politeknik Mersing. Furthermore, as a complement to this system, an appealing website and a user-friendly Android application will be developed. The comprehensive approach encompasses the painstaking deployment and rigorous testing of

the Smart E-Waste Management System (SEMS), ensuring its seamless integration and excellent operation.

IV. MATERIALS AND METHODS

Materials:

IoT Board: Utilizing the ESP32 Board and its extension counterpart, the ESP32 30P, the setup involves connectivity to a laptop via a 2.0 USB micro cable. The ESP32 is equipped with essential libraries and seamlessly interfaces with various components, ensuring smooth operation.

Sensor Module: The primary setup involves the utilization of an inductive proximity sensor with PNP mode to detect positive metal presence. Additionally, a side sensor employs a PIR sensor to determine the bin's fill level and signal when it's full.

Traffic Light Module: Employing the default component tailored for students has proven to be compatible and effective in conjunction with the ESP32 board. This component facilitates seamless connectivity between the board and the overall system.

Acrylic Container: With dimensions of at least 24 inches in height and 21 inches in width, the container can effectively accommodate mobile e-waste, ensuring that no surfaces are compromised.

Laptop and PC: Obligated for the IoT device configuration and the front-end system graphic interface for users to interact comfortably.

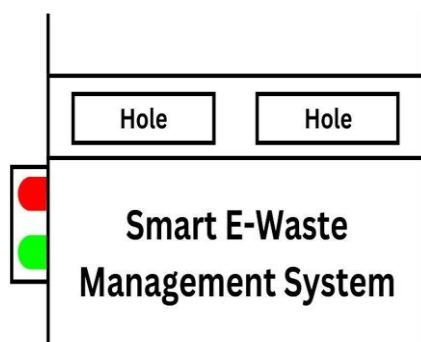


Figure 1: Acrylic Container



Figure 2: Traffic Light LED Module



Figure 3: Laptop



Figure 4: Acrylic Box

Methods:

System Design: The smart bin's function is to impartially inform users about any occurrences, whether it's an external influence or updates initiated by the smart bin. These events will be promptly showcased on the website. Serving as the system's front-end interface, it necessitates an aesthetically appealing design to enhance the user experience and usability. **Internet of Things (IoT) configuration:** By incorporating all essential hardware components, the board is primed for programming to effectively achieve the project's objectives. This approach encompasses any IoT-related programming methods.

System Integration: This requires connectivity between the Internet of Things (IoT) device and the system's front-end interface, which is imperative for realizing the project's objectives. The integration process, while pivotal, presents challenges due to the intricate configuration alignment required with the website or mobile app system.

V. RESULT AND DISCUSSION

The adoption of a discarded electronic goods collection system presents a promising solution to address the pressing issue of environmental pollution in Malaysia. Electronic waste contains hazardous chemicals like mercury, lead, cadmium, arsenic, bromine, and beryllium, which can infiltrate the soil and water sources, endangering both aquatic life and human health. Implementing effective e-waste management is essential to mitigate these risks and protect the environment. Moreover, the integration of a robust security system within this framework safeguards sensitive data from potential cyber threats. A noteworthy advantage of this approach is the convenience it offers local residents, eliminating the dilemma of proper disposal of electronic items. The introduction of the Smart E-Waste Management System (SEMS) at the Smart Green of Politeknik Mersing further enhances this facility. This



sophisticated system employs cutting-edge sensors and LED traffic indicators to accurately categorize and segregate items placed in disposal bins. At the same time, it collects comprehensive data from various perspectives, ensuring real-time information updates for Smart Green of Politeknik Mersing without the need for physical presence at the landfill.

The Smart E-Waste Management System (SEMS) is replete with several e-waste features. Notably, it prevents unauthorized access to the bins, ensuring that only electronic waste is deposited. Furthermore, it notifies Smart Green of Politeknik Mersing when the bin is almost full. This strategic notification system prevents overfilling and ensures bins are available for public use, streamlining the collection process for electronic waste. In summary, the implementation of the Smart E-Waste Management System (SEMS) signifies a significant stride towards sustainable electronic waste disposal. By addressing environmental hazards, offering convenience to residents, and enabling efficient data-driven monitoring, this innovative system exemplifies a comprehensive solution to the challenges posed by electronic waste accumulation.

VI. CONCLUSION

A Smart E-waste Management System represents a significant advancement in how we manage the growing challenge of electronic waste. As technology rapidly evolves, electronic devices have become an integral part of our lives. However, these devices also contribute to a concerning issue: e-waste, which consists of discarded electronics like smartphones, computers, and appliances.

Traditional e-waste management approaches often involve manual sorting and crude recycling methods that can lead to environmental pollution and inefficient resource utilization. The smart system, on the other hand, leverages IoT devices, sensors, and connectivity to create a networked infrastructure. This infrastructure enables real-time monitoring of e-waste collection bins, tracking their fill levels, and optimizing collection routes.

Data analytics play a crucial role in a Smart e-waste Management System. By analyzing data from sensors and user interactions, the system can predict usage patterns, identify peak disposal times, and optimize collection schedules. This minimizes unnecessary transportation and reduces the carbon footprint associated with collection vehicles.

Automation is another key component. Smart sorting technologies can identify and separate different types of electronic components, aiding in the recovery of valuable materials such as rare metals and plastics. These materials can then be recycled and reused in the manufacturing of new electronic devices, reducing the demand for virgin resources.



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MICROHYDROPONIC

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Abstract - This business proposal outlines a plan to describe a micro-hydroponics business that will provide tools and services to create hydroponic systems for small-scale and home use. The increasing demand for fresh, locally grown produce has fueled the growth of small-scale urban agriculture, particularly among homeowners and urban dwellers with limited outdoor space. To meet this demand, a growing industry has emerged that specializes in providing hydroponic equipment and installation services tailored to the unique needs of small-scale and home growers, facilitating accessible and sustainable urban food production. In this business, we explore the wide range of hydroponic systems and equipment on offer, from compact vertical systems to modular kits designed for balconies and indoor spaces. Micro-hydroponic systems integrate advanced technologies such as the Internet of Things (IoT), namely automated control systems, to create space-, water- and resource-efficient growing platforms. These solutions often feature easy-to-use designs, automated controls, and optimized resource use, serving both novice and experienced growers. In addition, the industry recognizes the importance of education and support, providing training and resources to help individuals succeed in their hydroponic endeavors.

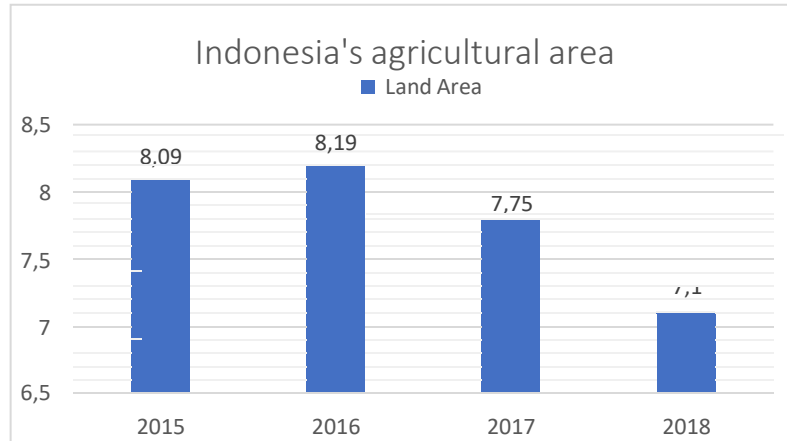
Keywords: Mikrohidropoani, Internet of things, Teknologi

1. INTRODUCTION

Microhydroponic is an industry that provides hydroponic installation services as a key component of the biotechnology industry, our business answers the challenges faced by urban dwellers who do not have the skills or time to set up and manage their own hydroponic systems. These services include site assessment, system design, installation and ongoing maintenance. By offering turnkey solutions, the business allows individuals to seamlessly integrate hydroponic growing into their lifestyle, while cultivating a sense of connection to the food they consume. Through this business, we aim to contribute to the growing understanding of agricultural practices. By sharing the benefits, challenges and potential applications, we hope to highlight the role of microhydroponics in shaping the future of urban agriculture and promoting sustainable food production in the modern world.

2. BACKGROUND AND MARKET OVERVIEW

In Indonesia's urban areas, limited land for agriculture is a major problem. This phenomenon is linked to rapid population growth, urbanisation and increasingly intensive economic activity in urban areas. The Central Statistics Agency (BPS) has noted that the amount of agricultural land in Indonesia has experienced extraordinary fluctuations over the past four years.



Indonesia's agricultural land area reached 8.09 million hectares (ha) in 2015, then increased to 8.19 million hectares (ha) in 2016, but in the next two years, 2017 and 2018, it decreased again to 7.75 million hectares (ha) and 7.1 million hectares (ha). The table of agricultural land area above shows that from 2015 to 2018, the area of agricultural land in Indonesia experienced a significant decline, which is directly proportional to the rapid development in Indonesia. As an agricultural country, Indonesia needs to immediately implement an innovation transformation to increase the attractiveness of agriculture to the younger generation (millennial or digital generation).

2.1 Location

This small-scale hydroponic system does not require a large area of land. Just a small area of land with plenty of water and sunlight for the plants. This method can also be easily applied to household needs. You can grow various vegetables such as lettuce, kale, spinach, tomatoes, celery, etc. in a hydroponic system.



2.2 Existing brands

In Indonesia, there are not many brands that sell hydroponic equipment and provide hydroponic installation services. There are several brands that have started business in this field, such as

- Casafarm: Is a hydroponic company that not only provides hydroponic equipment, but also sells plant seeds and provides hydroponic training for people interested in learning.
- Home Hydroponics: This company provides hydroponic equipment and training in hydroponic growing.
- Yursayur Farm: Is a company that provides hydroponic installations, training and support for hydroponic growing and also sells hydroponic vegetables.

Compared to existing brands, the advantage of Microhydro Farm lies in the monitoring equipment that utilises IoT, which allows consumers to monitor this application to monitor lighting, temperature, water level, life cycle and surveillance or CCTV cameras over long distances.

3. MAIN FEATURES OF THE BRAND

- 3.1 Sustainable sources: We will work with housewives and people who are interested in hydroponics and have free land at home.
- 3.2 Research and innovation: Our company will continue to carry out research and innovation in the development of hydroponics using advanced technology.
- 3.3 Hydroponics Education: MicroHydroponic will hold many workshops and seminars so that the public can gain a lot of knowledge and understanding about hydroponic cultivation.

3.4 Use of Technology: We use IoT technology, which will be very helpful in monitoring hydroponic plants quickly and easily.

The following are the main features available in the monitoring application:

- Lighting features, i.e. features that have the function of regulating the light elements needed by plants for the photosynthesis process.
- Temperature, which is a feature used to regulate the room temperature according to the temperature required by the plant.
- Water Level, which is a feature that regulates the amount of water needed by the plants for growth so that the results are of high quality.
- Water Humidity, which is a feature to regulate the content or substances contained in the water for plant nutrition.
- Life Cycle, which is a feature relating to the life cycle of plants from sowing to harvest.
- Camera monitoring, which is a feature of technological innovation in hydroponic growing as a control measure to maintain the quality of the plants from sowing to harvesting.

4. PRODUCT TYPE

4.1 Application for Monitoring and Creating Small-scale Hydroponic Installations

Advances in Internet of Things (IoT) technology can facilitate various types of work, including controlling hydroponic systems so that plant care can be done remotely and at any time.



MicrofarmHydro sells applications for monitoring hydroponic plants. In this application we can monitor lighting, temperature, water level, life cycle and surveillance cameras or CCTV. Our company provides small scale hydroponic installations. The construction of hydroponic systems involves a number of technical steps to ensure the system runs well and the plants grow optimally. The area of land will influence the design of the frame to be made. Apart from this, the condition of the land can also be a consideration and is related to the budget that the consumer will be spending. We will prepare equipment such as media containers or places for plants to grow, planting media, water pumps and others for installation needs.



2nd International Competition of Entrepreneurship Business Innovation
(iCEBIV 2023)

11 September 2023, Universitas Islam Bandung, Indonesia





The following is a list of tools provided for the construction of hydroponic systems:

1. Installation Tools

Dimension (170 cm x 60 cm x 130 cm) (2.000.000)

Tools:

- 2.5" pipe
- 1" pipe frame
- Nutrient tank
- Water pump
- Hose "
- Net pots
- Flannel wick
- Rockwool planting medium
- AB Mix Nutrition for 100 L dilution
- Seeds (repack) of 3 types of leaf vegetable plants, such as pak choy, mustard greens, lettuce, kale, spinach, etc. (taken at random)
- 12 mL nutritional syringe
- Guidebook

Monitoring:

- Includes WiFi Arduino
- Can be monitored by mobile phone
- Temperature and humidity sensors
- Additional sensors by request

Dimension (200 cm x 60 cm x 130)

(3.000.000)Tools:

- 2.5" pipe
- 1" pipe frame
- Nutrient tank
- Water pump
- Hose "
- Net pots
- Flannel wick
- Rockwool planting medium
- AB Mix Nutrition for 100 L dilution
- Seeds (repack) of 3 types of leaf vegetable plants, such as pak choy, mustard greens, lettuce, kale, spinach, etc. (taken at random)
- 12 mL nutritional syringe
- Guidebook

Monitoring:



- Includes WiFi Arduino
- Can be monitored by mobile phone
- Temperature and humidity sensors
- Additional sensors by request

Dimension (250 cm x 60 cm x 130 cm)

(4.000.000)Tools:

- 2.5" pipe
- 1" pipe frame
- Nutrient tank
- Water pump
- Hose "
- Net pots
- Flannel wick
- Rockwool planting medium
- AB Mix Nutrition for 100 L dilution
- Seeds (repack) of 3 types of leaf vegetable plants, such as pak choy, mustard greens, lettuce, kale, spinach, etc. (taken at random)
- 12 mL nutritional syringe
- Guidebook

Monitoring:

- Includes WiFi Arduino
- Can be monitored by mobile phone
- Includes temperature and humidity sensors
- Additional sensors by request

5. Consulting Services

- Hydroponics Consultancy Services - RAB Calculation (Get modules / guides related to RAB(Cost Budget Plan). (100,000)
- Hydroponics Consultancy Services - GAP Design (Get modules / guides related to GAP (GoodAgricultural Practice). (200,000)
- Hydroponics Consultancy Services - SOP Design (Obtain modules / guidelines related to SOP(Standard Operating Procedure) design. (200,000)

5. MARKETING AND PROMOTION

Our marketing strategy will be implemented by:

1. Using social media platforms.

We use various social media platforms to promote our products and services, providing customers with an attractive promotional presence. Through social media, companies can interact with a wide range of customers from different areas.

2. MSMEs and housewives.

Micro-hydroponics provides efforts to improve MSMEs (Micro, Small and Medium Enterprises) engaged in hydroponics and food processing in urban areas. It also provides education on the role of housewives in growing hydroponic plants to support the family economy.



3. Identifying strategic marketing locations.

Industrial sales outlets are placed in strategic locations to enable potential customers to see the products and services that microhydroponics offers.

4. Holding events

By holding events we can reach a wider audience. Microhydroponic can introduce companies, such as being a sponsor at an event, so that those attending the event will recognise and be interested in the products and services we make.

5. Expanding links with the hydroponic community.

We are developing links with the hydroponic community to share knowledge and tips on managing hydroponic plants. One of these approaches is part of our aim to distribute products and services that can be used by the community as a hydroponic business.

6. The company maintains good customer relations.

Microhydroponic maintains customer loyalty by providing convenience in service delivery and payment. We also provide rewards in the form of fulfilling suggestions and input from customers or sending gifts to customers who have subscribed.

7. Establishing cooperation with other companies.

Microhydroponic will work with other companies to create superior products and services. The right business relationships can be beneficial to the development of Microhydroponic in the future.

7. SWOT ANALYSIS

Strengths

1. Offer services for the creation of small-scale and home-based hydroponic installations according to the landscape of the house or land.
2. Microhydroponics is one of the brands providing quality hydroponic installation services and one of the brands providing hydroponic equipment and control applications that are beneficial to small and medium businesses and customers.
3. We provide the best service for customers in designing simple and practical hydroponic planting designs according to the size of land and space used.
4. To create a hydroponic system that will educate customers on how to control hydroponic plants using the application that we have designed.
5. Microhydroponics provides the best guarantee for the customer to ensure that the hydroponic plants created can run smoothly and that the equipment offered can function well as a planting medium that meets their installation needs.
6. To reach a wider market in the cultivation of hydroponic plants through various platforms and social media.

Weakness

1. The initial investment for a hydroponic system is quite expensive.
2. Plant control that customers must pay attention to in order for hydroponic planting to produce maximum results.



3. Collaboration between sponsors and microhydroponics, which can eat into the budget.

Opportunities

1. Public awareness of organic and healthy food
2. Microhydroponics has the opportunity to create a business that is more unique than other businesses, making it easier for customers to grow hydroponically.
3. Public awareness of the importance of vegetables and their cultivation can provide an opportunity for us to help consumers install hydroponic cultivation more easily and practically, which will be linked to the application controls available.
4. Hydroponics provides an outlet for people's hobbies and has the potential to create a sideline business.

Threat

1. Eating home-grown vegetables takes a lot of time and money.
2. There have been problems with customers using hydroponics, resulting in bad publicity for our brand.
3. Competition from other brands that have the same aspirations and goals as microhydroponics may threaten to reduce the number of consumers who have subscribed to microhydroponics.
4. Competitive brands offering lower prices divert customer interest.
5. There are government regulations regarding product limits that can threaten domestic agricultural businesses.

8. SUMMARY

MicroHydroponic is a company that provides solutions for growing plants using the hydroponic method to overcome the problems of limited land and poor quality at harvest time. MicroHydroponic operates in the agricultural sector using hydroponic methods targeted at the home consumer. The target consumers are expected to be able to produce plants for their daily needs with the equipment provided by MicroHydroponic, which is equipped with Internet of Things (IoT) technology as an automatic control system to overcome problems in the planting process. MicroHydroponic's marketing is carried out by optimising social media, organising events and establishing good relationships with customers. The service that MicroHydroponic provides to consumers to create satisfaction is by providing education on how to control hydroponic plants with the applications provided by MicroHydroponic and providing simple and practical hydroponic planting designs according to the size of the land or room in the consumer's home.

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DM&E: BOOSTING SMALL BUSINESS GROWTH THROUGH DIGITAL MARKETING

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(Jaslin Md Dahlan) *

Abstract

The DM&E e-book project introduces a dynamic and transformative module tailored to empower aspiring small-scale entrepreneurs with the fundamental skills needed to harness the potential of digital marketing. In an increasingly digitalized business landscape, establishing a robust online presence is not just advantageous but imperative for success. This project bridges the knowledge gap by providing accessible and comprehensive training to beginners, enabling them to navigate the intricacies of digital marketing with confidence. Through a meticulously structured curriculum, participants delve into a spectrum of digital marketing techniques. From demystifying social media strategies and effective content writing to unravelling the nuances of social media campaigns and content creation, this module offers a holistic learning experience. Practical exercises provide hands-on engagement, ensuring participants can seamlessly translate theory into practice. However, the project's impact extends far beyond individual skill enhancement. By nurturing a culture of knowledge sharing, participants are not only equipped to advance their own ventures but are also encouraged to pay it forward. The module fosters a sense of collaboration between the University and community, motivating entrepreneurs to share their newfound expertise with fellow peers, thereby cultivating a network of digitally savvy small-scale entrepreneurs. At its core, DM&E e-book is not merely an instructional tool book; it's a catalyst for a paradigm shift in business acumen. By imparting essential digital marketing skills and fostering a spirit of collaborative learning, the project ignites a ripple effect of innovation and economic growth within the small business ecosystem. As participants become adept in leveraging digital tools, they become champions of progress, enriching not only their own enterprises but also the collective entrepreneurial landscape.

Keywords: Digital Marketing, Small-Scale Entrepreneurs, University to Community, Knowledge Transfer



1. INTRODUCTION

Businesses use digital technologies for a variety of tasks, including marketing their brands online, including on social media, selling products or services through e-commerce platforms and apps, sourcing materials through B2B transactions, managing finances and staff through software, and sourcing materials. The Inita Project, which aims to transition women's entrepreneurship from physical to online operations, has been the subject of a study by Aziz and Razak (2012) that showed favorable effects on income levels, online presence, and networking. The findings showed that most of the respondents have knowledge of the Internet, are moderate in digital literacy skills, and have been using the Internet via smart phones and tablets to browse Facebook and WhatsApp. Thus, this study suggests more digital programs need to be conducted to enhance skills among women entrepreneurs in utilizing the Internet for businesses. (Hamid, 2020).

The evaluation of digital entrepreneurs' competence in the context of a Creative Design and Thinking Learning (CDTL) model integrated immersive experiential marketing. The evaluation form used to assess competence in digital entrepreneurship, digital competence, and creative digital economy innovation (Chouyluam et al, 2021).

The phrases e-book, e-textbook, web textbook, online textbook, digital textbook, ePUB, Portable Document Format (pdf), Mobipocket, etc. are all used to refer to e-books. The use of digital readers and books in education is a topic that the academic community is encouraged to discuss globally. Whether reading books on digital devices has any educational benefits has been questioned. A debate on this topic has been raised by enriched e-books due to their focus on instructional design. To assist teaching scenarios and learning experiences, learning objects are increasingly being incorporated into enriched e-books. The advantages of enhanced e-books include increased sensory engagement, a wide range of sources, composition control possibilities, and continual material updates. As reading software and portable reading devices develop to improve educational and learning scenarios. (Kapaniaris et al, 2013).

The entrepreneurs learn from observing other businesses and employ various tactics such as updating information about operating hours, informing customers about new products and promotions, utilizing content strategies for promotion, engaging in two-way communication with customers to resolve issues, maximizing search engine optimization, engaging in co-branding collaborations with other businesses and social media accounts, and leveraging endorsements from third-party influencers as strategies are seen as effective in increasing customer reach and maintaining relationships(Rozaq et al, 2021)

2. MATERIALS AND METHODS

2.1 Methodology of DM&E e-book development

Design Thinking is used as a methodology because it offers several distinct advantages in problem-solving, innovation, and product development, making it highly effective to generate creative ideas in complex and user-centred challenges. By deeply empathizing and understanding with target users, solutions are tailored to their actual needs, leading to more meaningful and relevant outcomes as well as emotionally resonate with users, fostering strong customer loyalty. The iterative nature in process of design thinking, allows for continuous refinement and improvement of the solutions where it is tested and refined based on real user feedback, resulting a successful solution for the user. For further insight, refer to Figure 2.1, illustrating the visual representation of the described methodology of DM&E e-book development.

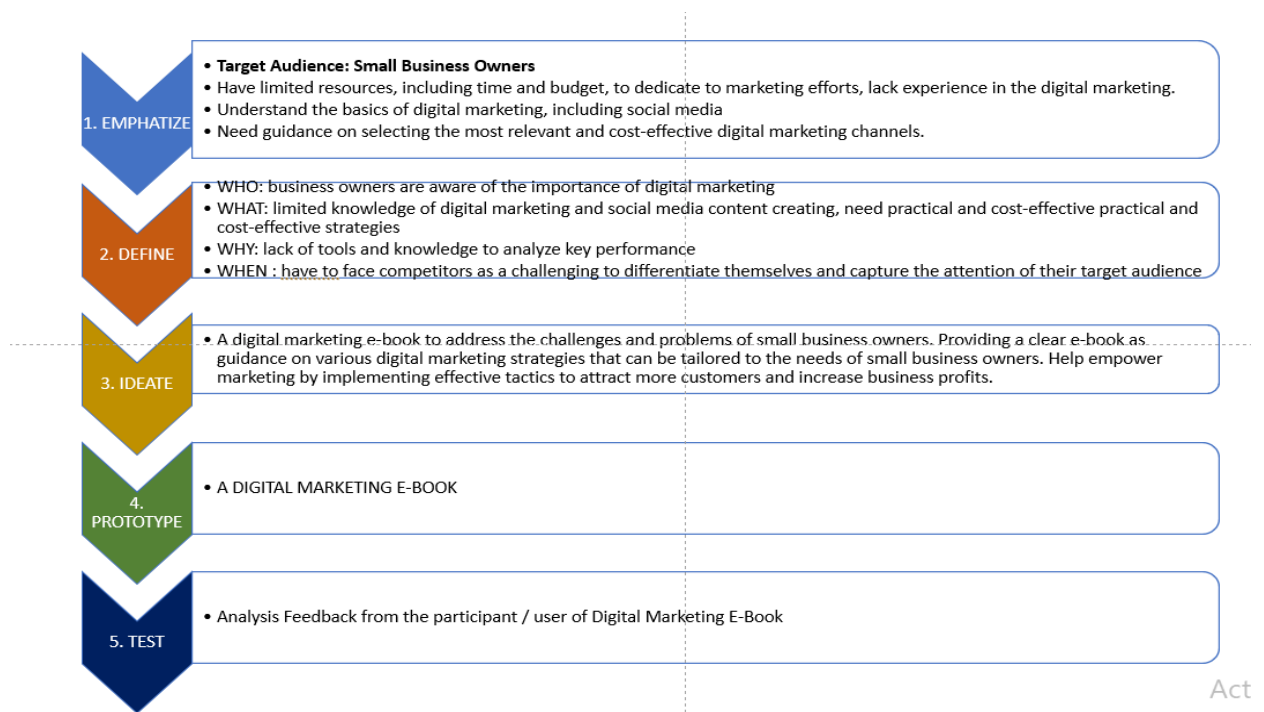


Figure 2.1: Methodology of DM&E e-book development

2.2 Flow of DM&E e-book development:

The DM&E e-book development process flows through several pivotal stages. It commences with a comprehensive topic selection aligned with the target audience's needs. Research ensues, gathering data to substantiate content. Outlining the book's structure follows, framing chapters and concepts logically. Content creation commences, with engaging writing and visual elements. Post-content integration, thorough editing and review transpire, refining language and coherence. Formatting and design come next, optimizing readability and aesthetics. Simultaneously, cover art is designed to encapsulate the book's essence. Final review assures quality, culminating in publishing and distribution across e-book platforms. Continuous enhancement of the content will be considered after receiving feedback from our target users, small-scale entrepreneurs. For

further insight, refer to Figure 2.2, illustrating the visual representation of the described DM&E e-book development process.

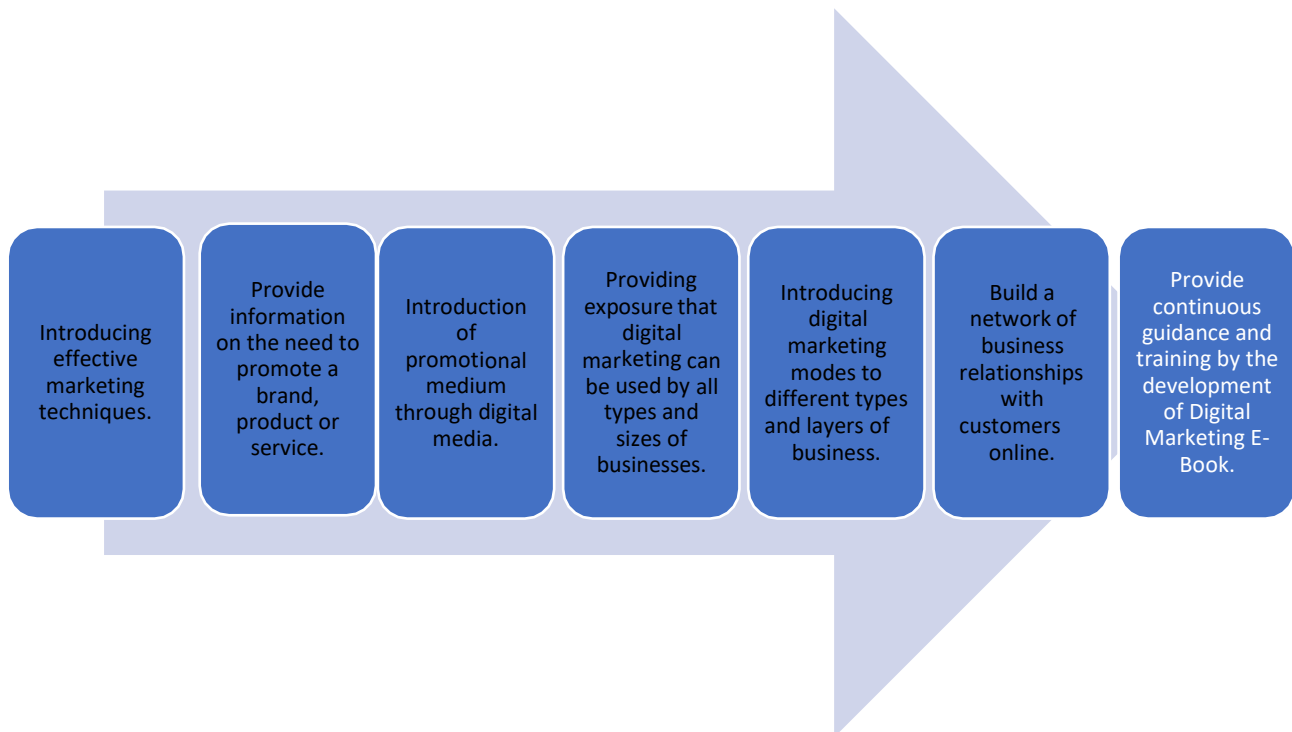


Figure 2.2: DM&E e-book development process

2.2 Content of DM&E e-book

The content of the DM&E e-book will assist and guide small-scale entrepreneurs on a transformative journey through our comprehensive DM&E e-book, meticulously crafted to unravel the intricate realm of digital marketing for small-scale entrepreneurs. This guide serves as beginner's compass, navigating them from the fundamental's concepts of digital marketing to intermediate strategies, ensuring the users not only grasp the essentials but also thrive in the ever-evolving digital landscape. The DM&E e-book topics include copywriting on social media, product photography, and video editorial tactics. These skills are essential in harnessing the power of content writing and business sustainability, each chapter is a step closer to elevating their online presence. Also included is a topic of business financial planning and pricing strategy. For further insight, refer to Figure 2.3, illustrating the visual representation of the describing the content of DM&E e-book.

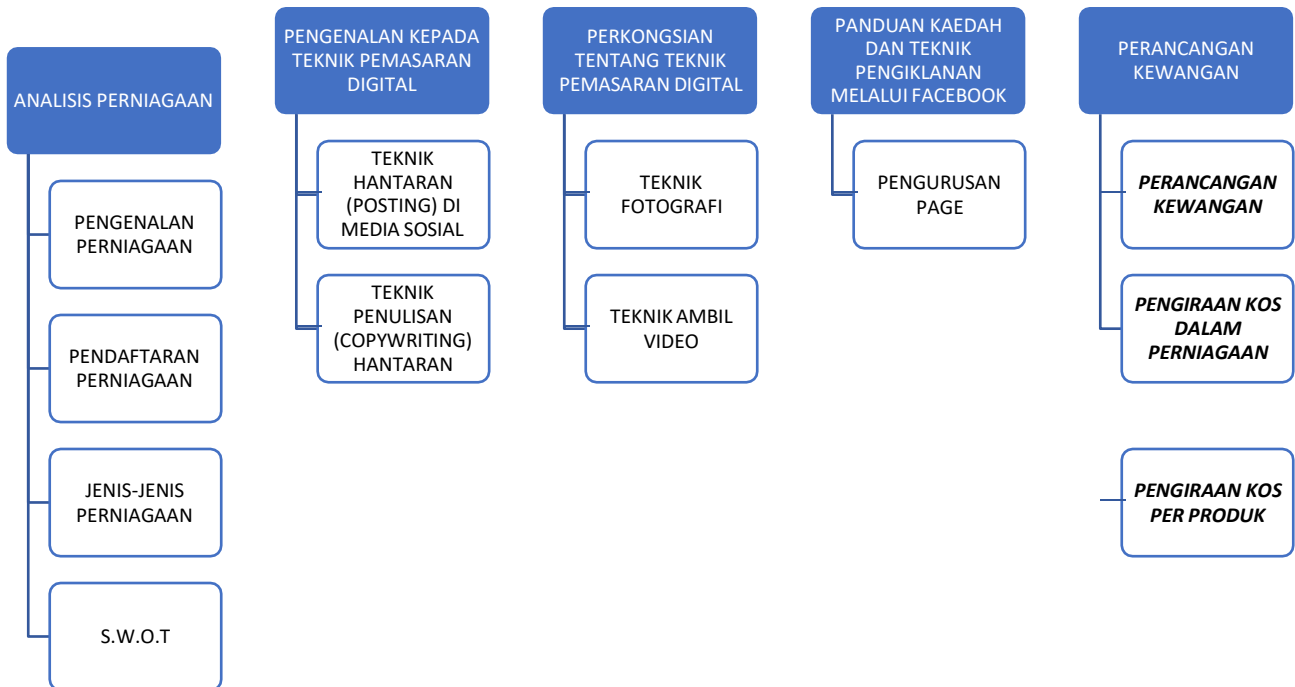


Figure 2.3: Description of DM&E e-book content

3. RESULTS AND DISCUSSION

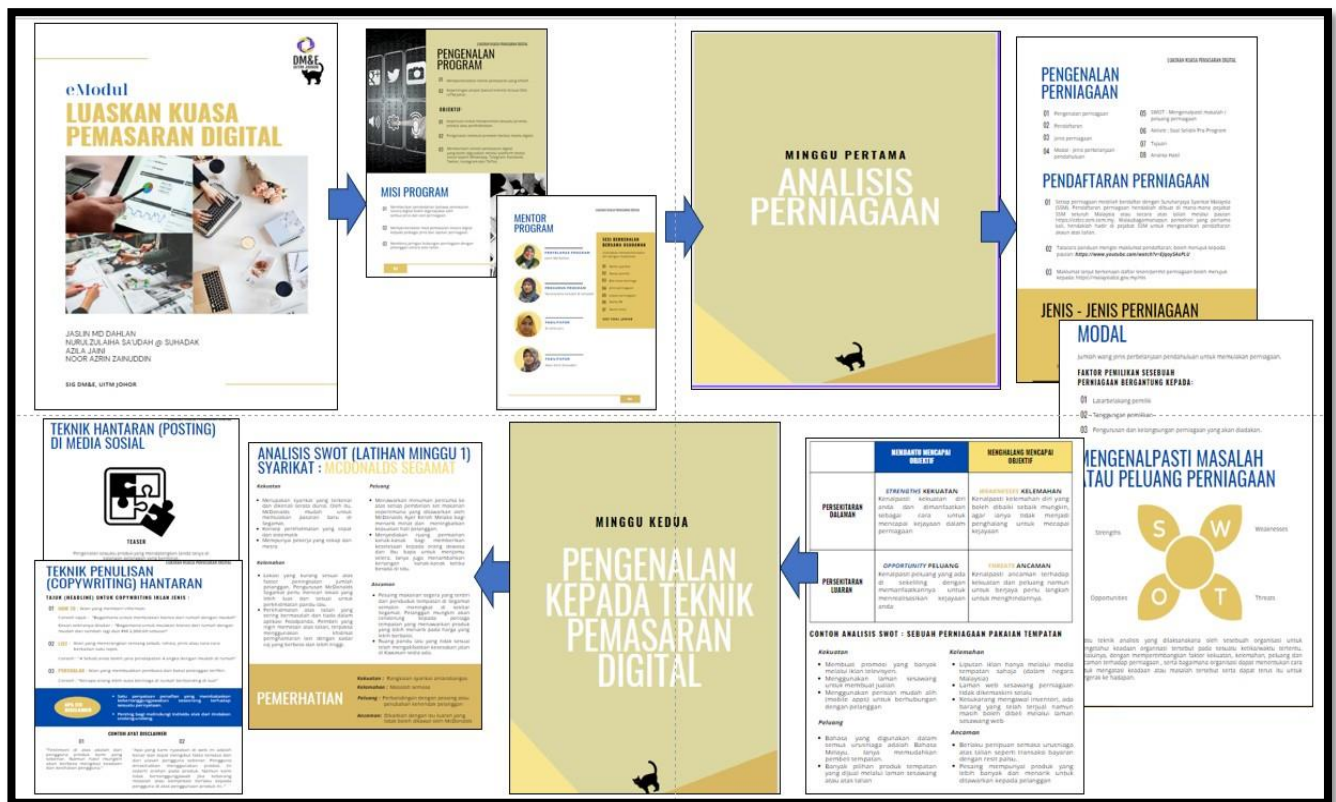
The DM&E e-book has been used as the teaching module since 2021. The users of the e-book were small-scale entrepreneurs and participants of the *DM&E: Luaskan Pemasaran Digitalmu* program. The program was held at Sekolah Menengah Kebangsaan Dato’Bentara Dalam, Segamat, Johor. The users’ feedback from the fifty participants of the program have been collected and analysed. A significant improvement of their interest about digital marketing, their level of knowledge, the ability to utilise that knowledge, ability to share and teach the knowledge with others.

The data gathered from the participants before and after the program. The analysis shows the difference in mean between pre-post test conducted among the participants. The analysis of pre-post test results for program participants reveals a highly positive outcome. Evident from substantial improvements in post-test scores compared to pre-test scores, the program has effectively enhanced participants' knowledge and skills. This positive trend reflects the program's efficacy in promoting learning and growth. Additionally, participants' enthusiastic experiences underline the program's excellence, as they expressed heightened engagement and satisfaction. Particularly noteworthy is participants' newfound capability to not only grasp the material but also to effectively share and teach it to others. This outcome underscores the program's comprehensive impact, equipping participants not only as learners but also as potential educators.

4. INTERFACE DESIGN OF THE DM&E E-BOOK

The Figure 2.4, illustrating the visual representation of the interface design of the DM&E e-book. All participants of the *DM&E: Luaskan Pemasaran Digitalmu* program are given the e-book.

Figure 2.4: Interface design of DM&E e-book



5. CONCLUSION

The importance of this journey becomes even more clear for DM&E e-book. Since its start in 2021, this tool has served as a beacon of hope for innumerable small business owners, kindling their expertise in digital marketing and catapulting their businesses towards unmatched success. Participants have attested to the transforming power of the knowledge found within these pages, and the positive impact has been evident.

Real-world success stories have resulted from the shared practical insights, which range from igniting social media engagement techniques to unravelling the algorithms underlying search engine success. With an arsenal of digital marketing strategies at their disposal, business owners who once struggled with the difficulties of online visibility now command the attention of their respective industries. There has been a significant cascade of effects, with participants

In the future, DM&E will refine existing methodologies, which will encompass a holistic approach towards the community enhancement initiatives. This is to foster further collaboration with the local small-scale businesses. Additionally, new horizons will emerge with the incorporation of cutting-edge content, such as AI applications, revolutionizing data analysis and insights. The evolution of DM&E



will empower a comprehensive framework, catalysing sustainable growth and innovation across diverse sectors.

6. ACKNOWLEDGMENT

We gratefully acknowledge UiTM Johor for their invaluable support in making this work possible.

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3rd Category: Business Idea Battle

Type of Innovation: Sustainable Environment Project

SUSTAINABLE ENVIRONMENT PROJECT: ZERO TO HERO: ENHANCING ZEROWASTE LIFESTYLE IN FLAT PAYA NAHU, SUNGAI PETANI, KEDAH.

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Abstract

Green Garden's Glory Co was responsible for putting together the initiative known Zero to Hero: Enhancing Zero Waste Lifestyle as part of their contribution to the Paya Nahu resident's welfare. Therefore, with regard to this project, is required a number of task, some of which concerned the budget and many others. As a result, the information that pertains to the Green Garden's Glory will be included in this presentation in great detail. This information will cover issues such as the stated, vision and mission of the company, the achievements of the company, the introduction of the product, and the members of the team that makes up the company. In addition, there is the introduction of the Paya Nahu, as well as towards the problem statement, which pertains to the development of Flat PPR paya Nahu. In addition to this, there are the event activities that will be carried out during the event, the target audience of the event, and the many sorts of event marketing strategy and plans. In addition to that, it includes the manner of event promotion as well as the event poster, banner, and posting through the various social media platforms. In addition, there is additional information related with the program focus, potential and target market, budget forecast, as well as the specifics of the event, all of which will be detailed through the work breakdown structure and the responsibilities Matrix.

Keywords: Sustainability, Organic, Green Technology, Recycle, Eco-Friendly, Welfare



INTRODUCING A NEW METHOD OF CLEANING COW FEET TO HELP RESTAURATEURS COOK COW HOOV SOUP FASTER

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Abstract

Cow hoof soup is categorized as an exotic food that is very popular among fans of gearbox soup. The objective of this project is to help community to enjoy the deliciousness and the restaurant operators speed up the process of cooking beef hoof soup. According to the conventional method, cleaning cow hoofs is complicated because they need to be burned using a charcoal stove. For urban communities, this process creates difficulties because it can cause gas stoves to clog. To prevent this from happening, the process of cleaning cow hoofs by boiling was introduced. Beef hooves are split in half so that they are easy to put in the pot and arranged vertically. Then water is put into the pot until the cow's hoof is submerged. To know the best and most effective time to remove cow hoofs, the process of boiling cow hoofs is done in three (3) stages. Then the base of the cow's hoof is cut to a thickness of 5mm to facilitate the process of removing it. The hooves were boiled for 30, 45 and 60 minutes respectively, taking about 2 minutes, one minute and 15 seconds to remove the cow's hooves. Some of the benefits obtained through the process of cleaning cow hoofs by boiling are as follows: the gas stove remains clean, the gas burner is not clogged, the cow hoof soup is free from carbon traces, the interior is free from musty odors, it saves time because various activities can be done while the cow hoofs boiled, the cost of using gas is economical which is as cheap as RM0.50 per hour. In conclusion, the process of cleaning cow hoofs by boiling can maintain the sustainability of the cow hoof soup menu and the community always has the opportunity to enjoy its deliciousness. Besides being cheap and user-friendly, it also helps maintain a green ecosystem.

Keywords: cow hoof soup, exotic food, process to make cow hoof soup

1. INTRODUCTION

Cow hoof soup is categorized as an exotic food and it is very popular among fans of gearbox soup. The objective of this project is to help restaurant operators implement the process of removing cow hoof shoes quickly and indirectly speed up their cooking time. The conventional way of removing these cow hoof shoes is complicated where they burn them using a charcoal stove. For urban communities, this process creates difficulties because it can cause gas stoves to clog. To prevent this from happening, the process of removing cow hooves by boiling was introduced. The objective of this project is to maintain the sustainability of the exotic menu of cow hoof soup so that the community can continue to enjoy its deliciousness. At the same time, try to help restaurant operators implement the process of removing cow hoof shoes quickly and indirectly speed up their cooking time.

2. MATERIALS AND METHODS

According to [1], cow hoof soup is popular to people in the east and north coast regions of peninsular Malaysia. For the community in Terengganu, [2] cow hooves that are burnt and boiled are then made into 'rojok kateh'. In addition to being used as a soup, [3] states that this roasted cow hoof can be eaten directly and sprinkled with tamarind water/chili sauce. According to AzieKitchen [4], in order to get tasty and crispy cow's hooves, it needs to be burned until the cow's hoof shoes come off. This burning process takes a long time to ensure that the fine wool is removed from the cow's skin. After the burning process, the cow's hoof must be boiled for 4 hours [5]. The process of cleaning and removing cow hoof shoes to make soup is as shown in Figure 1.

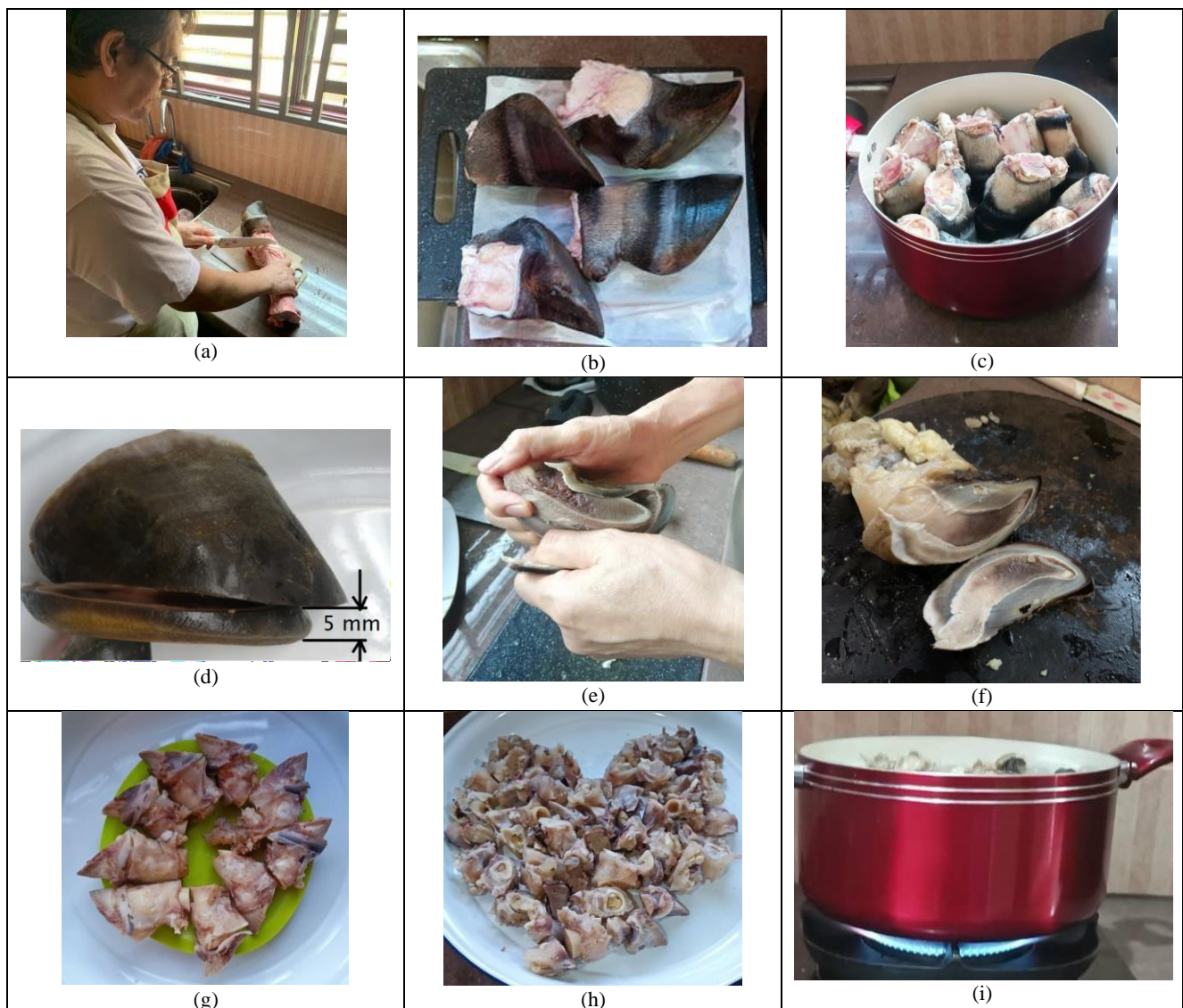


Figure 1- The process of cleaning and removing cow hoof shoes by boiling,

Figure 1(a) shows the process of cleaning and separating cow hooves from the leg. The cow's hooves are split in half (Figure 1b) so that they can be easily put into the pot (Figure 1c) to be boiled for an hour. Then the soles of the cow hoof shoes are cut to a thickness of 5 mm (Figure 1d) so that they can be easily removed (Figure 1e). In Figure 1(f) shows that the cow hoof shoes have been completely removed and washed (Figure 1g). Finally, the cow hooves are cut into small pieces (Figure 1h) and boiled a second time to make cow hoof soup. In order to obtain the best boiling duration to produce a short time to remove cow hoof shoes, three boiling time tests (30, 45 and 60

minutes) were performed. Figure 1(i) shows that the flame of a gas stove remains blue after being used to boil cow's hooves. This indicates that the stove is not clogged and is still working properly.

3. RESULTS AND DISCUSSION

The graph in Figure 2 shows that the increase in boiling time is inversely proportional to the time of removing the cow's hoof. An hour's boiling time allowed the cow's hoof shoes to be removed in 15 seconds. According to the chef who works in the restaurant, the time to boil cow hooves for an hour usually involves gas consumption of approximately RM0.50 per hour.

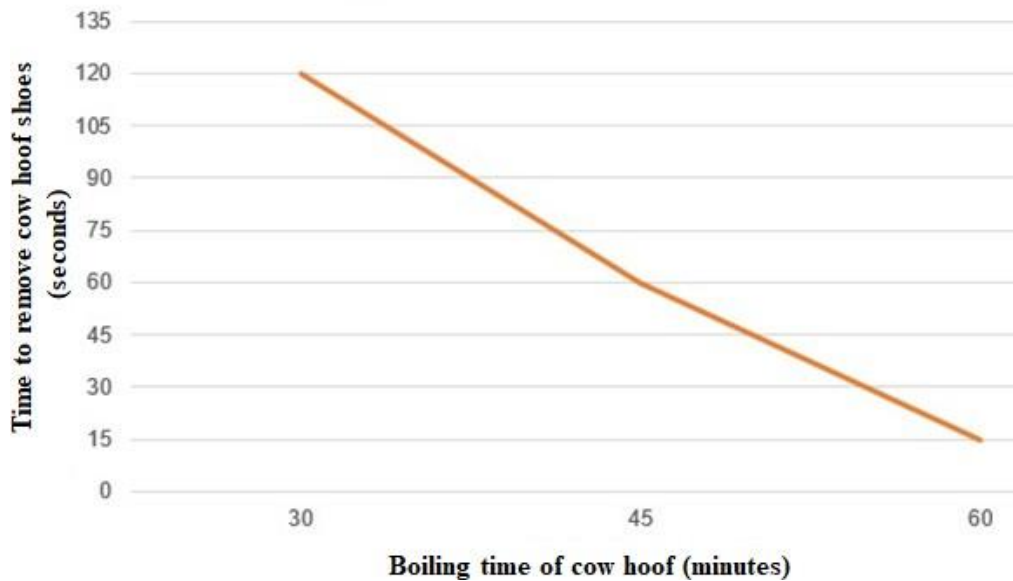


Figure 2- Time required to remove cow hoof shoes compared to the boiling time.

Advantages

- Processing time (baking) has been saved from 4 hours through the previous process [4] compared to one hour using the boiling method.
- The kitchen is cleaner and the smell problem and the stove is not clogged happen.
- For the community that is interested in the cow hoof soup menu, they will enjoy it more easily because of the quick removal of the cow hoof shoes and the clean preparation process.
- No risk of food ingestion which contain carcinogens which will cause cancer. According to [6], when cooking over high heat, especially an open flame, you are exposed to two main carcinogens: heterocyclic aromatic amines (HCAs) and polycyclic aromatic hydrocarbons (PAHs). Friendly speaking, a carcinogen is a substance, organism or agent capable of causing cancer.

4. POTENTIALLY COMMERCIALIZED

- The boiling method prevents cow hoof fat from dripping onto the gas burner and this prevents clogging of the gas burner.
- Usually, cow hooves that are simply thrown away can be processed so that they can be eaten by the community and this traditional food can be maintained.



5. CONCLUSION

In conclusion, it is hoped that with a new method to remove cow hoof shoes it will be able to contribute something meaningful to society. Maintaining the sustainability of the beef hoof soup menu where the community can enjoy its deliciousness continuously. Low operating cost, user- friendly and helps maintain a green ecosystem.

6. ACKNOWLEDGEMENT

The authors would like to express appreciation for the support from Malaysia Ministry of Higher Education and UiTM Pulau Pinang Kampus Permatang Pauh.

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- [5] <https://myresipi.com/cara-masak-sup-kaki-lembu/>
- [6] <https://trainingcenter.events/blog/makan-makanan-dibakar-benarkan-potensi-kanker>



THE ROLE OF DIGITAL BUSINESS LAW CONSULTANTS “LAW4BUSINESS” IN DEVELOPING MSMEs IN INDONESIA

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Abstract -- Micro, Small, and Medium Enterprises (MSMEs) play a crucial role in Indonesia's economy, contributing 60.5% to GDP and 96.9% to national employment. However, MSMEs face challenges with business licenses, intellectual property rights, cooperation agreements, and tax compliance. Licensing issues arise due to confusion and changing regulations, hindering business growth. MSMEs also lack awareness of copyright, brand, and patent distinctions, leading to disputes. The absence of cooperation agreements exposes them to legal risks. Additionally, illegal levies and disruptions by local entities affect business operations. To address these hurdles, the idea of Law4Business emerges, an online legal consultation app catering to MSMEs from establishment to dispute resolution, aiming to facilitate growth and compliance.

Keywords-- Micro Small and Medium Enterprise, Online Legal Consultation

INTRODUCTION

Micro, Small and Medium Enterprises (MSMEs) are one form of livelihood business that is present in Indonesia to fulfil the needs of the community (Harsono in Larasati, 2022). The role of MSMEs is very large for the growth of the Indonesian economy, with the number reaching 99% of all business units. The contribution of MSMEs to GDP also reaches 60.5%, and to employment is 96.9% of the total national employment (Coordinating Ministry of Economic Affairs of the Republic of Indonesia, 2022). Therefore, MSMEs are the strongest pillar in the business sector that contributes to the growth of the national economy.

Based on their contribution to the Indonesian economy, the development of MSMEs must be done to improve the welfare of the community. However, the implementation of MSMEs in Indonesia has its own obstacles or constraints. Some of the problems that often hit MSME players in Indonesia include problems with business licences, intellectual property rights (HAKI), cooperation agreements and business premises. Based on data from the Ministry of Investment / Investment Coordinating Board (BKPM), until 15 September 2022 at 11.00 WIB, a total of 1,959,530 business identification numbers (NIB) have been issued throughout Indonesia through the OSS-RBA (online single submission risk-based approach) system, with a dominance of 98 percent of micro and small business actors (MSEs) and 2 percent of medium and large business actors, this number is still far from the total estimated 65.47 million micro, small and medium business units (MSMEs) in Indonesia. In addition to licensing, another regulation that is often ignored by MSME players is tax payment. Of the estimated 60 million MSME players in Indonesia, only 2.5% or around 1.5 million MSME players report their taxes. This shows that not all MSME players understand how to calculate the taxes that are their obligations. The worst effect that can happen to MSME players is that their business can go out of business because the existing capital is used up to pay late tax sanctions.

Licensing issues are often an obstacle for MSME actors because many of these MSME actors are still confused and mistaken and do not even know the procedures and where to take care of business licences. In addition, this is often exacerbated by regulations that change in a short time. So that not a few MSME players are desperate to continue their business but do not take care of their business licences even though this can hamper the pace of their own business in the future.

Next is the issue of intellectual property rights. Many of the MSME players do not know the difference between copyrights, brands and patents. So that brand disputes often occur between MSME actors. The third legal problem that often occurs is the absence of a cooperation agreement. Overriding the law on the grounds of friendship is one of the triggers for most disputes in this country. The absence of a written cooperation agreement results in the absence of legal protection in the event of default. The last issue is about the place of business. Not a few MSME players are visited by thugs and or local government "elements" who ask for "rations" or illegal levies with the mode of business dissolution. If business owners have an official



presence, such incidents can be minimised.

Based on the above problems, a companion or consultant in directing is needed, especially in the field of law for MSMEs in running and developing their businesses. But unfortunately, these legal consultants are not easily found and usually require quite high costs. Therefore, we have an idea to create a legal consultation application that will assist MSME players in their business starting from the establishment process, development to consultation if disputes arise in the future. This application can be accessed online anywhere. This application is called Law4Business

BUSINESS CONCEPTS

Law4Business is an app created to help micro, small, and medium enterprises (MSMEs) address legal issues related to the establishment and development of their businesses. The app serves as a platform that provides online legal consultations with legal experts who are experienced in the field of business law.

Law4Business' business philosophy is simple, to provide quality legal assistance and advice to help MSMEs understand and comply with the laws and regulations that apply to their business. Using this application, users can consult with legal experts via video call or chat to get solutions to various legal problems faced by businesses.

Law4Business also provides business-related legal articles and the latest legal information so that MSMEs can increase their knowledge of the legal aspects of running a business. So that this application is a legal education application related to business development and is also an extension of the government in the process of socialising the latest laws or regulations, especially regarding the MSME business world.

Law4Business' main objective is to support the growth and success of MSMEs by providing quality and affordable legal consulting services. By doing so, MSME players can overcome legal challenges with more confidence and focus on growing their business without worrying about violating laws and regulations.

TARGET MARKET

1. Micro and small business owners: micro and small business people often operate with very limited teams or even on their own. They need legal advice regarding licensing, contracts, agreements with suppliers and customers, as well as other legal issues that may arise in day-to-day operations.

2. New entrepreneurs: people who are just starting a business often do not have sufficient legal knowledge regarding certain aspects of running a business. Legal consulting apps can help them understand the legal requirements that need to be met.

3. Online store owners: MSMEs operating online need legal advice related to e-commerce regulation, customer data protection, intellectual property rights (such as trademarks), and agreements with platform providers.

4. Manager of a restaurant, cafe, or food business: businesses in the food industry need legal guidance related to food licensing, hygiene regulations, contracts with suppliers, menu copyrights, and customer-related legal issues.

5. Creative business owners: MSMEs in the arts, design, fashion, and other creative industries need to protect their copyrights and intellectual property rights. They also need legal guidance regarding licenses and collaboration agreements.

6. Franchise owners: franchise business owners need a clear understanding of their rights and obligations within the framework of franchising, including legal aspects related to contracts and branding.

7. Independent professional services managers: individuals who perform professional services such as consultants, accountants, or independent lawyers need legal advice regarding employment contracts, intellectual property protection, and Professional Responsibility.

8. Other Online and Offline business owners: business owners in various sectors, such as services, manufacturing, commerce, and others, also need legal guidance related to their operations and business activities.

VISION and MISSION

Law4Business Vision:

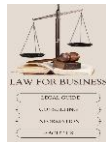
"Being a trusted partner of MSMEs in the legal aspects of business, providing affordable and quality solutions to support their growth and success."

Law4Business Mission:

1. Providing high quality legal consultancy to assist MSMEs in the establishment and development of their businesses.
2. Provides easy access to legal experts experienced in various business-related fields.
3. Providing legal articles and up-to-date information to improve the understanding and legal awareness of MSME players.
4. Committed to providing friendly, transparent and reasonably priced services to all MSMEs in need of legal support.

PRODUCT PHOTOS

Home App



6. Consultation History: Users can view their previous consultation history, including consultation notes, recommendations, and related legal documents.
7. Secure Payment: A secure and reliable payment system to pay for legal consulting services that have been used.
8. Additional Chat Feature: In addition to the video consultation feature, an additional chat feature allows users to communicate in writing with legal experts for quick questions or clarifications.
9. Legal Guide: Easily accessible and clear guidance on various legal aspects that MSMEs need to understand, such as licensing, tax, and consumer protection.
10. Secure Storage of Documents: Users can store important legal documents that have been created through the app in secure and encrypted storage.
11. Customer Support: Responsive customer support team to assist users with technical queries or issues.

App Logo

PRODUCT DESCRIPTION

The following are the features that will be held in the Law4Business application:

1. Online Legal Consultation: A key feature that allows users to consult directly with legal experts via video call or chat, regarding the establishment, business licensing or Halal filing and development of their business.
2. Legal Expert Search: Users can search and select legal experts based on specialisation, ratings, and reviews from other users.
3. Legal Articles and Current Information: This feature provides legal articles and up-to-date information on legal regulations relevant to businesses and MSMEs.
4. Template Legal Documents: Provision of template legal documents that can be downloaded by users, such as cooperation agreements, licences, or employee contracts.
5. Notifications and Reminders: Users receive notifications about consultation schedules, updates on relevant legal regulations, and other reminders.

SWOT ANALYSIS

The following is a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis for Law4Business:

Table 1. SWOT analysis

<p>STRENGTHS: Team of Legal Experts. Focus on MSMEs Competitive Prices</p>	<p>WEAKNESSES: Brand Awareness Limited Resources</p>
<p>OPPORTUNITIES: Growth of MSMEs Industry Collaboration Online Services</p>	<p>THREATS: Competition with Conventional Services Regulatory Changes Misuse of Information</p>

Strengths:

1. Team of Legal Experts: The availability of a team of experienced legal academics and practitioners will provide credibility and quality services.
2. Focus on MSMEs: Concentrating on the MSME segment will enable deeper specialisation and an in-depth understanding of client needs.
3. Competitive Prices: Offering affordable prices will attract MSME players who need quality yet affordable legal consultations.

Weaknesses:

1. Brand Awareness: As a new service, Law4Business may require further efforts to build brand awareness among MSME players.
2. Limited Resources: Limited resources, including limitations in the size of the legal team, may affect the capacity to handle a high number of clients.

Opportunities:

1. Growth of MSMEs: The potential growth of the MSME sector in Indonesia opens opportunities for

increased demand for relevant legal advisory services.

2. Industry Collaboration: Opportunities to partner with existing MSME platforms or associations to increase the reach and influence of Law4Business.
3. Online Services: In the digital age, the adoption of online legal consultation services is an opportunity for Law4Business to reach a wider market.

Threats:

1. Competition with Conventional Services: Competition from established conventional legal consultancies can be a challenge for Law4Business to attract MSME players.
2. Regulatory Changes: Changes in laws and government regulations may affect the way Law4Business operates and require rapid adaptation.
3. Misuse of Information: The risk of misuse of information by irresponsible parties can threaten the reputation and trust of clients.

It is important for Law4Business to capitalise on its strengths and opportunities, as well as address weaknesses and face threats with the right strategies. By conducting continuous SWOT analyses, Law4Business can identify changes in the business environment and strengthen its position as a trusted partner for MSMEs in dealing with the legal aspects of their businesses.

NEED

In the creation and development of the Law4Business application, the following things will be needed:

1. App Development Team/Application Developer: A team of developers with knowledge and experience in Android-based application development is required. This team is responsible for the entire development process from design to launch.
2. Legal Experts: This team consists of academics and legal practitioners who have extensive knowledge of various legal aspects related to MSME businesses and enterprises. They will provide consultation and legal information to app users.
3. User Interface Design (UI/UX): Creating an attractive, responsive and user-friendly interface requires a professional design team. A good design enhances the user experience of the app.
4. Application Development: In the development process the right software and technology is required to create the application. This includes relevant programming languages, frameworks and application software (IDE).
5. Servers and Infrastructure: To run the app smoothly, you need servers and infrastructure that can handle the traffic and user requests. The selection of a reliable server and hosting provider will have an effect on the performance of the application.
6. Database: The Law4Business application will store and manage user data, legal articles, and other information. Therefore, a reliable and secure database is required to manage the application data.
7. Security: App security is vital, especially since it involves sensitive legal information. Strong layers of security are needed, such as data encryption and authentication mechanisms.
8. Testing and Quality Assurance: The app should be thoroughly tested to ensure its stable and error-free performance. The development team should carry out testing and quality assurance before the app is launched.
9. Launch and Marketing: Once the app is ready, it needs an effective launch plan and marketing strategy to raise awareness and attract users.
10. Support and Maintenance: After launch, the app will require constant support and maintenance. It requires a team that is ready to respond to issues and update the app as needed.

The creation of the Law4Business app required good planning and coordination between the development team, legal experts, and other teams involved.

COST

As previously mentioned before, Cost estimates for developing and running Law4Business app can vary based on many factors. Here is a rough estimate of the cost in Rupiahs based on the aforementioned needs:

Application development: estimated between 50,000,000 and 300,000,000 Rupiahs.

Testing and Quality Assurance: Estimated between 5,000,000 and 60,000,000 Rupiahs.

Design System and User Experience (UI/UX): Estimated between 3,000,000 to 30,000,000 Rupiahs.

Infrastructure: Estimated between 2,000,000 and 15,000,000 Rupiahs per month.

Software Acquisition and Licensing: Estimated between 5,000,000 to 20,000,000 Rupiahs.

Marketing and advertising: estimated between 5,000,000 and 30,000,000 Rupiahs.

Support and Maintenance: Estimated between 5,000,000 and 60,000,000 Rupiahs per month.

The total estimated cost to develop and run a Law4Business application ranges from approximately 75,000,000 to 510,000,000 Rupiahs or more depending on various factors and ongoing costs.

CONCLUSIONS

MSMEs are a pillar that supports the Indonesian economy, which continues to grow. This growth is accompanied by the birth of various regulations and laws that regulate them so that the implementation process is orderly. However, this is not accompanied by awareness of the importance of the law itself from MSME players. For this reason, the presence of Law4Business is expected to increase the awareness of MSME players and also make it easier for them to establish, run and develop MSME businesses in Indonesia.

Source:

Larasati, F. O., Khalisa, S. N., & Pudjiastuti, D. (2022). Legal Protection Efforts to Develop MSMEs Based on the Job Creation Law. *Dictum: Journal of Legal Science*, 10(1), 132-146.

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AUTONOMOUS DRONE SWARM FOR SURVEILLANCE

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Abstract-An autonomous swarm of drones is designed to secure an area, replacing the need for CCTV cameras and security guards. This reduces the workload for security personnel. The project requires programmable drones and a computer with Python libraries. The client is the "Development and Maintenance Unit Politeknik Mersing," and they need the drones for a location without security cameras. Autonomous drones are used because they can access inaccessible areas, providing better surveillance from above. The project follows the "DevOps methodology" with planning, coding, and testing phases. The operational approach involves cycling drones one by one, ensuring continuous coverage.

Keywords: Drone, Surveillance, Autonomous, Drone swarms



I. INTRODUCTION

The project employs autonomous drone swarms as an innovative method to enhance surveillance capabilities and replace conventional security measures like CCTV cameras and security officers. This approach not only offers more comprehensive coverage but also has the potential to reduce the workload of human security personnel. The implementation involves programmable drones controlled through a laptop or computer with Python libraries. The project's client, the "Development and Maintenance Unit Politeknik Mersing," aims to deploy these autonomous drones in an area lacking existing security infrastructure, such as security cameras. The drones' aerial perspective facilitates clearer and more effective surveillance.

The project follows the "DevOps methodology," which comprises three main phases: planning, coding, and testing. The planning phase involves defining project requirements based on needs and coding the autonomous drone and accompanying website. In the testing phase, both the drone and website are evaluated to ensure they meet the specified requirements. The operational approach of having one drone active at a time, with seamless transitions to another drone when recharging is required, optimizes continuous surveillance.

On the other hand, the project also addresses the issue of weak authentication, which is a prominent security vulnerability in databases. Weak authentication encompasses practices such as using weak passwords, default credentials, or identical username-password combinations. This creates a vulnerability where attackers could gain unauthorized access. The project aims to counteract weak authentication by implementing a login system with two-factor authentication (2FA). Two-factor authentication is a security mechanism that adds an extra layer of protection by requiring users to provide two separate forms of verification before granting access. This can involve something the user knows (password) and something the user has (a mobile device for receiving a verification code).



By incorporating 2FA, the project endeavors to enhance security awareness among users and educate them about the importance of using stronger authentication practices. This aligns with the broader goal of bolstering the security posture of the organization and its technology infrastructure. In summary, the project showcases the innovative use of autonomous drone swarms for surveillance and security enhancement while also addressing the



critical issue of weak authentication through the implementation of two-factor authentication measures.

Figure 1 : This is the open area behind the Development and Maintenance Unit of Politeknik Mersing, Malaysia.

Figure 2 : This is the location of the Development and maintenance unit's office.



II. PROBLEM STATEMENT

Recent news articles from various sources in Malaysia shed light on the growing concerns related to the invasion of permanent forest reserves and the role of autonomous drones in addressing these issues. These events underscore the significance of safeguarding ecologically vital areas and highlight the potential impacts of such encroachments.

In the first news article from Berita Harian on May 21st, 2023, the invasion of two permanent forest reserves in Selangor is presented as a pressing concern. This incident emphasizes the immediate need to act and mitigate encroachment activities that threaten these ecologically crucial regions. The invasion likely involves human activities that could result in deforestation, habitat destruction, and disruption of local ecosystems. The situation calls for effective measures to monitor and manage these reserves to ensure their long-term sustainability.

The April 6, 2023, issue of The Star presents a second article detailing the recognition of enduring woodland sanctuaries in Johor that have been subject to unauthorized exploitation. This suggests an ongoing issue of unauthorized activities within these reserves. To combat such encroachments, advanced technologies like autonomous drones could play a pivotal role. These drones could be employed for surveillance, tracking, and monitoring remote areas that are difficult to access by traditional means. Equipped with various sensors and cameras, autonomous drone swarms can provide real-time data and imagery to authorities, aiding in the detection of illegal activities and enabling prompt responses.

The third news piece from Bernama on May 20th, 2023, discusses the actions taken by the Royal Malaysian Police and the forestry department to address migrant invasion activities at the Malaysian-Thailand border. While this news does not directly relate to the forest reserves, it demonstrates the broader challenges of managing border areas and preventing unauthorized entries that could potentially impact natural resources and protected areas. Autonomous drone swarms can be valuable assets in patrolling and surveilling such border regions, enhancing security measures, and enabling quicker responses to potential threats.

In the context of these news articles, the use of autonomous drones could have a positive impact on addressing the issues of invasion and encroachment in permanent forest reserves. Autonomous drone can aid authorities in effectively monitoring and protecting these ecologically vital areas, helping to prevent illegal activities and maintain the integrity of the environment. By providing timely data and actionable insights, autonomous drones contribute to the conservation efforts and sustainable management of natural resources.

Ts Suhana Binti Ismail, the Deputy Director of Academic Support at Politeknik Mersing in Malaysia, has stated that the open area behind the Development And Maintenance Unit's office lacks any form of surveillance, including Closed Circuit Television (CCTV). Furthermore, security personnel are unable to monitor this area. The potential consequences of this lack of surveillance include a higher risk to the safety of the student hostel, a compromise in the security of the staff's residential area, and a potential impact on government assets.



III. OBJECTIVES

By harnessing the power of the Python programming language, our objective is to intricately design an autonomous drone swarm that embodies cutting-edge technology. This project aims to create a robust autonomous drone swarm surveillance system. This system will play a pivotal role in diligently monitoring not only the security of clients' premises but also the surrounding areas, thereby establishing a comprehensive and dynamic security network.

IV. MATERIALS AND METHODS

Materials :

Drones: A pair of identical quadcopter drones sourced from the DJI Tello series by Da Jiang Innovations formed the cornerstone of this project. These drones, characterized by their affiliation with the DJI Tello model, boasted exceptional specifications encompassing a commendable 25-minute flight duration, an expansive range extending up to 800 meters, and the incorporation of a 720p HD camera for onboard imaging.

Ground Control Station: The ground control station's composition comprised integral elements, notably including a laptop equipped with an Intel Core i5 processor and 16GB RAM. This pivotal component was complemented by a tailor-made website, meticulously crafted to facilitate seamless control over the drone swarm.

Communications Infrastructure: The establishment of wireless communications among the drones was achieved via a WIFI connection emanating from each individual drone, hinging upon a frequency range of 2.4 GHz.

Methodology:

Swarm Configuration and Coordination: The operational blueprint centered on a sequential process whereby one drone would initiate its flight, and upon reaching the culmination of its maximum flight duration, gracefully descend to yield the aerial domain to its counterpart.

Navigation and Mapping: The intricate choreography of drone navigation and mapping was meticulously orchestrated using Python programming during dedicated programming sessions.

Task Execution: The drones seamlessly undertook multifaceted roles encompassing comprehensive area surveillance and precise object tracking. The execution of these autonomous tasks was seamlessly regulated from the ground control station, facilitated by the bespoke website. This interface not only delivered real-time data but also facilitated live video feeds, encapsulating a holistic overview of mission-critical activities."



Figure 3 : Illustrates the "Dji Tello" drone designated for the utilization in this project.

V. RESULTS AND DISCUSSION

The utilization of autonomous drone swarms for surveillance has the potential to revolutionize monitoring and security measures in a multitude of positive ways. One of the most remarkable benefits is the substantial enhancement in coverage capabilities. These swarms can efficiently cover vast areas, including intricate terrains that are often challenging for traditional surveillance methods to navigate. This expanded coverage ensures that no corner goes unnoticed, providing a comprehensive and detailed view of the monitored environment.

Furthermore, the real-time data collection prowess of autonomous drone swarms is unparalleled. Equipped with advanced sensors and communication systems, these drones can gather and transmit data from multiple angles simultaneously. This enables a more accurate and up-to-date understanding of the situation on the ground, proving invaluable in time-sensitive surveillance tasks, disaster response, and security operations.

The adaptability and flexibility of drone swarms are also noteworthy advantages. These autonomous units can swiftly adapt to changing circumstances, allowing for quick reconfiguration and redeployment. This agility is particularly vital in dynamic scenarios where immediate action is required. Additionally, the use of drone swarms reduces the need for human presence in potentially hazardous environments, thus mitigating risks to human life.

From a financial standpoint, while the initial investment in drone technology might be substantial, the operational costs of maintaining a drone swarm are often lower than those associated with large human security forces. Moreover, the deterrence factor cannot be understated. The visible presence of drone swarms acts as a powerful deterrent against criminal activities, discouraging potential wrongdoers due to heightened surveillance and monitoring.



I. CONCLUSION

In summary, the objective is to establish a reliable project centered around utilizing drones for surveillance purposes. To address this, a viable solution involves combining various drone systems, a course of action prompted by the recognition of the limited research conducted in this field so far. This approach stands out as optimal due to its potential to offset individual shortcomings. For instance, the synergy between drones boasting high maneuverability but limited battery life and blimps with extended battery life but restricted maneuverability can prove highly effective.

Future investigations will focus on creating system simulations and prototypes to further validate the project advisor's proposed scenario for deployment. From a technical perspective, drones offer numerous advantages in the realm of surveillance. Despite this, it's noteworthy that drone-based security surveillance remains relatively untapped and underexplored. Existing studies investigating the efficacy and efficiency of such technology are scarce, leaving a nuanced understanding of both its strengths and weaknesses. However, a harmonized integration of these technologies can yield mutually compensatory effects. The brief operational lifespan of drones, for instance, can be counterbalanced, while drones' agility can overcome the navigational limitations of blimps in confined spaces.

Although the project was extensive, it involved exploring numerous preliminary designs in the pursuit of crafting an adaptable drone capable of serving as a cornerstone for the Aerial Security Surveillance System. The ensuing section outlines the anticipated outcomes associated with the drone's design.



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3rd CATEGORY: BUSINESS IDEA BATTLE

**MIND POWER PROJECT: CULTIVATING RESILIENT
SOCIETIES THROUGH INNOVATIVE LEARNING &
INTERACTIVE MULTIMEDIA IN FLAT PAYA NAHU, SUNGAI
PETANI, KEDAH.**

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Abstract

The abstract outline about the "Mind Power Project: Cultivating Resilient Societies Through Innovative Learning & Interactive Multimedia" is a different project designed to help Flat Paya Nahu residents in developing a growth mindset and learning how to expand their knowledge. The project was created to be enjoyable and engaging, with an emphasis on interactive activities that educate those living there, especially children, by using different approaches. The project described above include a variety of activities that help boost their knowledge, skills, confidence, and awareness about important education. For example, the Book House, Face Painting, Games Section, Show and Plays, and Seminar and Workshop. On the other hand can give education and public awareness through sharing materials and conducting awareness campaigns to promote reading habits, literacy skills, and learning outcomes. Due to the issue of underprivileged residents and a disharmonious environment in Flat Paya Nahu, it has an impact on the development of children there, especially those aged 12 and under. This is because the target group for this project is society, children, youth and parents in Flat Paya Nahu. As the saying goes, "Books give a soul to the universe, wings to the mind, flight to the imagination, and life to everything. Thus, reading this will change one's mind and then one's life, and one of the branches of educational transformation. Finally, posters and social media platforms will be used to promote these types of projects as well as the collaboration partners, sponsors, and influencers who can ensure widespread marketing and gain the trust of the target audiences. Therefore, ensure that the project runs flawlessly and effectively that can give a positive impact towards residents in Flat Payah Nahu.

Keywords: Interactive activities, knowledge, skills, confidence, education, social media

ECOHALALCAMP: COMBINING HALAL TOURISM AND DIGITAL-BASED ENVIRONMENTAL MANAGEMENT

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Abstract

In an era marked by conscientious consumption, spiritual pursuits, and environmental concerns, the concept of sustainable halal tourism is gaining traction. This paper presents "EcoHalalCamp," a visionary business idea that encapsulates the essence of enhancing sustainable halal business through digital innovation. Combining the principles of halal travel, eco-conscious practices, and cutting-edge technology, EcoHalalCamp offers a transformative camping experience that resonates deeply with Muslim travelers seeking authentic connections with faith, nature, and sustainability. Through a comprehensive analysis encompassing the market landscape, potential customers, financial projections, and more, this paper highlights the feasibility and uniqueness of EcoHalalCamp in bridging the gap between religious values and environmental stewardship.

Keywords: *Halal Tourism, Sustainable Travel, Eco-Friendly Camping, Digital Innovation, Faith-Based Experiences*

1. INTRODUCTION

In the current landscape of consumer consciousness, a fascinating convergence is occurring at the crossroads of ethical consumption, cultural identity, and spiritual exploration (Battour & Ismail, 2016). This convergence has ignited a remarkable surge in the demand for travel experiences that transcend mere leisure, resonating deeply with personal values while also aligning with broader ethical and environmental concerns. As this trend gains momentum, it ushers in an unprecedented opportunity within the realm of halal tourism—an industry catering to Muslim travelers seeking experiences that not only adhere to their faith but also uphold environmental consciousness (Mohsin et al., 2016). This intersection of spiritual aspirations, environmental responsibility, and unique travel experiences presents not only a promising market but also an avenue to address a longstanding challenge in the travel sector (Rosmery et al., 2019). The traditional paradigms of travel have often fallen short in catering to the nuanced needs of Muslim travelers (Rhama & Alam, 2017). While the concept of halal travel has garnered recognition, a considerable gap remains in the market—where comprehensive offerings seamlessly blend religious observance with eco-conscious practices. This gap underscores a twofold challenge. On one hand, Muslim travelers are searching for holistic experiences that authentically integrate their religious values, halal dietary requirements, and spiritual practices. On the other hand, the mounting environmental concerns stemming from conventional tourism practices necessitate a shift towards sustainable alternatives (Huda et al., 2020).

This gap signifies an opportunity for innovation, where existing travel solutions either address halal requirements without considering sustainability or emphasize environmental responsibility while neglecting the specific needs of Muslim travelers. This creates a niche that calls for a pioneering approach—one that reconciles the tenets of halal tourism with the imperatives of eco-friendly practices (Vargas-Sánchez & Moral-Moral, 2020). Thus, emerges an avenue for the creation of a novel paradigm in travel, one that bridges the chasm between religious and ecological considerations. The potential inherent in the fusion of halal camping and eco-tourism reverberates within the travel industry as two significant trends intersect (Iskandar et al., 2022). The evolution of halal tourism, extending beyond the provision of halal food and prayer facilities, has captured the attention of a diverse range of Muslim travelers. The integration of natural environments and outdoor experiences into the realm of halal travel unveils a captivating avenue of exploration and spiritual rejuvenation. Concurrently, the global surge in eco-tourism underscores an overarching yearning among travelers to bask in the beauty of nature without leaving behind an indelible environmental footprint (Samori

et al., 2016). The allure of unspoiled landscapes and the collective commitment to preserve them for generations to come are ushering in a new era of travel experiences. It is within this dynamic context that innovative strategies can thrive, by harmonizing halal practices with ecologically sustainable principles (El-Gohary, 2016). This confluence crafts a compelling narrative, reflecting the evolving needs and aspirations of contemporary travelers. Embracing this dynamic intersection, "EcoHalalCamp" emerges as a pioneering solution that not only bridges the gap in halal travel but also catalyzes a journey towards a more harmonious and conscientious travel industry. The subsequent sections delve deeper into the intricacies of how EcoHalalCamp navigates this complex terrain, demonstrating its prowess in redefining the contours of travel and tourism.

2. MATERIALS AND METHODS

Vision

To be the forefront of sustainable halal tourism by seamlessly integrating authentic Islamic experiences with eco-conscious practices through digital innovation.

Mission

Empower Muslim travelers to connect deeply with their faith, nature, and sustainable living through immersive halal camping experiences, underpinned by innovative digital tools and environmental stewardship.

Materials

Table 1. Material Initiatives and Descriptions

No.	Initiatives	Description
1.	Halal-Certified Facilities	Partnering with halal-certified food providers, accommodation, and amenities to ensure that all aspects of the camping experience are in line with Islamic principles.
2.	Eco-Friendly Camping Gear	Sourcing and providing environmentally friendly camping equipment, such as biodegradable tents, reusable utensils, and sustainable bedding to minimize the ecological footprint.
3.	Digital Platform	Developing a comprehensive digital platform that enables customers to browse and select camping destinations, make reservations, access halal menus, register for religious activities, and receive eco-friendly camping tips.
4.	Educational Content	Curating and offering educational content that raises awareness about the significance of eco-conscious living, waste reduction, and sustainable practices aligned with Islamic teachings.
5.	Renewable Energy Solutions	Introducing renewable energy sources, such as solar-powered lighting and charging stations, to minimize reliance on traditional energy sources and promote sustainable energy practices.
6.	Biodegradable Toiletries	Providing biodegradable toiletries to ensure personal hygiene while minimizing the environmental impact on the camping sites.

Source: The Authors, 2023

Methodology

Table 2. The Methods for The Initiatives

No.	Initiatives	Description
1.	Destination Selection and Preparation	a. Identifying picturesque camping locations that offer both natural beauty and accessibility to religious facilities. b. Collaborating with local authorities for land permits, environmental impact assessments, and feasibility studies. c. Preparing the camping sites with minimal intrusion on the environment, ensuring waste management and recycling facilities are in place.
2.	Halal Experience Curation	a. Collaborating with religious scholars to design immersive Islamic experiences, including prayers, lectures, and group discussions. b. Crafting halal dining experiences that adhere to dietary requirements and cultural preferences, sourced from local halal producers.
3.	Digital Integration	a. Developing a user-friendly digital platform and mobile app to streamline bookings, payments, and communication. b. Integrating QR codes and digital guides to enhance the camping experience, offering informative insights into religious practices, local ecology, and sustainability initiatives.
4.	Environmental Stewardship	a. Implementing "Leave No Trace" principles to ensure campsites are left untouched after departure. b. Conducting waste audits and adopting a zero-waste approach by encouraging campers to minimize waste and recycle responsibly.
5.	Educational Workshops	a. Organizing workshops on sustainable living, conservation, and eco-friendly practices led by environmental experts. b. Facilitating discussions on Islamic teachings related to nature and stewardship, fostering a deeper connection between faith and environmental responsibility.
6.	Impact Measurement and Enhancement	a. Employing data analytics to track the environmental impact of each camping experience, including carbon footprint and waste generation. b. Collaborating with reforestation projects or local conservation initiatives to offset any environmental impact.

Source: The Authors, 2023

Through these materials and methodologies, EcoHalalCamp not only offers a unique and enriching travel experience but also works diligently towards realizing its vision of pioneering a sustainable halal tourism paradigm that bridges faith, nature, and technology while leaving a positive impact on the environment.

3. RESULTS AND DISCUSSION

Direct Potential Competitors

1. Halal-Focused Travel Agencies: Companies exclusively focused on providing halal travel experiences could be direct competitors. While they cater to the religious and dietary needs of Muslim travelers, their approach might not necessarily emphasize the integration of sustainable and eco-friendly practices.
2. Eco-Tourism Operators: Eco-tourism companies that prioritize sustainability and environmental conservation may overlap as competitors. They might offer eco-friendly experiences, but without the specialization in halal services, they might not cater to the specific needs of Muslim travelers.
3. Religious Tourism Providers: Entities offering religious travel experiences could also be competitors. While they emphasize spiritual aspects, they may not integrate the environmental aspect or the digital tools that EcoHalalCamp provides.
4. Traditional Camping Providers: Conventional camping companies that do not focus on the halal or eco-friendly aspects could still compete. However, they might not cater to the specific needs of Muslim travelers or emphasize sustainable practices.

Indirect Potential Competitors

1. Mainstream Travel Agencies: General travel agencies might indirectly compete as they cater to a wide range of travelers. However, they might not focus specifically on halal or eco-friendly experiences.
2. Online Travel Platforms: Large online platforms offering a variety of travel experiences might indirectly compete. However, the specific focus of EcoHalalCamp on halal and sustainable aspects differentiates it from these platforms.
3. DIY Travel Planning: Some travelers might choose to plan their own halal camping trips, booking accommodations, halal food, and arranging for eco-friendly practices individually. EcoHalalCamp offers the convenience of an integrated solution.
4. Cultural and Heritage Tours: Tours that focus on cultural and heritage exploration might indirectly compete, as they also offer immersive experiences. However, the emphasis on halal compliance and sustainable practices sets EcoHalalCamp apart.

Competitive Analysis

EcoHalalCamp's uniqueness lies in its ability to seamlessly blend the often disparate elements of halal compliance, sustainable practices, and digital innovation. Its direct competitors might excel in certain areas, such as halal services or eco-friendliness, but they are less likely to provide the comprehensive integration that EcoHalalCamp offers. Indirect competitors may not specialize in halal and eco-friendly experiences, lacking the customized focus that EcoHalalCamp provides. The convenience of a one-stop solution and the emphasis on combining faith-based values with ecological responsibility give EcoHalalCamp a competitive edge. To maintain a competitive advantage, EcoHalalCamp should continually enhance its unique value proposition by refining its halal offerings, deepening its sustainability initiatives, and leveraging digital tools to create a seamless and enriching experience for Muslim travelers seeking an authentic, eco-conscious, and spiritually fulfilling camping adventure.

4. FINANCIAL ANALYSIS

Cost Analysis

Table 3. Cost Analysis

Cost Categories	Description	Estimated Costs
Site Preparation	Land permits, environmental impact assessments, campsite preparation (land clearing, setting up facilities), waste management.	\$15,000 - \$20,000
Halal-Certified Facilities	Collaborating with halal food providers, accommodation partners, and amenities to ensure halal-compliant services.	\$10,000 - \$15,000
Eco-Friendly Gear	Sourcing biodegradable tents, reusable utensils, eco-friendly bedding, solar-powered lighting, recycling bins.	\$8,000 - \$10,000



Digital Platform	Developing a user-friendly platform, including app development, payment gateways, QR codes for guides and educational content.	\$25,000 - \$30,000
Educational Workshops	Conducting workshops on sustainable practices, conservation, Islamic teachings on environmental stewardship.	\$5,000 - \$7,000
Marketing and Promotion	Advertising, social media campaigns, website maintenance, professional photography for promotional materials.	\$8,000 - \$12,000
Personnel	Salaries for camp coordinators, environmental educators, tech support, customer service, religious scholars.	\$40,000 - \$50,000
Miscellaneous	Contingency fund for unforeseen expenses, permits, licenses, insurance, and other miscellaneous costs.	\$5,000 - \$7,000
Total Estimated Costs		\$116,000 - \$151,000

Source: The Authors, 2023

Description of Cost Categories:

1. **Site Preparation:** These costs involve obtaining necessary permits, assessing environmental impacts, preparing campsite facilities, and implementing waste management systems to ensure eco-friendliness and compliance with regulations.
2. **Halal-Certified Facilities:** Collaborating with halal-certified providers for food, accommodation, and amenities to ensure that all aspects of the camping experience are in line with Islamic principles.
3. **Eco-Friendly Gear:** Procuring biodegradable tents, reusable utensils, sustainable bedding, solar-powered lighting, and other equipment to minimize the environmental footprint of the campsite.
4. **Digital Platform:** Developing a user-friendly digital platform and app for seamless bookings, payments, communication, and provision of educational content, enhancing the overall experience.
5. **Educational Workshops:** Conducting workshops to educate participants on sustainable practices, conservation, and the connection between Islamic teachings and environmental stewardship.
6. **Marketing and Promotion:** Allocating funds for advertising, social media campaigns, website maintenance, and professional photography to promote EcoHalalCamp and attract participants.
7. **Personnel:** Covering salaries for camp coordinators, environmental educators, tech support, customer service representatives, and religious scholars who contribute to the holistic camping experience.
8. **Miscellaneous:** Setting aside funds for unforeseen expenses, permits, licenses, insurance, and other miscellaneous costs that may arise during camp operation.

By carefully managing these costs and continuously assessing the financial aspects of the venture, EcoHalalCamp can work towards achieving its vision of pioneering a unique and enriching halal camping experience that also champions sustainable practices and digital innovation.

Financial Projections for EcoHalalCamp

Here's a simplified financial projection for the first year of EcoHalalCamp's operation.

1. **Revenue Projection:**
 - Number of Campers: 300
 - Average Camp Fee per Camper: \$400
 - Total Revenue: 300 campers * \$400 = \$120,000
2. **Cost Projection:**
 - Site Preparation: \$17,500
 - Halal-Certified Facilities: \$12,500
 - Eco-Friendly Gear: \$9,000
 - Digital Platform: \$27,500
 - Educational Workshops: \$6,000
 - Marketing and Promotion: \$10,000
 - Personnel: \$45,000
 - Miscellaneous: \$6,000
 - Total Costs: \$133,500
3. **Gross Profit:**
 - Gross Profit = Total Revenue - Total Costs
 - Gross Profit = \$120,000 - \$133,500 = -\$13,500
4. **Operating Expenses:**
 - Administrative Costs (rent, utilities, office supplies): \$15,000

- Total Operating Expenses: \$15,000
- 5. Net Profit (Before Taxes):
 - Net Profit = Gross Profit - Operating Expenses
 - Net Profit = -\$13,500 - \$15,000 = -\$28,500
- 6. Break-Even Point (BEP) Analysis:
 - BEP (in terms of campers) = Total Fixed Costs / (Average Camp Fee - Variable Cost per Camper)
 - Assuming variable costs per camper are \$180:
 - BEP = (\$133,500 + \$15,000) / (\$400 - \$180) = 487.5 campers (approx. 488 campers)
- 7. Return on Investment (ROI):
 - ROI = (Net Profit / Total Investment) * 100
 - Assuming the total investment is \$140,000 (including miscellaneous and contingency):
 - ROI = (-\$28,500 / \$140,000) * 100 ≈ -20.36%

EcoHalalCamp should use these projections as a basis for more detailed financial planning, considering factors such as pricing adjustments, cost optimization, and expansion plans. These projections will serve as a guiding framework to make informed decisions and steer the venture towards long-term success.

5. MARKET AND POTENTIAL CUSTOMER ANALYSIS

Market Analysis

The market for EcoHalalCamp operates at the intersection of three burgeoning trends: halal tourism, eco-friendly travel, and digital innovation. Each of these trends has been gaining momentum individually, and their convergence presents a unique opportunity for a venture like EcoHalalCamp.

1. Halal Tourism: The global halal tourism market has been expanding rapidly, driven by a growing Muslim population seeking travel experiences that align with their faith and values. This market is estimated to be worth billions of dollars, with travelers looking for halal-compliant accommodations, food, and activities.
2. Eco-Friendly Travel: The increasing awareness of environmental concerns and the desire to minimize ecological footprints have given rise to the eco-tourism movement. Travelers, irrespective of their faith, are seeking destinations and experiences that prioritize sustainability and conservation.
3. Digital Innovation: The integration of digital tools in the travel industry is transforming how travelers plan, book, and experience their trips. Mobile apps, online platforms, and digital guides are becoming integral to enhancing the overall travel experience.

Potential Customer Analysis

EcoHalalCamp's target audience is a diverse group of Muslim travelers who value both their faith and environmental responsibility. This includes:

1. Families: Muslim families seeking vacations that cater to the needs of all family members while adhering to halal principles. The immersive and educational aspects of EcoHalalCamp are appealing to parents who want their children to connect with nature and their faith.
2. Solo Travelers: Young Muslim adults or professionals looking for unique travel experiences that combine spirituality, outdoor adventure, and the chance to meet like-minded individuals.
3. Couples: Muslim couples seeking romantic getaways that offer a blend of spiritual enrichment and eco-conscious relaxation.
4. Faith and Nature Enthusiasts: Individuals who are passionate about their faith and want to explore the beauty of nature while deepening their spiritual connections.

Key Considerations

1. Cultural Sensitivity: Understanding the cultural nuances and preferences of the target audience is crucial. This includes providing halal-certified food, designated prayer areas, and gender-segregated facilities.
2. Environmental Consciousness: Eco-conscious travelers are drawn to experiences that prioritize sustainability. EcoHalalCamp's commitment to minimizing environmental impact is likely to resonate with this segment.

3. Digital Integration: Tech-savvy travelers appreciate the convenience of digital platforms for reservations, access to information, and interactive guides.
4. Educational Value: Travelers seeking to enrich their understanding of Islamic teachings on environmental stewardship and sustainable living are likely to find EcoHalalCamp's workshops and activities appealing.

In conclusion, EcoHalalCamp operates in a market with substantial growth potential, catering to a diverse group of Muslim travelers who seek authentic halal experiences that are environmentally responsible. By addressing the unique needs of this audience and capitalizing on the intersection of halal tourism, eco-friendly travel, and digital innovation, EcoHalalCamp can position itself as a trailblazer in the evolving landscape of sustainable and faith-based travel experiences.

6. CONCLUSION

"EcoHalalCamp" represents an innovative stride in the realm of sustainable halal tourism, where faith, nature, and technology harmoniously converge. By addressing the specific needs of Muslim travelers seeking halal experiences and combining them with eco-friendly practices, the venture taps into the dynamic intersections of faith-based values and environmental responsibility. The meticulous analysis conducted throughout this exploration underlines the substantial demand for such a venture and underscores its potential to foster a paradigm shift in travel experiences. As the paper delves into the multifaceted aspects of EcoHalalCamp—ranging from its vision and mission, competitive analysis, financial projections, and market insights—it becomes evident that the venture holds the promise of being a transformative force in the modern travel landscape. By seamlessly intertwining halal principles, sustainability initiatives, and digital innovation, EcoHalalCamp emerges as a catalyst for conscientious and enriching travel experiences that inspire travelers to embrace faith, nature, and responsible living in unison.

7. ACKNOWLEDGMENT

We extend our heartfelt gratitude to Universitas Pembangunan Jaya for providing the platform and resources that facilitated the exploration and development of the business idea presented in this paper. The academic environment, guidance, and support offered by the university have been instrumental in shaping our understanding and approach to the dynamic intersections of sustainable halal tourism, digital innovation, and environmental consciousness.

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HALALMARKET+ APPS : WHERE HALAL MEETS SUSTAINABILITY

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Abstract— The HalalMarket+ Apps : Where Halal Meets Sustainability digital ecosystem integrates the halal market with sustainable practises. The platform offers a variety of halal-certified products, including food, cosmetics, and apparel sourced from ethical vendors, with a focus on transparency and authenticity. Utilising blockchain technology, the traceability system enables users to verify product origins and halal certifications. A complementary mobile application enhances the halal lifestyle experience by providing reminders for prayer times, a Qibla direction finder, and sustainable living advice. Through social interaction, users can share their experiences, provide ratings, and nurture a community dedicated to halal living that is sustainable. HalalMarket+:Where Halal Meets Sustainability presents the convergence of halal and sustainability.

Keywords—halal, sustainability, digital ecosystem

I. INTRODUCTION

In the world market of today, the desire for halal products has grown a lot. This is because more people are learning about halal standards. At the same time, there is a growing interest in healthy and moral ways to consume, which is driven by the need to solve environmental and social problems. Halal goods and services aren't just for Muslims because they promote sustainability, ethical purchasing, and green growth (Sahari,2023). The need to combine halal and sustainability has grown, making it important to come up with new ways to help people who want halal goods but also care about the environment. The halal business in Malaysia is expected to grow to US\$113.2 billion (RM500.17 billion) by 2030 and contribute 8.1% to the country's GDP by 2025 (Sahari,2023). It shows how much companies could gain from tapping into this market. Also, studies like the Nielson Global Corporate Sustainability Report show that consumers are becoming more interested in sustainable products. For example, 66% of consumers are ready to pay more for goods made by companies that care about the earth and society. This ground-breaking concept finds significant market gaps that present exceptional chances for differentiation and growth. Existing platforms lack a comprehensive integration of halal and sustainability, which distinguishes HalalMarket+ Apps as a digital ecosystem that integrates both aspects in a seamless manner. Moreover, the platform resolves the lack of transparency by utilising blockchain technology to provide verifiable traceability for halal-certified products, allowing consumers to make confident decisions based on accurate information.

II. CONTENT

A. Introduction to HalalMarket+

HalalMarket+ is a digital tool that changes the way the halal market and sustainable practises work together. It addresses the need for transparency and authenticity in the halal industry and encourages people to make decisions that are good for the environment at the same time. The platform collects a wide range of halal-certified goods, like food, clothing, cosmetics, and more, from vendors who care about ethics and the environment. By using blockchain technology, HalalMarket+ built an end-to-end traceability system that lets users check that the goods they buy are certified as halal and come from the right place. Consumers see the Halal logo as a sign of trust and credibility, which shows that the logo's purpose has changed from being a way to identify a product to being a brand that consumers look to for trust and credibility before making a decision to buy (Abdul Khalek & Mohd Mokhtar,2016). A study conducted in Malaysia found that halal certification plays a crucial role in building consumer trust and confidence in halal products (Voak, 2021). Researchers have done a few studies that show how important these kinds of traceability methods are. Traceability is a system that lets you track and follow a product with all of

its details at every step of the supply chain (Zailani, S., Arrifin, Z., Wahid, N.A., Othman, R. and Fernando, Y.,2010). With this features, you can find out where a product came from and make sure that it is Halal. In this situation, halal branding can be built around two things: the place of origin and the audience (Alserhan, 2010; Wilson & Liu, 2010, 2011). It talks about how important the halal traceability method is for making sure that halal rules are followed all along the supply chain. Few studies have shown that consumers are becoming more interested in ethics and transparency. This all-around method fits with these trends. Abdul Aziz and Nyen Vui did a study that showed that Muslims eat Halal products, but that non-Muslims are also starting to like Halal goods. Halal foods are preferred because they are cleaner, healthy, and taste better (Burgmann, 2007). This companion mobile app makes the user's experience better by giving them things like prayer time alerts, a Qibla direction finder, and tips on how to live in a way that is good for the environment. This helps them live a more complete halal lifestyle. HalalMarket+ is based on social interaction and encourages users to share their experiences, give ratings, and take part in a community focused on halal living. This encourages people to work together and make good changes..

B. Information Skills

For the backend processes of these applications, experts in data analytics, blockchain technology, and market research are required. They curate the platform's diverse halal-certified products, ensuring blockchain-based end-to-end traceability. Expertise in social media facilitates community engagement, while knowledge of eco-friendly logistics and sustainable procurement promotes ethical consumption. Their emphasis on UX design improves the user experience, while their expertise in halal certification and e-commerce security guarantees product authenticity and secure transactions. Through the creation and management of content, they educate users on sustainable halal living, thereby establishing a comprehensive digital ecosystem in line with contemporary values.

In the meantime, end users or consumers of HalalMarket+ will appreciate a seamless and secure shopping experience, access to transparent and sustainable product information, and the chance to engage with a supportive community centred on halal and sustainability values. The platform empowers users to make informed decisions and live a holistic halal lifestyle that contributes positively to the environment.

III. METHODOLOGY

This application is available in two languages, Malay and English, and is compatible with all mobile phone software and computer operating systems. In addition to a comprehensive halal product range and halal product traceability, the application includes the following features:





1. *Living Tips* : The companion mobile app provides users with sustainable living advice and practises that are compatible with their halal lifestyle. These guidelines encourage eco-friendly decisions and aid users in making informed consumption decisions.
2. *Prayer Time Reminders and Qibla Direction Finder* : The app includes features to assist users in practising their religion, such as prayer time reminders and a Qibla direction finder, which allows them to readily locate the direction of Mecca for prayer.
3. *Social Engagement and Community Building* : Through its social engagement features, HalalMarket+ fosters a sense of community. The ability for users to share their experiences, provide ratings and reviews, and partake in community forums fosters collaboration and the dissemination of knowledge.
4. *Events and Halal Lifestyle Calendar* : The application includes an events calendar that highlights halal-related activities, thereby fostering engagement within the halal community. Users are able to locate halal festivals, exhibitions, and events that correspond with their interests.
5. *Personalized Recommendations* : HalalMarket+ uses user preferences and browsing history to provide personalised recommendations, enabling users to discover new halal products and sustainable options tailored to their requirements.
6. *Eco-friendly Logistics Partnerships* : HalalMarket+ will collaborate with environmentally conscientious logistics companies to promote sustainable delivery practises. This includes partnerships with companies that use electric vehicles or other environmentally responsible modes of transportation.
7. *Secure Payment Gateway* : The platform ensures secure transactions via a dependable and encrypted payment gateway, providing users with a seamless and dependable purchasing experience.
8. *Sustainability Standards for Vendors* : The platform encourages vendors to employ eco-friendly packaging, responsible sourcing, and ethical production practises. This promotes a more environmentally conscious and socially responsible approach to halal products.

HalalMarket+ aspires to develop a comprehensive digital ecosystem that accommodates to individuals seeking halal products while putting an emphasis on sustainability and ethical consumption practises. In Halal industries, the Halal concept is not limited to the manufacturing and packaging process, but requires vigilant inspections throughout the logistics process until the product reaches the final consumer (Zailani et al., 2010). The research conducted by Jannah and Al-Banna (2021) emphasises the significance of halal traceability, considering the viewpoints of both commercial entities and Muslim customers. The authors highlight the significance of halal traceability in shaping the integrity of the halal supply chain, hence serving as a crucial determinant of halal supply chain performance. The study proposes that producers who possess a certain level of understanding regarding halal practises should consider incorporating cutting-edge technologies, such as blockchain, to enhance the traceability of halal products.

RESULTS AND DISCUSSION

The successful implementation of HalalMarket+ will revolutionise the halal market by incorporating sustainable practises. Through extensive data analytics, the platform will effectively cater to the diverse preferences of end users, providing personalised product recommendations and facilitating a seamless shopping experience. The transparent product information and end-to-end traceability system will inspire consumer confidence, enabling them to make ethical and well-informed decisions consistent with their halal values and environmental concerns.

The social features are going to foster a vibrant community of individuals with a passion for halal and eco-friendly living, resulting in exceptional user engagement. This sense of belonging will encourage active participation, the sharing of knowledge, and platform loyalty. The companion apps sustainable lifestyle suggestions will further enhance users' experiences, inspiring them to adopt eco-friendly practises and positively impact the environment. The incorporation of eco-friendly logistics partners will considerably reduce the platform's environmental impact, promote responsible delivery methods, and further align HalalMarket+ with its sustainability objectives. In addition, the emphasis on secure transactions and halal certification will foster user confidence, thereby enhancing the platform's reputation as a dependable and authentic source for halal products. Beside that, HalalMarket+'s commercialisation provides a unique chance to address halal-conscious consumers' needs while supporting sustainability. The platform establishes industry standards by linking halal and sustainability, setting the way for a future where responsible and ethical choices meet a complete halal lifestyle.



IV. CONCLUSION

In conclusion, HalalMarket+ will successfully bridge the gap between halal practises and sustainable business practises, presenting itself as a revolutionary digital halal ecosystem in the Asian area. Because of the platform's dedication to transparency, authenticity, and social involvement, it will attract a dedicated user base, which will propel the expansion of the halal business while maintaining an eco-friendly mentality. HalalMarket+ is at the vanguard of a revolutionary movement, advocating a holistic halal lifestyle that resonates with current values and builds a brighter, more responsible future for generations to come. As the demand for halal and environmentally responsible products continues to climb, HalalMarket+ is at the forefront of this movement.

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ENHANCING SUSTAINANCE HALAL BUSINESS THROUGH THE REPORT RUBRIC ON ENTREPRENEURIAL TALENT MANAGEMENT OF ORGANIZATIONS, EMPLOYEE AND INDIVIDUAL: RbQ.Drdtaj4000

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Abstract

The introduction in this study is the Rubric as a subjective assessment tool which aims to assess the effectiveness of the strategic plan for managing the entrepreneurial talent of employees in the organization, starting with an analysis using the Mixed Method methodology: quantitative and qualitative. Quantitative to obtain respondent data by answering three parts of the question and Qualitative interviews of respondents about the understanding of innovation questions: by using the innovation question " REPORT RUBRIC ON ENTREPRENEURIAL TALENT MANAGEMENT OF ORGANIZATIONS, EMPLOYEE AND INDIVIDUAL-RbQ.Drdtaj4000. The innovation questions of this Rubric can help maintain the success of Halal Business that has the best record, which is the Entrepreneurial Talent Management Report in the organization. Rubrics can also be stated as guidelines for the purpose of requirements, content of indicators for rubrics, function of content of indicators for rubrics and statement lines to evaluate the performance of report indicators, organizations and individuals. Thus, the Concept of Strategic Management in Talent Management is needed, because it is a measuring stick to the level of individual and organizational performance. As you know, the concept of strategic management in entrepreneurial talent management requires a rubric (REPORT RUBRIC ON ENTREPRENEURIAL TALENT MANAGEMENT OF ORGANIZATIONS, EMPLOYEE AND INDIVIDUAL-RbQ.Drdtaj4000), which this rubric can measure based on guidelines, the concept of strategic management, specific to Talent Management and storage of statistical and organized reports.

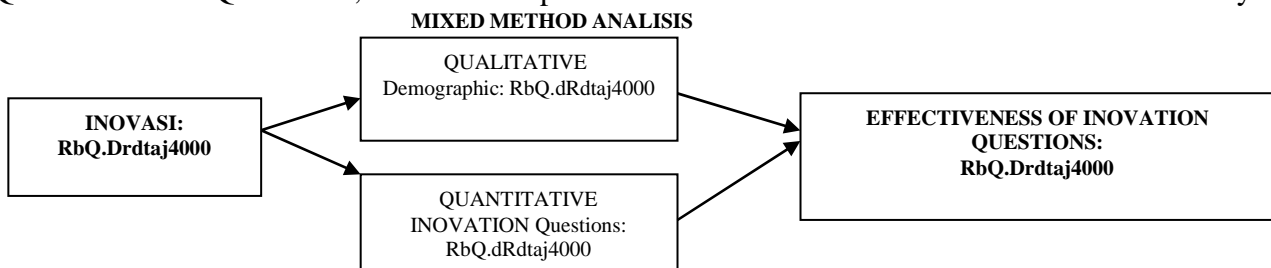
Keywords: *rubrics, entrepreneurial, talent management report*

1.INTRODUCTION. Talent Management in organizations or individuals is very important, this needs to be stated individuals in the organization or the management of the organization itself needs a guideline and a rubric that has the right indicators for any evaluation and the best evaluation answer. Talent is a gift from God to each individual and the ability possessed by each individual needs to be identified, given training that is in line with the talent that has been awarded. When individual talent has been identified, the flow of knowledge and training is very necessary to polish the talent of each individual. Talent that has been polished can be used to help do certain work things faster, more accurately and better when compared to ordinary individuals who do not go through the assessment and formation of their own talent. Referring to the writing of the following books: Talent Intelligence by Nik Kinley, Shlomo Ben-hur (2013), Strategy-Driven Talent Management, A leadership Imperative by Rob Silzer, Ben E. Dowell (2010), The Differentiated workforce: Transforming talent into strategic impact by Brain F.Beeker, Mark A and Richard w.Beatly (2009) and The Talent advantage by Alan weiss and Nancy Mackay (2009) has clearly stated that each individual whose talent value has been identified and formed through relevant training can express the work output of those talented individuals more accurately, quickly and in detail. The understanding of the individual's talent is a value of the ability of a pontificating individual and still requires training from an accurate assessment of individual talent. The value of entrepreneurship is a value that involves the formation, understanding and practice of organizational and individual talent management. Entrepreneurship can be defined as a work ethic that expresses the continuity of individuals who involve themselves in business activities with innovation and

successfully overcome risks in business with the aim of achieving success and profit. Entrepreneurship that operates a business that can express the individual's ability and willingness to form, organize and manage a business enterprise and also understand the risks involved in trying to make a profit.

2. CONTENTS. It can be stated that there are several characteristics obtained from the definition of entrepreneurship, namely process, entrepreneur, innovation, organization, profit and the uniqueness of individual continuity as an entrepreneur. It can be stated that an entrepreneur must have strong physical and mental characteristics in themselves. achieve success and main goals in business. However, talent management needs a statistical and lasting report, this report is used as a current and future reference. In the field of Halal entrepreneurship, talent management requires a copy of the report to obtain a reference report to know the smoothness of talent management in the organization and the best effects of talent management in the organization that involve entrepreneurship in the organization. Therefore, the production of this rubric will involve portfolio evaluation which is carried out using rubric indicators that are compatible with the production of thereport, thus being able to know that the organization does not have inaccurate rubric production.The rubric is also categorized as a scoring tool that involves the exact score value produced from the analysis session in any analysis production. The ideas, thoughts and concepts of entrepreneurial talent management really need value from this report to find out if the value of entrepreneurial talentmanagement is accurate or still not structured accurately. Therefore, the production of the Entrepreneurial/Entrepreneurial Talent Management Report Rubric indicator will be able to make all the information on the entrepreneurial/entrepreneurial talent management production can be stored with a complete information structure, understandable and as a reference in the future. The production of REPORT RUBRIC ON ENTREPRENEURIAL TALENT MANAGEMENT OF ORGANIZATIONS, EMPLOYEE AND INDIVIDUAL-RbQ.Drdtaj4000 can help the smoothness, achievement and preparation of accurate reports for Halal businesses. The importance of the study on the value of rubrics for entrepreneurial talent management reports, especially for Halal businesses, is clearly very useful for scientific reference.

3. METHODOLOGY. The concept of strategy management in talent management requires a rubric, which this rubric can measure based on the guidelines of the concept of strategy management, as specified for Talent Management. By outlining: a) formulation of the talent management formula b) implementing talent management actions c) evaluating the cross-decision function in implementing the decision function that has been evaluated. It can carry out the assessment of talent in the management of the organization clearly and any assessment in the assessment of individuals in the organization is more detailed. The analysis methodology for this topic uses Mixed Method, Quantitative and Qualitative, where the respondents consist of Halal traders in Kota Kinabalu City.



3A) MIXED METHOD: QUANTITATIVE (SPSS) G-Power method to find out how many respondents (Halal traders) are needed to answer the SPSS question, the SPSS question is divided into 3 parts, Part 1: Demographics of the respondents, Part 2: Obtaining information, do the respondents understand Rubric definition, Entrepreneurial/entrepreneurship, Talent, Talent Management, and entrepreneurial talent management report. Part 3: do respondents know and

understand the form, content and criteria of the entrepreneurial talent management report rubric. After data collection or answers from respondents, quantitative analysis is carried out where the data obtained will be analysed using SPSS, the results of the SPSS analysis will reveal the number of Halal traders who understand and are aware of the importance of the REPORT RUBRIC ON ENTREPRENEURIAL TALENT MANAGEMENT OF ORGANIZATIONS, EMPLOYEE AND INDIVIDUAL-RbQ.Drdtaj4000. The second analysis uses the Qualitative method, it is used to find out if the Halal traders understand the method of Entrepreneurship, Talent Management, Talent themselves know the importance of the Rubric method in producing entrepreneurial talent management reports in organizations, businesses, individuals. Qualitative questions for interview sessions with respondents are based on questions obtained from the REPORT RUBRIC ON ENTREPRENEURIAL TALENT MANAGEMENT OF ORGANIZATIONS, EMPLOYEE AND INDIVIDUAL-RbQ.Drdtaj4000. The results of the Quantitative data analysis will give statistics on how many respondents understand the definition of Rubric, Entrepreneurial/entrepreneurship, Talent, Talent Management, and entrepreneurial talent management reports, while for Qualitative data it will use Innovation questions which are based on rubric questions to find out the production of the entrepreneurial talent management report of the organization, employees or individuals is implemented correctly, understood or not implemented at all.

3B) This report outlines the findings that: 1) There is a record or statement of the vision and mission of talent management, a statement of information to state that talent management is one of the indicators in the culture of the organization, outlining the objectives of talent management and what the goals of talent management are in the organization and the individual. 2) Assessment of the situation for talent management based on management's strengths, management's weaknesses, opportunities from management and further actions from management 3) Talent Management requires the implementation of an accurate assessment, this assessment will use one of 3 strategies namely SWOT: INTERNAL FACTOR EVALUATION (IFE MATRIX) (STRENGTHS/WEAKNESSES) and EXTERNAL FACTOR EVALUATION (EFE MATRIX), through these findings it can explain that the talent management in the organization is not evaluated accurately or irregularly if there is no strategic value to evaluate the effectiveness of talent management in the organization. 3) Talent Management Audit, does the organization have a talent management policy? Does the organization have the latest talent management strategy and future plans? Is there a guideline for the audit to refer to detect any excellence or weakness in talent management. 4) When implementing a talent management report, does it involve the existence of a talent management formula? 5) Talent management involves teamwork and having a team, a group of talents found in the organization. Does the organization have teamwork for talent management and does the organization have a pool of talent that is united for the purpose of managing talented individuals in the organization in whatever field of management or position of this individual in the organization.

4. MIXED METHOD: QUALITATIVE ANALYSIS- INNOVATION QUESTIONS: REPORT RUBRIC ON ENTREPRENEURIAL TALENT MANAGEMENT OF ORGANIZATIONS, EMPLOYEE AND INDIVIDUAL-RbQ.Drdtaj4000. Calculation to obtain total results for the assessment of the Talent Management Plan's strategic results (indicator report) based on the following format: Obtain the weighted score using the following formula: The set score is multiplied by the grade and the weighted score value is obtained. After obtaining the value of the Weighted Score for each category, the weighted score will be mixed for all findings from each category and multiplied to a percentage (%) and for information the number of this percentage

(%) is based on the percentage required for any assessment and divided into 100 (%). The answers obtained through this rubric can state the strategic evaluation of the plan, especially for Talent Management (report indicator) in the organization that has a talent management report indicator or does not have a talent management report indicator, then with the answer or evaluation results based on the rubric it can give the answer that the organization non-existent, existing and incomplete have specific rubrics for the strategic evaluation of the plan, especially for talent management (report indicators).

4.1 Figure Formula. Formula: a) Mark Allocated x Grade = Weighted Marks, b) Weighted Marks x % / 100 = answer

4.2 Table 1: REPORT RUBRIC ON ENTREPRENEURIAL TALENT MANAGEMENT OF ORGANIZATIONS, EMPLOYEE AND INDIVIDUAL-RbQ.Drdtaj4000

RUBRIK LAPORAN PENGURUSAN BAKAT KEUSAHAWANAN ORGANISASI/PEKERJA ATAU INDIVIDU <i>RbQ.Drdtaj4000</i> REPORT RUBRIC ON ENTREPRENEURIAL TALENT MANAGEMENT OF ORGANIZATIONS, EMPLOYEE AND INDIVIDUAL- RbQ.Drdtaj4000							
CRITERIA	Mark allocated	1 poor	2 moderate	3 satisfactory	4 good	5 excellent	Weighted markes
1) Adakah di dalam laporan mempunyai - muka hadapan -Penyataan - isi Kandung <i>PRELIMINARY ITEMS</i>	5	1 Provide poor preliminary materials -cover page - acknowledgement -Table of contents	2 Provide moderate preliminary materials -cover page - acknowledgement -Table of contents	3 Provide satisfactory preliminary materials -cover page - acknowledgement -Table of contents	4 Provide good preliminary materials -cover page - acknowledgement -Table of contents	5 Provide excellent preliminary materials -cover page - acknowledgement -Table of contents	
2) Adakah di dalam laporan mempunyai Ringkasan eksekutif? <i>EXECUTIVE SUMMARY</i>	5	0 No executive summary	1 Poorly understanding of the executive summary	2-3 Moderate understanding of the executive summary	4 Satisfactory understanding of the executive summary	5 Good knowledge of the executive summary	
1) Adakah amalan pengurusan bakat mempunyai indikator seperti yang dinyatakan? AMALAN PENGURUSAN BAKAT: - latar belakang pengurusan bakat - visi dan misi pengurusan bakat - pengurusan bakat dalam budaya organisasi -matlamat pengurusan bakat TALENT MANAGEMENT PRACTISES: - Talent Management background - Talent Management Vision and Mission	15	1-3 Poorly presented. Many key elements are not highlighted	4-6 Moderately presented few key elements are highlighted	7-9 Satisfactorily presented fairly highlight key elements	10-12 Highly satisfactorily presented Good in highlighting key elements	13-15 Excellently presented key elements are excellently highlighted	

- Talent Management Organizational culture -Talent Management objective -Talent Management goal							
2) Adakah penilai situasi dalam pengurusan bakat digunakan? PENILAI SITUASI: PENGURUSAN BAKAT-SWOT -KEKUATAN -KELEMAHAN -PELUANG -ANCAMAN SITUATIONAL ASSESSMENT: TALENT MANAGEMENT: SWOT - Strengths -Weaknesses - opportunities -threats	15	1-3 Poorly presented many key elements are not highlighted	4-6 Moderately presented few key elements are highlighted	7-8 Satisfactorily presented fairly highlight key elements	10-12 Highly satisfactory presented Good in highlighting key elements	13-15 Excellent presented key elements are excellently highlighted	
3) Adakah formula digunakan sebagai strategi Pengurusan bakat? STRATEGI PENGURUSAN BAKAT: FORMULA TALENT MANAGEMENT STRATEGY FORMULATION	10	1-2 Poorly presented many key elements are not highlighted	3-5 Moderately presented few key elements are highlighted	4-6 Satisfactorily presented fairly highlight key element	7-8 Highly satisfactory presented Good in highlighting key elements	9-10 Excellent presented key elements are excellently highlighted	
4) JENIS PENIALAIN YANG DIGUNAKPAKAI DALAM PENGURUSAN BAKAT TALENT MANAGEMENT IMPLEMENTATION EVALUATION FOR 3 STRATGIC SWOT: INTERNAL FACTOR EVALUATION (IFE MATRIX) (STRENGTHS/WEAKNESSES) DAN EXTERNAL FACTOR EVALUATION (EFE MATRIX) (OPPORTUNITIES/THREATS)	10	1-2 Poorly presented many key elements are not highlighted	3-5 Moderately presented few key elements are highlighted	4-6 Satisfactorily presented fairly highlight key element	7-8 Highly satisfactory presented Good in highlighting key elements	9-10 Excellent presented key elements are excellently highlighted	
5) AUDIT PENGURUSAN BAKAT TALENT MANAGEMENT AUDIT	10	1-2 Poorly presented many key elements are not highlighted	3-5 Moderately presented few key elements are highlighted	4-6 Satisfactorily presented fairly highlight key element	7-8 Highly satisfactory presented Good in highlighting	9-10 Excellent presented key elements are excellently highlighted	

					key elements		
6) LAPORAN PENGURUSAN BAKAT TALENT MANAGEMENT REPORT	15	1-3 Poorly presented many key elements are not highlighted	4-6 Moderately presented few key elements are highlighted	7-9 Satisfactorily presented fairly highlight key elements	10-12 Highly satisfactorily presented Good in highlighting key elements	13-15 Excellent presented key elements are excellently highlighted	
7) PENGURUSAN BAKAT SECARA BERKUMPULAN, MEMPUNYAI KUMPULAN INDIVIDU BERBAKAT. TALENT MANAGEMENT TEAMWORK -TALENT POOL -GROUP WORK	15	1-3 Poorly presented many key elements are not highlighted	4-6 Moderately presented few key elements are highlighted	7-9 Satisfactorily presented fairly highlight key elements	10-12 Highly satisfactorily presented Good in highlighting key elements	13-15 Excellent presented key elements are excellently highlighted	
TOTAL	100						/100

Tabel 1: REPORT RUBRIC ON ENTREPRENEURIAL TALENT MANAGEMENT OF ORGANIZATIONS, EMPLOYEE AND INDIVIDUAL-RbQ.Drdtaj4000

5. DISCUSSION. Results and effectiveness obtained from Innovation Question: REPORT RUBRIC ON ENTREPRENEURIAL TALENT MANAGEMENT OF ORGANIZATIONS, EMPLOYEE AND INDIVIDUAL-RbQ.Drdtaj4000. a) a detailed statement to express excellent or failed performance in talent management in the organization, b) through the findings of the value of this talent management report, the next actions will be implemented in detail, for example: 1. form a group for each type of individual talent in the organization, 2. makes it easy to standardize and classify with the highest percentage based on talent, expertise and individual performance, 3. Knowing the 'wrongplace' to put talented individuals, who have expertise based on the educational knowledge learned and the best performance evaluation is always obtained, 4. Through the production of this rubric it can raising the level of assessment of each individual in the organization is simple, accurate and detailed. 5. The vision and mission statement in talent management can express the assessment of each individual talent in the organization based on accurate talent assessment indicators, 6. The management in the organization has focused on evaluating the original formation of each individual's talent, classifying the individual based on talent and continuously making formation and production of the best talent for each individual in the organization, 7. Providing courses, learning, knowledge and training as the purpose of talent development.

6. CONCLUSION Through the Strategic Plan Rubric: Talent Management (indicator of this report) Talent Management in the organization gives an excellent performance evaluation to the human resource management in the organization, this can also explain the selection of individuals in the organization can be evaluated accurately, can be categorized as talented individuals which is placed in the record list for the purpose of selecting this individual can produce more effective, quick and accurate work results for every organizational plan. The overall effect of Talent Management involves improving performance, being competitive, increasing productivity, being innovative, able to work in groups and disciplined. To achieve the value of talent management or to form talent management in the organization, a Report that uses accurate and clear report indicators to assess the status of the Strategic Plan: Talent Management in the organization and the learning

process requires the following rubric:**THE REPORT RUBRIC ON ENTREPRENEURIAL TALENT MANAGEMENT OF ORGANIZATIONS, EMPLOYEE AND INDIVIDUAL-RbQ.Dr dtaj4000**

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WOMEN EMPOWER WOMEN: YOUR CO-OPERATIVES MARKETPLACE

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Abstract

The "Women Empower Women: Your Co-operative Marketplace" represents a groundbreaking digital platform meticulously crafted to exclusively showcase and uplift products and services emanating from women-led co-operatives. In a marked departure from conventional e-commerce venues, this distinctive marketplace canters its focus entirely on the empowerment of women co-operatives, carving out an exclusive realm for them to access a wider spectrum of consumers. The functionality of the platform extends far beyond mere commercial transactions, delving into the realm of collaboration and interconnectivity among co-operatives. The seamless user interface seamlessly facilitates the registration process for co-operatives, enabling them to flaunt their diverse offerings while seamlessly engaging with potential buyers. Notably, the marketplace's distinct value proposition is underscored by its unwavering commitment to fostering collaboration. A rich tapestry of features, including interactive forums, enlightening webinars, and networking tools, engenders a fertile ground for co-operatives to glean insights from peers, nurturing meaningful partnerships that transcend boundaries. At its core, this initiative directly confronts the manifold obstacles that confront women-led co-operatives in terms of market access and digital prominence. Moreover, the platform's emphasis on online knowledge exchange has the potential to create a tightly knit fabric of women co-operative members across Malaysia, further amplifying its impact. By facilitating the connection between ethically produced goods and conscientious consumers, the marketplace becomes a linchpin in the edifice of women's economic ascendancy and community progression. The platform's sustainability is strategically fortified through envisioned revenue streams, encompassing judicious transactional fees and the allure of premium memberships. In essence, "Women Empower Women: Your Co-operative Marketplace" stands as a potent catalyst, kindling the flames of transformative change. Within its nurturing ecosystem, women co-operatives flourish, synergize, and collectively lay the bedrock of a society that brims with equity and empowerment.

Keywords: *women co-operatives, digital platform, empowerment*

1. INTRODUCTION

Expanding on the socio-economic impact of women's empowerment, demonstrate that when women are given equal opportunities and support; they contribute significantly to economic growth. Empowering women leads to increased investment in communities, innovation, and entrepreneurship. Consequently, this creates a ripple effect, leading to a more prosperous and stable society that benefits everyone.

One of the ways to empower women is through participation in co-operatives which has been acknowledged as a valuable tool to achieve both, changing the socio-economic role of women and fostering the economic development of a country (Latini, 2020; Lecoutere, 2017; Duguid, 2016; Majid et al., n.d.) Co-operatives are an effective means of empowering women economically as the members have access to credit, markets, and training (Rohaya, Idris & Kunci, 2019; Saha & Sangwan, 2019).

Women-led co-operatives often face challenges in reaching wider markets and connecting with potential buyers (Msosa, 2022). Existing e-commerce platforms lack a specialized focus on these co-operatives, making it difficult for them to stand out amidst the crowd. Moreover, there is a lack of cohesive platforms that facilitate collaboration and knowledge exchange among co-operatives (Zhang, Luo & Li, 2021). The objective of this marketplace is to create a dedicated platform for showcasing, promoting, and facilitating the exchange of products and services produced exclusively by women-led co-operatives. This unique marketplace will not only serve as an e-commerce platform but will also foster collaboration among co-operatives, enabling knowledge sharing, networking, and economic empowerment.

2. PLATFORM DEVELOPMENT

The marketplace will be developed as a user-friendly online platform and mobile application. It will feature a streamlined process for co-operatives to register, create profiles, and upload their products and services. The platform will be designed to encourage interaction and collaboration among co-operatives through features such as forums, webinars, and virtual networking events. The methodology involves:

- 2.1 *Market Research:* Understanding the needs and preferences of women co-operatives, potential buyers, and stakeholders to tailor the platform's features. Table 1 shows the potential competitors already existed in the market.

Table 1. Potential competitors

Competitors / Related Platforms	Description
Etsy	While not exclusively focused on women co-operatives, Etsy is a well-known e-commerce platform that emphasizes handmade and unique products, which could align with the ethos of ethically produced goods from co-operatives.
Women-centric Marketplaces	Platforms that spotlight products made by women entrepreneurs and businesses, though not strictly co-operatives, could potentially overlap. An example is "Women Owned," a directory of women-owned businesses.
Co-operative Platforms	General co-operative marketplaces might have a mix of products, including those from women-led co-operatives. However, the dedicated focus on women-led co-operatives gives your proposed platform a unique angle.
Global Giving Platforms	Platforms that support women's empowerment projects and initiatives could indirectly compete, as they may involve selling products for fundraising purposes.
Online Forums and Networking Groups	While not traditional marketplaces, online communities, forums, and networking groups for women co-operatives might offer a degree of collaboration and knowledge-sharing that your platform aims to provide. For example, Facebook Marketplace.

- 2.2 *Platform Development:* Creating a responsive and intuitive online marketplace with categories for various products and services. The costs involved in developing the "Women Empower Women: Your Co-operative Marketplace" platform can vary significantly based on factors such as the platform's complexity, features, technology stack, design, development approach, and team composition. Here's a general breakdown of potential cost areas as illustrated in Table 2.

Table 2. Cost Development Breakdown

Area	Description
Platform Development	This includes front-end and back-end development, database setup, user authentication, product catalog management, payment gateway integration, and more. Costs can vary based on the size of the development team, hourly rates, and project complexity.
Design and User Experience	Designing an intuitive, user-friendly interface that aligns with the platform's purpose is crucial. Design costs encompass UI/UX design, branding, logo creation, and visual assets.
Collaboration Tools	Integrating tools for communication, knowledge sharing, and networking among co-operatives. Developing forums, webinars, networking features, and other collaboration tools will contribute to costs. These may involve real-time communication integrations, video conferencing, and community management features.
Mobile App Development	If this plan includes to offer a mobile app alongside the web platform, development costs for both iOS and Android versions should be considered.
Quality Assurance and Testing	Ensuring the platform functions smoothly and securely requires comprehensive testing, bug fixing, and quality assurance efforts.
Security Measures	Implementing robust security measures, including data encryption, secure payment gateways, and user data protection, is essential and may incur additional costs.
Server Hosting and Infrastructure	Hosting costs will depend on factors like traffic, scalability, and performance requirements. Cloud hosting services like AWS, Azure, or Google Cloud may be used.
Maintenance and Updates	Ongoing maintenance, feature updates, bug fixes, and technical support contribute to the long-term costs of the platform.
Marketing and Launch	Promotional activities, marketing campaigns, partnerships, and launch events to attract co-operatives and users will require a budget.
Legal and Regulatory Compliance	Budget for legal expenses related to terms of use, privacy policies, copyright, trademarks, and compliance with relevant regulations.
Team and Expertise	Costs associated with hiring developers, designers, project managers, and potentially legal and marketing experts.
Contingency	Allocation for unforeseen expenses or changes in project scope.

It is challenging to provide an exact cost estimate without specific project details, but developing a comprehensive platform of this nature can range from tens of thousands to hundreds of thousands of dollars.

3. MARKET POTENTIAL & CUSTOMER ANALYSIS

The market potential analysis for the "Women Empower Women: Your Co-operative Marketplace" platform indicates a promising and potentially impactful venture. The analysis should encompass various aspects to provide a comprehensive understanding of the platform's growth prospects as shown in Table 3.

Table 3. Potential Market and Customer Analysis

Growth Prospects	Specification
Target Audience	Identify the specific demographic of women targeted. Is the focus on a particular age group, profession, location, or interest? Defining the target audience will help tailor the offerings and marketing strategies effectively.
Market Trends & Demand	Examine current trends in women's economic empowerment, ethical consumption, and social impact. Look into existing platforms, initiatives, and cooperative models catering to women.

User Behavior and Preferences	Understand the preferences of women co-operatives in terms of online platforms, collaboration tools, and marketing. Gauge consumer preferences for ethically produced products and the potential for repeat purchases.
Partnerships and Collaborations	Consider forming partnerships with women-focused organizations, cooperatives, NGOs, and women entrepreneurs. Collaborations lead to existing networks and gain credibility in the women's empowerment space.
Marketing and Outreach	Craft a comprehensive marketing strategy to reach the target audience. Utilize social media, content marketing, influencer collaborations, and online advertising. Highlight stories of empowered women who have benefited from the platform.
Community Building	Foster a sense of community among users. This could include discussion forums, webinars, workshops, and networking events focused on women's empowerment, business growth, and cooperative economics.
Revenue Generation	Project potential revenue streams, such as transaction fees, premium memberships, and partnerships. Ensure the pricing aligns with the value provided.
Sustainability and Scalability	Assess the platform's potential to attract and retain co-operatives, consumers, and partners over the long term. Determine the scalability of the platform to accommodate growth in terms of users, transactions, and features.

The "Women Empower Women: Your Co-operative Marketplace" platform holds substantial market potential driven by growing awareness of ethical consumption, women's empowerment, and collaboration among co-operatives. By addressing the unique needs of women-led co-operatives and facilitating meaningful connections, the platform has the capacity to make a significant social and economic impact while establishing a niche within the broader e-commerce landscape.

4. VALUE PROPOSITION & COMMERCIALIZATION VALUE

Value Proposition for the platform focuses on the following aspects:

3.1 *Dedicated Focus.* The marketplace exclusively highlights products and services from women-led co-operatives, offering a unique and curated shopping experience for consumers who want to support women's economic empowerment.

3.2 *Collaborative Environment.* The platform encourages collaboration and knowledge sharing among co-operatives, allowing them to learn from each other's experiences, explore potential partnerships, and collectively grow.

3.3 *Convenience and Accessibility.* The marketplace serves as a convenient one-stop shop for co-operative members to buy and sell products, eliminating barriers to entry for smaller co-operatives.

3.4 *Empowerment and Impact.* By facilitating increased sales and visibility, the platform empowers women co-operative members to improve their socio-economic conditions and contribute positively to their communities.

Commercialization Value

The marketplace's potential for commercialization lies in various revenue streams:

- 3.5 *Transaction Fees*: Charging a small percentage fee for each transaction conducted on the platform.
- 3.6 *Premium Memberships*: Offering premium features and benefits for co-operatives willing to subscribe to enhanced services.
- 3.7 *Advertisement Opportunities*: Allowing co-operatives to promote their products through featured listings and advertisements.
- 3.8 *Partnerships*: Collaborating with like-minded organizations, NGOs, and government agencies to further support and fund the platform.

5. CONCLUSION

In conclusion, the proposed marketplace for women-led co-operative products addresses a significant gap in the e-commerce landscape, providing women-led co-operatives with a dedicated platform for showcasing, collaboration, and commerce. By empowering women co-operatives and promoting economic growth, the marketplace aims to create a positive and lasting impact on both local communities and the broader society.

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SUSTAINABILITY ON THE SPREAD: REDEFINING FOOD WASTE WITH WATERMELON RIND JAM

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Abstract

In the midst of an era where innovation and sustainability are the center of attention, an interesting business idea emerged, namely a watermelon rind jam business that combines culinary delights with the aim of reducing food waste. By utilizing the often overlooked watermelon rind as the main raw material, this effort produces a value-added product without leaving significant waste.

Watermelon rind, which has often been wasted, turns out to contain extraordinary potential. Rich in dietary fiber, antioxidant compounds, vitamins, and phytochemicals, watermelon rind has great benefits for human health. Through the watermelon rind jam business, these benefits can be enjoyed by consumers in a delicious and tantalizing form. One of the peculiarities of this business is its approach focused on reducing food waste. By processing watermelon rind into jam, this effort contributes to global efforts to reduce food waste.

Not only that, the watermelon rind jam business also carries sustainability values. By using natural ingredients and without excessive sugar adding, this product meets the expectations of modern consumers for healthy and environmentally friendly food. The high demand for natural and preservative-free products provides a great opportunity for this business to develop and develop further.

Through a unique combination of culinary innovation, sustainability, and health benefits, the watermelon rind jam business not only satisfies consumers' tongues but also has a positive impact on the environment. In a world increasingly aware of the importance of waste management and ecosystem balance, this effort provides a tangible example of how a creative idea can inspire positive change. By embracing sustainability values, the business is not only filling the culinary market, but also making a meaningful contribution to reducing food waste globally.

Keywords: watermelon jam, natural products, food waste

1. INTRODUCTION

Food waste is the main source of organic waste in landfills (TPA). When food waste is buried in landfills, they will decompose and produce methane gas, which is a gas that can cause the greenhouse effect. Reporting from katadata, the IEA estimates that global methane emissions in 2022 will reach 580 million tons. About 40% are natural methane emissions from peat or wetlands, while 60% are anthropogenic methane emissions from human activities. Therefore, it is important for us to protect the environment and come up with creative and innovative ideas on how we can reduce waste, especially food waste.

One of the food wastes is from the use of watermelons where only the flesh is taken, while most of the watermelon skins are simply thrown away. Watermelon rind is discarded because according to most people, watermelon skin has a rough texture, hard, and difficult to chew. It is also seen that watermelon rind has no economic value that can be used as a business opportunity. However, many people don't know that watermelon skin has many benefits, both in terms of nutritional content such as vitamin A, vitamin C, potassium, magnesium, and other important nutrients or health benefits summarized from the Healthline page, Organic Facts,



Lifestyle Asia that watermelon skin can maintain the immune system, lower blood pressure, reduce signs of skin aging, and many more benefits.

Watermelon rind which is often considered as organic waste, has its own uniqueness in the use of watermelon skin as jam itself, including having a different taste from other fruits, namely sweet to sour taste, containing fiber which balances the body's needs, jam from watermelon rind can also used in various product variants. Apart from the watermelon rind itself, the uniqueness of using watermelon rinds can indirectly benefit the environment, because indirectly using watermelon rinds can reduce organic waste. In addition to the environment, humans as watermelon skin processors indirectly hone creativity in creating renewable products.

One of the main contributions of watermelon rind jam to the environment is reducing organic waste. By utilizing watermelon rinds which are usually disposed of as waste, the watermelon rind jam business helps reduce the volume of organic waste that will eventually decompose in landfills, reducing the production of methane gas which contributes to climate change. The watermelon rind jam business encourages sustainable practices by stimulating attention towards reducing waste and more efficient use of natural resources.

Reporting from kompas.com, the public's increasing concern about health has led to various healthy food trends continuing to emerge. Throughout 2023, there are at least eight types of healthy food that experts predict will become a trend or we will easily find and enjoy them. By marketing and selling watermelon rind jam products, this business can introduce the concept of utilizing food waste to consumers. This education can change consumers' mindsets about food waste and inspire them to care more about the way they perceive food and waste.

Therefore, seen from the phenomenon of environmental pollution by organic waste and also the trend of healthy food. This can be a business idea for small or large entrepreneurs. This business idea can also be separated into 2 different times. In the short term, the use of jam from watermelon rinds can enter the market share that processes bread, cakes or such as bakeries. In the long term, the utilization of jam from watermelon rinds can enter companies as the main supplier in the creative industry to export abroad which indirectly compares local products.

2. MATERIALS AND METHODS

Ingredients:

- Watermelon rind (in desired quantity)
- Granulated sugar (to taste)
- Lemon or lime juice
- A little water (if needed)

Steps:

- 1) Preparing the Watermelon Rind:
 - Choose fresh and clean watermelon rind. Wash the watermelon rind with clean water to remove any dirt or residue.
- 2) Cutting and Peeling the Rind:
 - Cut the watermelon rind into small pieces. You can remove most of the red flesh, but leave a little red flesh attached to the rind, as it can add flavor and color to the jam.



- 3) Cooking the Watermelon Rind:
 - Cook the watermelon rind pieces in a pot with enough water to cover them.
 - Boil the watermelon rind until it becomes tender, usually takes about 20-30 minutes.
- 4) Pureeing:
 - Once the watermelon rind is tender, drain the water and let it cool slightly.
 - Then, puree the cooked watermelon rind using a blender or any other suitable appliance. You can also mash it by hand if you don't have a blender.
- 5) Jam Cooking:
 - Pour the pureed watermelon rind into a pot.
 - Add granulated sugar according to taste. The sugar adds sweetness to the jam and also aids in preservation.
 - Add a little lemon or lime juice to impart a slight tangy flavor and help maintain the color of the jam.
 - Heat this mixture over medium heat until it comes to a boil, stirring constantly to prevent sticking or burning.
- 6) Thickening and Preserving:
 - After it boils, reduce the heat to low and continue to cook until the jam starts to thicken. This can take around 30-45 minutes, depending on the amount of water in the jam.
 - Stir occasionally during the cooking process to prevent sticking or burning.
- 7) Testing for Doneness:
 - To test the jam's readiness, drop a small amount of jam onto a chilled plate. If the jam thickens and isn't runny, it's ready.
- 8) Packaging:
 - Once the jam has reached the desired consistency, turn off the heat and let the jam cool down.
 - After cooling, pour the watermelon rind jam into clean and dry containers.
 - Store the jam in the refrigerator to keep it fresh.

3. RESULT AND DISCUSSION

A. Content in Watermelon Rind

The content of watermelon rind is citrulline which functions as an antioxidant that can counteract free radicals. Citrulline in the body can turn into arginine, which is an amino acid that plays an important role in the immune system and can improve blood circulation. The nutritional content in watermelon rind is considered capable of maintaining heart health.

Below is a table of the chemical content contained in 100 grams of watermelon rind:

Table 2.1 Chemical content of watermelon rind/100 grams;

Substance Content:	Amount :
Water (g)	94,00
Energy (cal)	18,00



Proteins (g)	1,60
Fat (g)	0,10
Carbs (g)	3,20
Ash (g)	0,70
Fiber (g)	0,60
Calcium (mg)	31,00
Phosphorus (mg)	11,00
Iron (mg)	0,50
Sodium (mg)	1,00
Potassium (mg)	82,00
Manganese (mg)	0,038
Magnesium (mg)	10
Riboflavin (mg)	0,03
Thiamin (mg)	0,03
Niacin (mg)	0,60

B. Cost Analysis :

Cost analysis is used to determine the amount of profit or loss and the feasibility of a project. Here, the feasibility of the product will be measured for the watermelon rind jam business.

a) Raw Material Cost

Raw material cost used to produce watermelon rind jam 1 kg = 1 bottle

Ingredient	Unit	Unit price	Total price
Watermelon rind	1 kg	Rp30.000	Rp30.000
Total			Rp30.000

b) Additional Cost

Ingredient	Unit	Unit price	Total price
Sugar	10 gram	Rp8	Rp80
Lemon	1	Rp10.000	Rp10.000
Total			Rp10.080

c) Factory Overhead Cost

Information	Day/(Rp)
Electricity Cost	Rp5.000
Water Cost (PDAM)	Rp3.400
Marketing Cost	Rp5.000
Total	Rp13.400

d) Cost of Goods Produce Watermelon Rind Jam

Information	Per hari (Rp)
Raw material cost	Rp30.000
Additional Cost	Rp10.080
Factory Overhead Cost	Rp13.400
Total	Rp53.480

From the calculation above it can be concluded that the calculation of the Cost of Production (HPP) of watermelon rind jam with a production of 1 kg in one day is as follows:

Unit HPP = total daily HPP : total amount of watermelon rind jam

$$= \text{Rp}53.480 \times 1$$

$$= \text{Rp}53.480$$

C. SWOT Analysis :

SWOT Analysis for Watermelon Skin Jam Business:

1. Strengths:

- The watermelon rind jam business is significantly unique in the food market. This product is a combination of culinary creativity and reduced food waste, which can attract the attention of consumers who are looking for unique alternatives.
- Watermelon rind contains fiber, antioxidants, and vitamins. This makes watermelon rind jam an attractive option for health-conscious consumers looking for foods that support their well-being.
- This business contributes to efforts to reduce food waste, which is in line with the trend of sustainability. This can attract consumers who want to endorse products that have a positive impact on the environment.

2. Weaknesses:

- The concept of watermelon rind jam may not be widely known. Therefore, consumer education is needed about the health benefits and sustainability values contained in this product.
- Some consumers may be skeptical of the unfamiliar taste or texture of watermelon rind jam. Gaining initial acceptance from the market can be challenging.

3. Opportunities:

- People are increasingly aware of the importance of healthy food. A watermelon rind jam business can take advantage of this trend by offering healthy and natural products.
- Consumers are looking for a variety of flavors and different culinary experiences. Watermelon rind jam provides an opportunity to fulfil this need with its unique taste.
- In an increasingly environmentally conscious environment, sustainable products such as watermelon rind jam have a great opportunity to attract consumers who are concerned about environmental issues.



4. Threats:

- The food market has a variety of jam products and other desserts. Competition with these products can affect market share.
- Changes in consumer trends or the economic situation can impact the demand for products. Businesses must be prepared for market fluctuations.
- The food industry is subject to strict regulation. Meeting regulatory and certification requirements can be a challenge in operating this business.

D. MARKETING STRATEGY

1) Direct dissemination of information

Dissemination is carried out by conveying directly to the closest person by explaining the benefits for the body and the environment as well as the uniqueness of the product. Then, attending food bazaars and exhibitions remains a good way to introduce the social mission and uniqueness of the brand in a more personal way, as it is possible to see the products directly and communicate with the brand owner.

2) Indirect dissemination of information

Information dissemination is indirectly carried out through social media such as Instagram, TikTok and WhatsApp. Instagram is used to describe the company profile and vision and mission of the brand, as well as the brand catalog. Tiktok is used to reach potential target markets (gen z) who are starting to be environmentally conscious. WhatsApp is used to make interactions with customers easier and more intimate and as a tool to receive criticism and suggestions from customers internally. Then we will work with influencers who are in line with the brand image and big vision of the brand, and are aware of the great potential of the environment in reducing food waste in order to increase brand value and wider product recognition.

Furthermore, the use of marketplaces, namely Shopee and Tokopedia for prefixes that are used as transaction channels, due to transaction security facilities for potential consumers. Shopee and Tokopedia were chosen because based on Indonesia's top 5 E-Commerce data for Q1 2022, it shows that the number of visits to Tokopedia reached 157,233,300 visitors per month in Q1 2022 and followed by Shopee as many as 132,776,700 per month.

4. CONCLUSION

Watermelon rind which is often overlooked turns out to have several beneficial ingredients for the body, namely it contains dietary fiber which is important for healthy digestion, contains antioxidant compounds, such as lycopene, beta-carotene, contains vitamin A, vitamin C, vitamin B6, potassium, and magnesium. , contains phytochemical compounds that contribute to health benefits including compounds such as cucurbitacin which have anti-inflammatory properties and anti-cancer potential.

One of the uses of watermelon rind is jam. This jam product combines the delicacy of watermelon rind as well as the health benefits it contains. In the context of the market, this business potential is very attractive. In the midst of consumer demand for natural, preservative-free and creative products, watermelon rind jam offers a unique solution.



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DESIGN LEARNING PLATFORM “MUSLIM&BEYOND” TO ENHANCE MUSLIM MIDDLE-CLASS COMMUNITY’S THOUGH & PRACTICING OF HALAL LIFESTYLE & SUSTAINABILITY IN ASEAN REGION.

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Abstract

Islam in Southeast Asia, often called the “Muslim archipelago,” Southeast Asia is home to more than 240 million Muslims. A shift in ASEAN’s Islamic and modern lifestyle has been brought about by the growth of the middle-class Muslim Community. A well-known concept of religion and sustainability is expanding quickly with a lifestyle that speaks to Islamic ideals. Muslim consumers are becoming more discerning about the things they learn, consume, and choose which is reflected in the development of the halal lifestyle. Learning Management System (LMS) Moslem&Beyond is a platform to help enhance the middle-class Muslim community’s preference to learn and take the experience of learning the Halal lifestyle ecosystem and sustainable living.

Keywords: *learningPlatform, Muslim lifestyle, sustainability*

I. INTRODUCTION

Islam in Southeast Asia, often called the “Muslim archipelago,” Southeast Asia is home to more than 240 million Muslims

-- about 42 percent of Southeast Asians, and about 25 percent of the world’s 1.6 billion Muslims. Most Southeast Asian Muslims are Sunni and follow the Shafii school of Muslim jurisprudence. Islam is the official religion of Malaysia and Brunei, and an officially recognized religion of ASEAN, Thailand, and the Philippines.

The development of lifestyle trends that are increasingly influenced by the existence of young adult middle-class Muslim status, makes the industry and market in ASEAN change. Muslim middle classes who are currently convenient to the religious spirits in their social activities, family and economic activities, have an active role in creating lifestyle trends that accordance with the Islamic religion or what has recently been called the halal lifestyle. The lifestyle that they applied according to sharia is reflected in their daily activities.

Looking at the middle-class Muslim community, especially in ASEAN they are mostly the people who are economically well-established but are religious and obedient to Islamic principles. They are people who are modern, knowledgeable, technology literate, and have global mind. As moderate Muslims, they see Islam as a religion that provides universal goodness to all humanity. Socio-economically, they are at a level that is sufficiently established and has high purchasing power, investment ability, and philanthropic spirit.

In carrying out their daily life activities, they also do not want to abandon the Islamic rule of consuming halal products. People are increasingly aware of halal products, whether it's food or products they use every day. They pay careful attention to how safety, hygiene, and quality assurance are from what they consume, and look at what they eat, drink, and use.

The increasing demand for halal products has become a market niche for ASEAN industries, and it is proven that it become a massive trend where all people want to use and consume halal products. Those halal products are not only in food, but also in fashion, cosmetics, and even the tourism sector. At first glance,

they also pay attention to the halal logo or not in a product that claims halal, because the trust factor of the middle-class Muslim community towards the authenticity of a product is based on whether there is a halal logo. Paying attention to the halal details is another manifestation in reflection of the high rational spirit of religion.

The middle-class Muslims increasingly seek spiritual benefits from the products they buy and consume, namely products that adhere to Islamic values. This is where the trend of halal lifestyles is increasingly widespread and become a contemporary lifestyle. Halal as a lifestyle is not only limited to mere needs but has become a trend that could increase one's social status. For industry players, halal as a lifestyle concept is believed to be able to increase positive stimulation in economic sectors through exports, tourism, additional product value, and various types of halal sectors. While for those who consume the halal lifestyle, are willing to buy something at a more expensive price to get a product that has halal certification.

In the halal lifestyle that exists in ASEAN, at least some sectors are growing rapidly and many bring changes to previous consumption patterns and many brands that have grown internationally. These sectors are food, finance, pharmacy, cosmetics, fashion, education, healthcare and wellness, recreation, gadgets, music, etc. The development of the halal industry in these sectors will indirectly create a global trend that makes the halal lifestyle a modern lifestyle.

The ASEAN market and industry are changing due to the emergence of lifestyle styles that are increasingly affected by the existence of young, middle-class Muslims. Muslim middle classes, who today adhere to religious principles in their social, familial, and economic activities, actively participate in developing lifestyle trends that are in line with Islam, or what is now referred to as the halal lifestyle. Their everyday activities reflect the Sharia-compliant lifestyle they adopted. Considering the middle-class Muslim population, particularly in ASEAN, they make up the majority of those who are not just devout but also uphold Islamic norms. They are modern, informed, tech-savvy individuals with a global perspective. They are viewed as moderate Muslims.

II. CONTENT

A. ISLAMIC VIEW ON SUSTAINABILITY

Sustainability is an important issue in our current situation and all of us are asked to act in a sustainable way to protect what we have been entrusted with. So, let us take a quick look at what Islam has to say about sustainability. Sustainability, in simple terms, means meeting the needs of the present generation without compromising the ability of future generations to meet their own needs. The concept of sustainability is not a new one; it has been advocated for centuries in different cultures and religions. In the Islamic faith, sustainability is deeply embedded in the teachings and practices of the religion. This essay will explore the Islamic perspective on sustainability.

Islam emphasizes the importance of stewardship of the earth and its resources. Muslims believe that the earth and its resources are a trust from God and that they must use them responsibly. This responsibility is reflected in the concept of Khalifa, which means custodian or steward. Muslims believe that man (all human beings) are the custodians of the earth and that they should sustainably manage its resources.

The Quran and the Hadith contain various references to sustainability and the environment. For example, the Quran states "It is He who has made you successors on the earth and raised some of you in ranks above others, that He may try you in what He has given you. Indeed, our Lord is swift in penalty; but indeed, He is Forgiving and Merciful." (Quran 6:165) This verse emphasizes that humans have been made successors on earth and that they have a responsibility to manage it responsibly.

Another verse in the Quran states, "O sons of Adam, attire yourselves at every time of worship; eat and drink, but do not be wasteful, for Allah does not love the wasteful." (Quran 7:31) This verse encourages Muslims to take a benefit from the creation of ALLAH (ta) in a reasonable way and also to avoid wastefulness and to use resources sustainably. In addition to the Quran, the Hadith contains many references to sustainability and environmental protection. For example, Prophet Muhammad (peace be upon him) said, "The earth is green and beautiful, and ALLAH has appointed you his stewards over it. The whole earth has been created as a place of worship, pure and clean. Whoever plants a tree and diligently looks after it until it matures and bears fruit is rewarded." This Hadith emphasizes the importance of protecting the environment and the rewards for doing so.

The Islamic concept of sustainability also extends to social and economic sustainability. Islam



encourages social justice and fairness in economic transactions. The Quran prohibits usury and encourages charity and helping those in need. Islam also encourages sustainable economic practices, such as avoiding excessive consumption and wastefulness.

The Islamic perspective on sustainability emphasizes the importance of responsible stewardship of the earth and its resources. Muslims believe that mankind has to manage the earth's resources sustainably, and that wastefulness and excessive consumption are discouraged and, in some cases, even sinful behavior bearing consequences in the Hereafter. The Islamic concept of sustainability also extends to social and economic sustainability, encouraging social justice and fairness in economic transactions. Islam provides a comprehensive framework for sustainability that is rooted in the teachings of the Quran and the Hadith and thus an obligation for every Muslim and every human being. For Muslims themselves, it even can be considered to be an act of worship and devotion towards the creator and thus a religious duty.

B. E-LEARNING ACCESSIBILITY: CONFIGURING AN LMS PLATFORM FOR THEMATIC INCLUSIVITY

A learning management system (LMS) is a software application or web-based technology used to plan, implement and assess a specific learning process. It's used for e-learning practices and, in its most common form, consists of two elements: a server that performs the base functionality and a User Interface (UI) that is operated by instructors, students and administrators. Typically, an LMS provides an instructor with a way to create and deliver content, monitor student participation, and assess student performance. It might also provide students with interactive features, such as threaded discussions, video conferencing and discussion forums.

Businesses, government agencies, and traditional and online educational institutions often use these systems. They can improve traditional educational methods, while also saving organizations time and money. An effective system lets instructors and administrators efficiently manage elements such as user registration and access, content, calendars, communication, quizzes, certifications and notifications. We will design a usable e-learning platform and materials that will be resourced based on crowd collaborative sources, not only the source from which we create but we collaborate with some partners.

C. E-LEARNING CONTENT

As e-learning designers, we should strive to improve education for everyone by catering to as many different learning preferences and needs as feasible. While designing accessible eLearning, our goal should be to make our course content accessible to many people, regardless of their ability level. In Muslim & Beyond LMS the content consists of 5 Chapters: 1) Basic Principles of Climate Change and Sustainability Living, 2) Basic Principles of Halal Ecosystem, 3) Sustainability our Environment, 4) Halal Lifestyle Ecosystem, 5) Halal Downstream & Upstream Ecosystem

D. BETTER LEARNING EXPERIENCE AND CATERS TO DIVERSE LEARNING NEEDS

Notwithstanding the topic's stigma, all students can benefit from accessible course materials. E-learning accessibility guidelines ensure that people of all abilities can access, read, and use our e-learning materials. As a result, our company's compliance and training initiatives will be more successful, providing our staff with the knowledge and tools they need to do their jobs well.

Because today's students come from various backgrounds, educational institutions need to be as accommodating as possible. E-learning programs, whether it is for K-12 or higher education, should be flexible enough to meet the needs of students with a wide range of learning styles and goals, including those with disabilities. Individuals' educational requirements must be satisfied through the use of approaches that are not exclusive. These techniques and modifications allow the student to reach their maximum potential.

The Uniqueness of our Program is we have additional services:

a. Add collaborative features

When discussing group cooperation activities, we should mention that interacting with other students in the same class can help bring students learning out of their figurative shells. They can collaborate and share information to find solutions for shared problems. The aim is to keep group sizes modest so that individuals can more easily transition into online working together

b. Include an online mentorship program

An online mentorship program offers a more personalized method that links reclusive online learners with more extroverted or experienced individuals in the field. Individuals are allowed to concentrate on the aspects of themselves that need work without the risk of being judged by the group as a whole.

c. Include self-guided support features

A microlearning virtual learning library is among the most useful tools for providing individuals with the ability to provide themselves with self-directed support. This readily digestible online training repository offers a variety of modules, quizzes, and other e-learning activities that can be completed quickly and are specifically designed to meet the requirements of online learners.

d. Include personalized learning paths.

Let students study whenever it is most practical for them by taking courses online. Introverts benefit greatly from self-guided learning paths since they allow them to work independently toward learning goals. In addition, they get to pick the eLearning activities and materials that work best for them.

III. METHODOLOGY

This Conceptual Business uses qualitative descriptive methodology to explain the current phenomenon and potential market in ASEAN & Indonesia's global market of halal lifestyle ecosystem and sustainability Life and how it is halal in commodification to become a modern lifestyle. A platform for Media Learning using an Open Learning Platform mixed with Moodle Platform and The Content-based ISpring and video Content. This paper aims to observe how the halal lifestyle is applied and popularized by modern Muslims in Indonesia, and how the urban Muslim group learning about their curiosity of halal Lifestyle and sustainability to fulfil their daily life who today adhere to religious principles in their environment, social, familial, and economic activities.

IV. RESULTS AND DISCUSSION

Halal Lifestyle and Sustainability

Halal Lifestyle has recently attracted great attention from both practitioners and academic research. In Muslim Lifestyle literature, the example notion is :

- a. **Halal tourism** was initially proposed by Battour in Scopus journal in 2010 (M. Battour, Ismail, & Battor, 2010; Ryan, 2016). Recently, Battour et al. (2021) defined Halal tourism "as any tourism object or action that is permissible according to Islamic teachings to satisfy the Muslim traveller's needs and achieve the destination's Muslim-friendliness".
- b. **Halal Food**, the absence of Halal food and Halal restaurants can increasingly be a source of worry to Muslim travelers and to those with whom they interact. Moreover, some other Muslim traveller's needs might represent challenges for tourism operators and tourism service providers such as sharia-compliant hotels where the emphasis is on not serving alcoholic drinks



and providing cultural activities, Islamic attire, Muslim prayer facilities, separated swimming pools, and gymnasium for both genders separately, Islamic entertainments i.e. Muslim TV channel, and segregated gender beaches (Ainin, Feizollah, Anuar, & Abdullah, 2020; M. M. Battour, Battor, & Ismail, 2012; Biancone, Secinaro, Radwan, & Kamal, 2019; Moshin, Brochado, & Rodrigues, 2020; Pamukcu & Sariisik, 2020).

- c. **Halal Fashion.** According to Business Wire's Global Ethical Fashion Market 2020 report, the global sustainable fashion market is valued at USD 6.35 million in 2019 and is predicted to continue to increase to USD 9.81 million in 2025. If the incorporation of sustainable fashion into the halal industry can be done more quickly, there will be greater market opportunities for the halal industry that can be obtained. This is also related to the more relevant value of sustainable fashion so that it can attract more consumers.

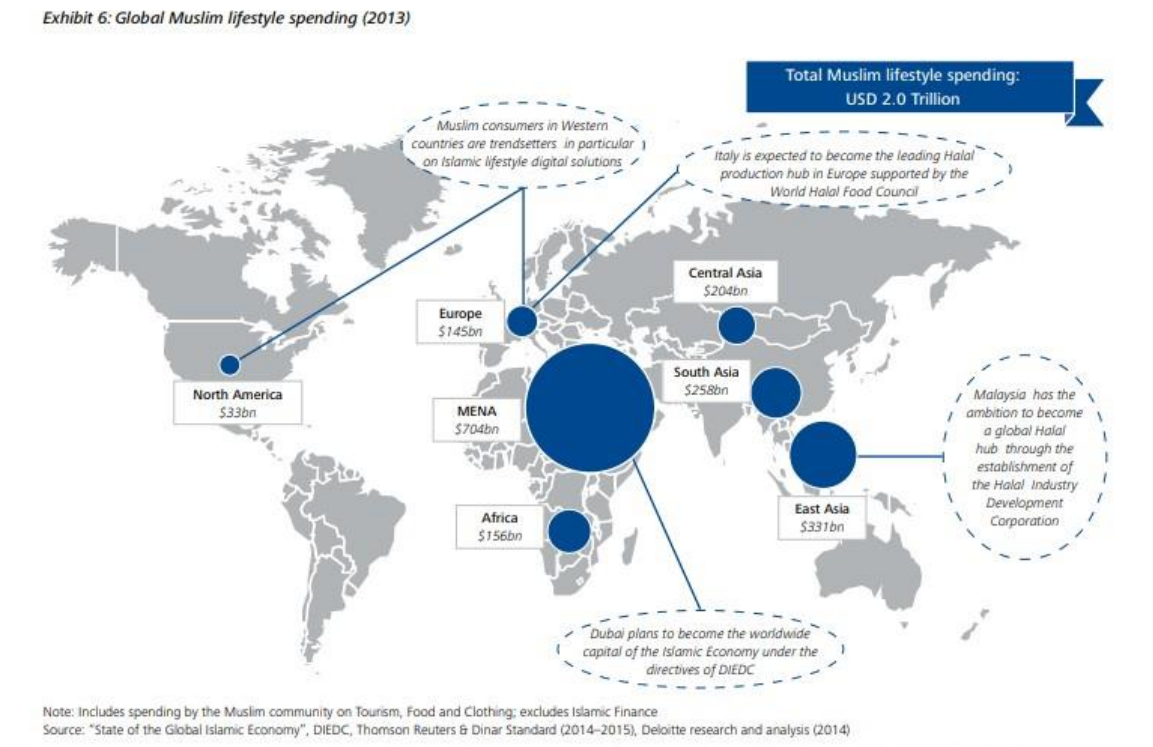
In Indonesia, the incorporation of sustainable fashion into the halal industry can be seen at the 7th ISEF in 2020, which carries the theme "Sustainable Fashion, Sustainable Lifestyle". Presenting 164 designers/brands with 720 displays, who apart from conducting fashion shows also had the opportunity to conduct business matching with local and international buyers. ISEF 2020 also plays a role in encouraging producers of fashion raw materials to participate in this sustainable fashion trend so that they can help push this industrial sector bigger and stronger. The production of environmentally friendly raw materials such as viscose, rayon, and cotton as well as the use of natural dyes are the majority practices in sustainable fashion in Indonesia.

- d. **Halal Entertainment** . There are several kinds of games and entertainment arts which the Prophet prescribed for the Muslims, to provide their joy and entertainment. Entertainment itself can prepare itself to face worship carry out obligations and bring agility and desire. Most of the entertainment takes the form of an exercise that can educate them to be strong-spirited humans and allow them to advance to the field of jihad fi sabilillah. Among the entertainment are: running races, wrestling, archery, horse riding, hunting, playing cards, singing, playing and listening to music.

Muslim Lifestyle Spending & Education for Sustainability

Muslim lifestyle spending following our understanding of the needs of the different Muslim consumer segments, Muslim lifestyle spending reflects the propensity of these segments to spend on Islamic-compliant products. Figures show that Muslims represent one of the most powerful set of consumer purchasers in the world, who, in total, have been estimated to spend US \$2.0 trillion on all lifestyle sectors (excluding Islamic Finance) in 2013²⁸. Of this, the MENA region represents the largest share of global purchasing, estimated at around 35 percent (US \$704 billion)²⁹, driven in particular by the wealthier GCC nations, which have a much higher GDP spend per capita. This indicates that the GCC region in particular is an ideal geography for commercial Digital Islamic Services. In addition, Muslim consumer expenditure is expected to continue to grow to reach an estimated US \$3.7 trillion by 2019³⁰. This is expected to be driven by ambitious government initiatives in the Organization of the Islamic Conference (OIC) countries including the GCC and non-OIC states.

Figure 1. Global Muslim Lifestyle Spending



The rising of education with an environmentally friendly approach becomes one of the focuses on implementing sustainable growth of social life, especially for the Muslim Lifestyle, there need new approach in the digital Era to learn more deeply about How is halal Ecosystem, Halal Lifestyle and Sustainability that they can supported, through e-learning platform, we collaborate with all Muslim stakeholder in ASEAN



country, present Moslem&Beyond Platform to introduce and enhance all middle- class Muslim's mindset to understand Halal Lifestyle Ecosystem and Sustainability living.

Halal Business Model

A Halal business model is conceived of as a strategic model in which sustainability could be exploited to ensure conducting business practices according to the Quran and the sayings of the Prophet Muhammed (Karia & Asaari, 2016). As per Islamic teachings, the Islamic economic system distinguishes between lawful (halal) and prohibited (haram) goods and transactions (Raimi & Yusuf, 2021). The term "Tayyib" is frequently used as a synonym of halal, which is referred to as wholesome, i.e.

harmless, healthful, or non-hazardous to health (Haleem et al., 2020). As the Muslim community also looks forward to achieving sustainable tourism development, there is no reason to believe the matter is diverse in the setting of Halal tourism, Halal Food, and Halal Fashion (Aman et al., 2019). According to Hossain & Omar (2019), the Halal Lifestyle in tourism might lead to long-term tourism that has a positive impact on sustainability. Muslim tourists must be invited to participate in initiatives to build community empowerment to promote the development of sustainable tourism in Halal locations in this scenario (Lagarense, 2018).

Environmental sustainability

Even though Halal Lifestyle is focused on health and the environment, it frequently has a negative influence on both. With the rapid growth of the tourism industry, the environment and public health can be subject to be endangered by several serious threats such as ecological degradation, global warming, and waste of natural resources (Pulido-Fernández, Cárdenas-García, & Espinosa-Pulido, 2019). For example, eco-tourism destinations have recently become an optimal choice, especially for those who have mostly high consciousness towards the environment (Romão et al., 2014).

The comprehensive Islamic view of sustainable development requires that this development not take place in isolation from religious and moral controls. There is also an environmentally friendly approach at the core of Islamic values that respects Mother Nature and also protects and cares for the environment. Many Qur'anic verses set some general rules for preserving natural resources, as Islamic teachings direct towards environmental sustainability. When it comes to tourism, Islam considers that the Muslim traveller is considered a servant of nature and must coexist in harmony with all other creatures, and corruption of all kinds, including environmental corruption, which includes industrial pollution, environmental damage, and waste of natural resources, are hated by God Almighty, where He said God Almighty in the Holy Qur'an: "And they strive throughout the land [causing] corruption, and Allah does not like corrupters." Al-Ma'ida-64.

The level of religiosity of Muslim tourists is at the heart of Halal tourism and the religious belief of Muslim travellers plays an important role in adopting an environmental sustainability approach and green behaviour in tourism (Kaplan & Iyer, 2021). According to a study conducted by Saxena et al. (2020) in Cox's Bazar, Bangladesh, tourists' religious practices and spiritual beliefs are essential in fostering dedication to measures of environmental sustainability and community well-being.

Understanding people's motives for adopting sustainable behaviours will help not only businesses and consumers, but also the environment (Minton, Kahle, & Kim, 2015). Although its role in sustainability is mixed (Kaplan & Iyer, 2021). Halal, which is at the heart of Halal-friendly tourism, expresses the concepts of sanitation, wholesomeness, and being considerate of society, the environment, and animals (Rezai et al., 2015). Food safety, health, naturalness, enjoyment, convenience, information, and ethical considerations such as environmental friendliness in food production and consumption have become increasingly important to Muslim tourists. Thus, Halal food manufacturing and processing will address issues such as sustainability and the environment, as well as ensure that the product is safe and clean to consume (Rezai et al., 2015).

Tourism, food products and services should prioritize sustainable consumption issues in meeting environmental sustainability challenges (Streimikiene et al., 2021). There are several future recommendations for sustainable tourism, with key environmental indicators for the tourism sector such as climate change mitigation, pollution reduction, renewable energy use, waste disposal, and so on (UNEP, 2004b; UNWTO, 2013, 2014, 2017).

Halal-friendly tourism where Islamic faith and ideology play a crucial role, must also consider these indicators while developing general guidelines and as part of Halal certification. In line with that, according to Rhama (2021), Halal tourism should start developing sustainable principles, establish more sustainable connections with communities and the environment, provide suitable and limited infrastructure for unsustainable tourist activities, and increase visitor surveillance methods. Innovations, research and technology development, can also provide major solutions for dealing with the environmental difficulties of tourism development (Streimikiene et al., 2021).

V. CONCLUSION

There are 4 conclusions for Business Conceptual Notes :

1. A platform for Media Learning using an Open Learning Platform mixed with Moodle Platform and ISpring & Video Content. This research aim is to observe how the halal lifestyle is applied and popularized by modern Muslims in ASEAN, especially in Indonesia, and how the urban Muslim group learning their curiosity about halal Lifestyle and sustainability to fulfil their daily life today adhere to religious principles in their social, familial, and economic activities.
2. Sustainability, in simple terms, means meeting the needs of the present generation without compromising the ability of future generations to meet their own needs. The concept of sustainability is not a new one; it has been advocated for



centuries in different cultures and religions. In the Islamic faith, sustainability is deeply embedded in the teachings and practices of the religion. This essay will explore the Islamic perspective on sustainability.

3. Halal Lifestyle has recently attracted great attention from both practitioners and academic research. In Muslim Lifestyle literature there are 4 notes that demonstrated as Halal Tourism, Halal Food, Halal Fashion and Halal Entertainment
4. A Halal business model is conceived of as a strategic model in which sustainability could be exploited to ensure conducting business practices according to the Quran and the sayings of the Prophet Muhammed (PBUH) (Karia & Asaari, 2016). As per Islamic teachings, the Islamic economic system distinguishes between lawful (halal) and prohibited (haram) goods and transactions (Raimi & Yusuf, 2021)

5. ACKNOWLEDGMENT

Thank you for the insight and advice from 1) Mr Rusmanto who supported me in learning about Learning Management System Application and OpenSource. 2) Prof. Dr Rudolf Rauch – GIZ who gave inspiration for Sustainable Green Energy,

3) Diandra Anugerah Wati Rauch, who always encourages me to determine my goals for sustainability, 4) Dr. Christian Hainsch who gave inspiration for your paper Muslim Initiative on Sustainability.

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E-ZY HALAL DIET APPLICATION

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Abstract

The E-zy Halal Diet Application has been meticulously developed to foster a health-conscious way of life among individuals, irrespective of their age and gender. This software utility serves the purpose of aiding users in diligently monitoring their daily dietary consumption, facilitating effective weight management endeavors. The application encompasses a comprehensive repository of dietary guidance, encompassing halal meal plans, Body Mass Index (BMI) computations, calorie estimations, health insights, and even halal food acquisition options through Grab Food services. An intrinsic aspect of the application is its integration with Grab Food, enabling seamless access to a diverse array of wholesome nourishment exclusively from establishments offering health-promoting fare. Within the E-zy Halal Diet Application framework, individuals are empowered to document each instance of sustenance consumption systematically. The application inherently undertakes automatically evaluating the aggregate calorie intake within a given day. This systematic recording and monitoring mechanism significantly contributes to the user's endeavor of managing calorie intake, thereby facilitating weight reduction and realizing their targeted BMI objectives. The profound significance of the E-zy Halal Diet Application is encapsulated by its potential to holistically enhance the well-being of its users. Through its user-friendly interface, comprehensive health elements, and symbiotic integration with the Grab Food App, this innovative digital tool presents a facile pathway towards uplifting and optimizing individuals' physical health, thus illustrating how technology can be harnessed to holistically elevate the quality of life in an increasingly interconnected and health-conscious society. Consequently, the E-zy Halal Diet Application emerges as an exceptional exemplar among extant dietary software, primarily due to its commitment to promoting a halal and health-conscious way of life accessible to all individuals.

Keywords: *diet, halal, application, health*

1. INTRODUCTION

In the contemporary landscape, characterized by businesses' endeavors to craft adaptable frameworks within digital transformation while navigating structural shifts, the dynamics unfolding within organizational settings catalyze the emergence of organizational change phenomena. Amid the digital innovation and transformation trajectory, enterprises have realized that engaging digital conduits for interaction with their pivotal stakeholders has become imperative (Klein, M., 2020). Due to its phenomenal impact on businesses, an application called E-zy Halal Diet has been developed to empower the role of digital platforms to benefit people. The digital transformation

process creates the establishing of novel business paradigms, operational procedures, and technological systems, all geared towards harnessing technology's potential to confer heightened competitive edge and amplify operational efficacy (Schwertner, K., 2017).

The E-zy Halal Diet application has been developed to facilitate weight loss and foster a halal health-conscious lifestyle. This software platform is a premier solution applicable across diverse demographics, independent of age and gender considerations. In contemporary times, a notable segment of the populace grapples with the challenges of weight management and the adoption of wholesome halal dietary practices, often impeded by time constraints and financial resources. The E-zy Halal Diet application emerges as a viable remedy to these predicaments.

This application boasts a multifaceted repertoire of functionalities encompassing Body Mass Index (BMI) computation, calorie intake assessment, and the provisioning of nutritious halal meal plans. Furthermore, it boasts seamless integration with the Grab Food application, a popular food delivery service. Within the Grab Food platform, a systematic selection of halal health-promoting meals from various dining establishments is featured, and this roster is seamlessly synchronized with the E-zy Halal Diet application.

End users can readily peruse and elect dietary options from the E-zy Halal Diet interface, initiating orders via the same application. Moreover, individuals can diligently document their dietary intake within the application, spanning each meal. Automated algorithms embedded within the application contribute to the real-time calculation of daily calorie intake based on the ingested meals. Incorporating digital technologies, such as mobile applications, can be posited as exerting a transformative influence on information processing and, with substantial expertise in this domain, leverage digital-centric strategies to foster innovation within the realm of transformation (Kane, G. C., et al., 2015). Hence, the E-zy Halal Diet application effectively addresses the imperative of embracing a halal health-oriented existence through a user-friendly and efficient modality.

2. MATERIALS AND METHODS

Developing the E-zy Halal Diet Application involves a similar process to any other application but with specific considerations related to halal dietary requirements. Following are the steps on developing the E-zy Halal Application:

(i) Idea Generation and Conceptualization

Define the purpose of your halal food application and research the needs of our target audience within the halal consumer base.

(ii) Market Research

Study the market to identify existing halal food applications and their features. Understand user preferences, pain points, and expectations related to halal meals. This research will help you identify unique selling points for your app.

(iii) Feature Planning

Outline the app's features, such as restaurant listings, menu details, recipe sharing, halal certification verification, dietary restriction filters, and user reviews. Consider including a user-friendly interface that emphasizes halal authenticity.

(iv) Technical Development

Choose the platform(s) for your app (iOS, Android, web) and the appropriate programming languages and frameworks. Develop the app's front-end and back-end components, ensuring secure user authentication, data storage, and real-time updates.



(v) Halal Data Integration

Collaborate with halal certification bodies or databases to integrate accurate and up-to-date halal information. Implement a system to verify the halal status of restaurants and food products listed in the app.

(vi) Database Management

Set up a database to store restaurant details, menus, recipes, user profiles, reviews, and halal certification information. Optimize the database for efficient data retrieval and management.

(vii) Testing and Quality Assurance

Thoroughly test your app for functionality, usability, and security. Conduct testing on various devices and operating systems to ensure a consistent user experience. Verify the accuracy of halal information.

(viii) App Store Submission

Create developer accounts on app stores (e.g., Apple App Store, Google Play Store). Prepare app descriptions, screenshots, and icons that highlight its halal focus. Follow submission guidelines for each platform.

(ix) Launch and Marketing

Launch your app and promote it through social media, food blogs, halal forums, and targeted advertisements. Emphasize the app's authenticity, convenience, and user benefits.

(x) User Feedback and Iteration

Monitor user feedback and reviews to identify areas for improvement. Continuously update the app to address issues, enhance features, and provide a better user experience.

(xi) Security and Privacy

Implement robust security measures to safeguard user data and privacy. Comply with data protection regulations and ensure the app's security against potential breaches.

Developing a halal food application requires a strong commitment to accuracy, authenticity, and user satisfaction. By addressing the unique dietary needs of the halal consumer base, we can create a valuable and trusted resource for halal dining options and information.

3. RESULTS AND DISCUSSION

The E-zy Halal Diet application has been devised to heighten individuals' consciousness regarding the consumption of healthful nourishment and the cultivation of a well-balanced lifestyle, irrespective of the constraints imposed by their busy schedules. The utilization of this application entails a structured progression consisting of three fundamental stages.

The inaugural step involves procuring the E-zy Halal Diet Application, which is conveniently executed by acquiring the application from the designated digital distribution platform, the Play Store. Subsequently, the second phase necessitates the input of comprehensive personal particulars encompassing age, gender, weight, height, and prevailing health status, among other pertinent information. The culmination of this preliminary data submission ushers in the third and final stage, which entails utilizing the application via a smartphone interface.

The E-zy Halal Diet application furnishes individuals with an extensive compendium of information and insights, which can be readily accessed at any time and place, thereby conferring a heightened level of convenience and accessibility, all encapsulated within the confines of their fingertips.

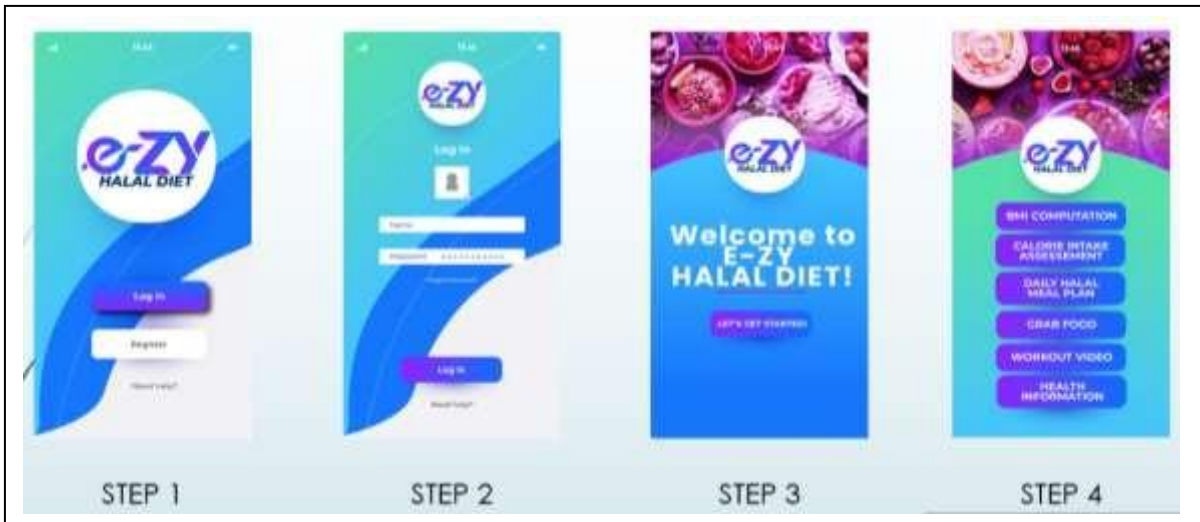


Figure 1. Steps to use the E-zy Halal Diet Application

4. CONCLUSION

In conclusion, the groundbreaking E-zy Halal Diet Application emerges as a pioneering solution within the market, establishing itself as the inaugural Halal diet application. Its development is anchored in the purpose of inspiring individuals to embrace a wholesome lifestyle, empowered by cutting-edge technological advancements. This multifaceted application encompasses a range of health-centric features, encompassing essential components like BMI calculation, calorie assessment, access to health-related insights, and instructive exercise videos. Notably, its integration with the Grab Food App, a platform renowned for offering nourishing meals from diverse restaurants, amplifies its appeal. By seamlessly intertwining convenience with health consciousness, this application bears the potential to significantly enhance individuals' well-being, exemplifying a user-friendly and accessible pathway to holistic health improvement.

5. ACKNOWLEDGMENT

The authors would like to express appreciation for the support of the Universiti Teknologi MARA Kedah Branch as well as the Faculty of Business Management.

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UNIVERSITY’S INCOME GENERATION THROUGH “PLANTERSCOFFEE”

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Abstract— This business proposal outlines the establishment of a coffee business within the premises of faculty of Plantation and Agrotechnology, aiming to offer high-quality coffee while promoting agricultural education, research, and sustainable practices in coffee cultivation. The proposal emphasizes the unique selling points, including a farm-to-cup experience, sustainable coffee practices, educational opportunities, and showcasing various coffee varieties. The primary target audience includes students, faculty, visitors, and coffee enthusiasts interested in responsibly sourced and ethically produced coffee products. The proposed coffee business will leverage the university's agricultural expertise, creating a distinctive and educational coffee destination that contributes to the university's revenue stream and fosters a deeper understanding of sustainable agriculture and coffee production.

Keywords—Income generation, coffee shop, liberica, economic analysis

I. INTRODUCTION

Planters Coffee is a faculty of plantation and Agriculture – led coffee brand, that will be established in collaboration with Department of Agriculture (DOA). The primary objective of this proposal is to leverage the expertise and resources of faculty Plantation and Agrotechnology (FPA) UiTM to develop a sustainable coffee brand that sets new industry standards in ethical sourcing, environmentally friendly practices, and exceptional coffee quality. By establishing this collaboration, we aim to contribute to the growth and success of Malaysia's coffee sector while making a positive impact on local coffee-growing communities.

2.BACKGROUND AND MARKET OVERVIEW:

The coffee industry in Malaysia is worth an estimated RM1 billion (US\$210.6 million) in 2023. The industry employs over 100,000 people, directly and indirectly. Coffee exports from Malaysia amounted to RM200 million (US\$42.1 million) in 2022. Coffee is a major source of foreign exchange for Malaysia. The coffee industry contributes to the growth of the tourism industry in Malaysia. However, the majority of coffee brands are yet to fully embrace sustainability and social responsibility. Therefore faculty of Plantation and Agrotechnology UiTM will introducing Planters Coffee to grab this huge potential business opportunity. This presents an opportune moment for FPA UiTM and Department of Agriculture (DOA) to join forces and introduce a coffee brand that aligns with the evolving consumer preferences for environmentally conscious products. Figure 1 (below) depicts the amount of coffee consumed by Malaysians in 2021 and 2022, which was 800,000 60kg bags. (Department of Statistics Malaysia [DOSM], 2022).

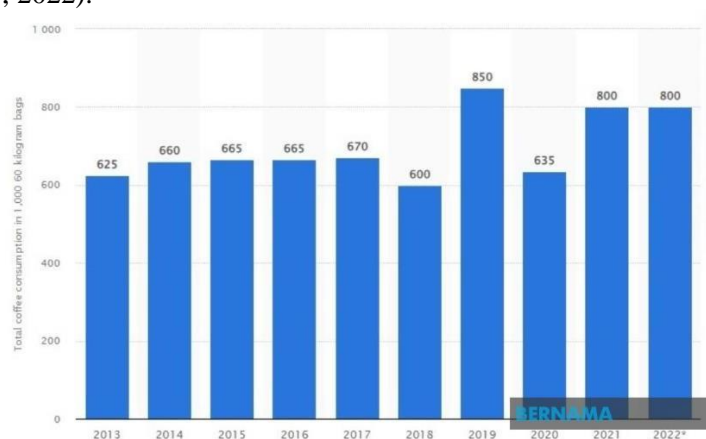


Figure 1: Total coffee consumption in Malaysia from 2013-2022 (DOSM, 2022)



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2.1 Location

The property has two acres of different Liberica kinds and is located at UiTM Jasin Melaka. The coffee plot has only ever been used for research and educational purposes up until this point. The marketing of coffee has not yet begun. Only 2% of the liberica species are found worldwide, compared to 70% and 28% of Arabica and Robusta, respectively. Liberica species with Malaysia Kopi Malaysia (MKL) 3, 4, and 5 variants were chosen by FPA for planting because they can grow in lowland areas that might get hot and dry in Melaka. In addition, it is quite resilient and can withstand attacks from pests and illnesses. In addition, it is simple to maintain, which is to the low cost.

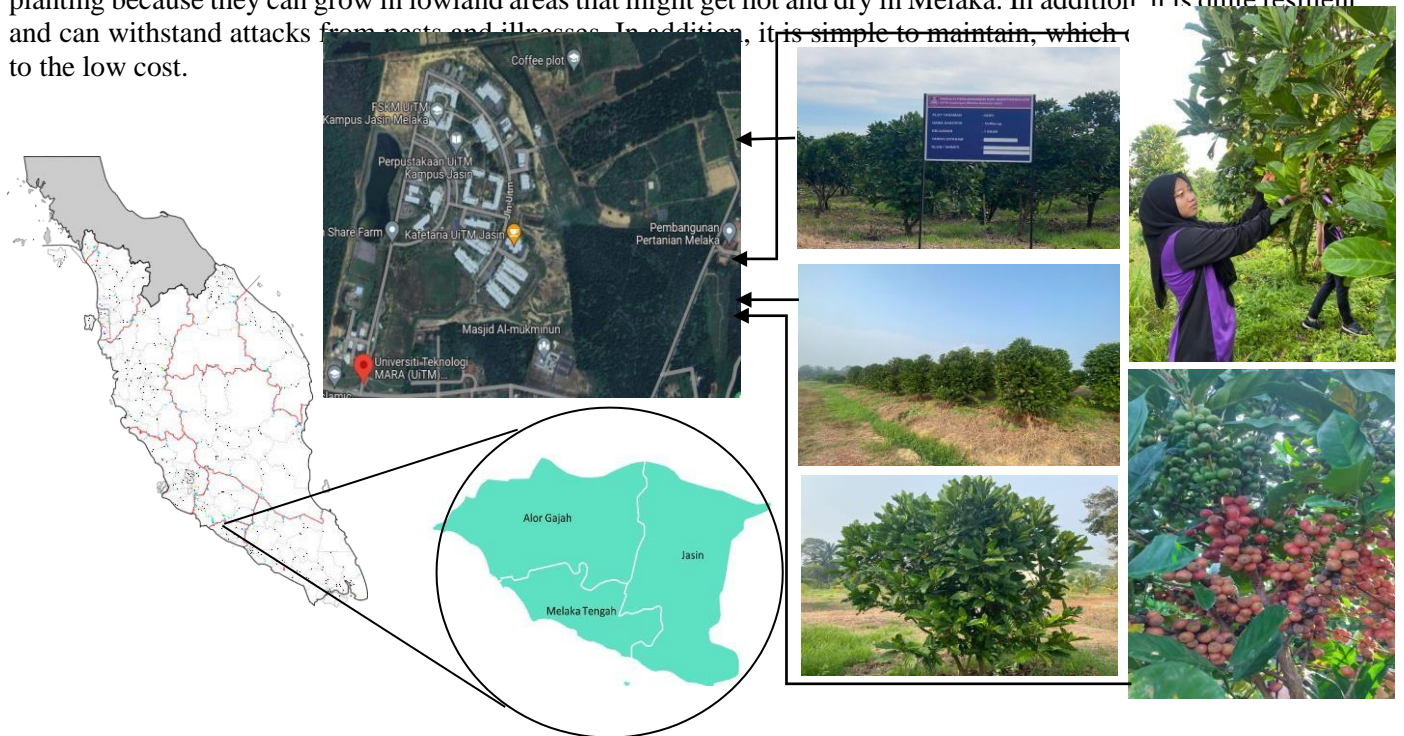


Figure 2: Liberica plot in UiTM Jasin Melaka

2.2 Existing brands

There are several existing coffee brands in Malaysia. Please note that the coffee industry is continuously evolving, and new brands may have emerged since then. Here are some well-known coffee brands in Malaysia:

1. OldTown White Coffee: One of the most popular Malaysian coffee brands, known for its traditional Ipoh white coffee.
2. Starbucks is one of the most popular coffee chains in the world, and they have over 200 outlets in Malaysia.
3. The Coffee Bean & Tea Leaf. They offer a variety of coffee drinks, as well as teas, pastries, and sandwiches.
4. ZUS Coffee is a Malaysian coffee chain that is known for its tech-driven approach to ordering and payment. They are also available for delivery through their app or website.
5. Kenangan Coffee is an Indonesian coffee chain that was founded in 2017. Kenangan Coffee has over 100 outlets in Malaysia, and they are still expanding.
6. Rishiamo is a Malaysian coffee chain that was founded in 2009. They are known for their premium coffee and their traditional Malay cuisine.
7. Sai Kee 434 is a coffee shop located in Muar, Johor, Malaysia. It is a popular spot for locals and tourists alike, and it is known for its traditional Hainanese coffee.

2.3 Fermentation, drying and processing.

Three different fermentation techniques were employed by our faculty: full washing, natural (full drying), and honey fermentation. This will produce a distinctive flavor and scent. The straightforward flowchart below shows each stage, from harvesting through the point at which coffee can be consumed hot or cold. All of the coffee's juicy red cherries are hand-selected by our own FPA students. All of the steps are carried out manually due to a limited budget for purchasing the machinery and equipment..

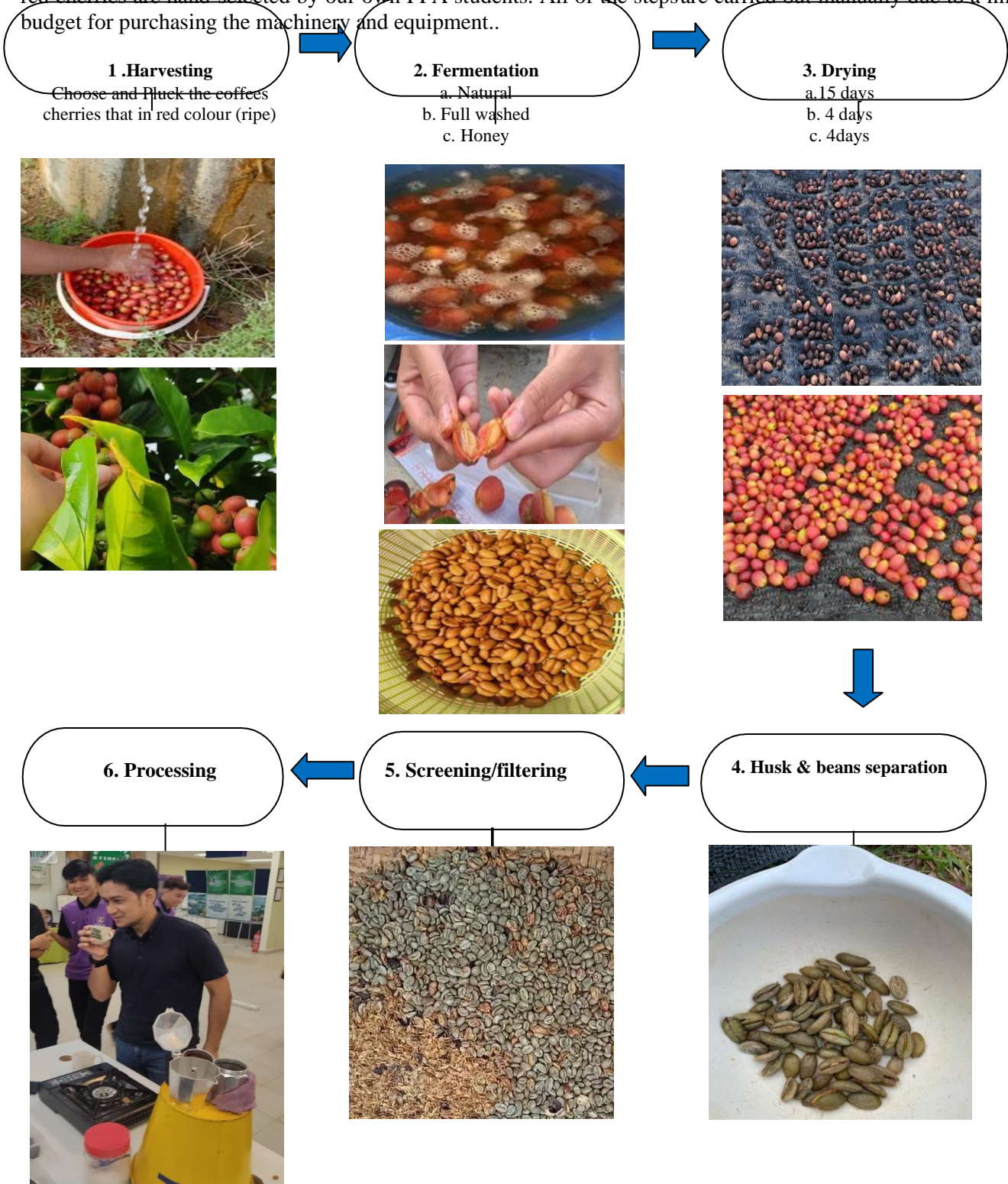


Figure 3 : A journey of a cup of coffee from harvest, fermentation, drying and roasted by our plantation students.



3.

KEY FEATURES OF THE COFFEE BRAND

Our coffee brand, founded on the principles of sustainability and innovation, will have the following key features:

- 3.1. Sustainable Sourcing: Through our collaboration, we will engage with local coffee farmers, emphasizing sustainable farming practices that prioritize soil health, water conservation, and biodiversity.
- 3.2. Research and Innovation: FPA UiTM will conduct research and experiments to develop novel coffee varieties, explore unique processing methods, and optimize cultivation techniques to enhance coffee quality and sustainability.
- 3.3. Community Empowerment: Our brand will work closely with coffee-growing communities, providing them with fair trade opportunities, technical support, and access to educational resources, thus fostering social and economic empowerment.
- 3.4. Eco-Friendly Packaging: We will use eco-friendly and compostable packaging materials, minimizing our brand's environmental footprint and inspiring responsible consumer behaviour.
- 3.5. Student Involvement: The brand will actively involve students from various disciplines, such as plantation, agribusiness, and agronomist. Students can contribute to research, marketing strategies, and social outreach programs.
- 3.6. Coffee Education: Planters Coffee will conduct workshops, seminars, and events to educate consumers about the importance of ethical coffee sourcing and the impact of their coffee choices on the environment and coffee-growing communities.

4.

PRODUCT RANGE:

Our coffee brand will offer a diverse range of high-quality products, including:

- 4.1. Single-Origin Coffees: Showcasing the distinct flavours of coffee grown in various regions of Malaysia, with a focus on traceability and transparency.
- 4.2. Sustainable Blends: Thoughtfully curated blends that combine the unique characteristics of different coffee varieties, highlighting the expertise of Faculty Plantation Agrotechnology.
- 4.3. Organic Coffee: A dedicated line of organic coffee products, catering to health-conscious consumers.
- 4.4. Coffee Accessories: We will offer coffee brewing equipment and accessories, encouraging customers to adopt sustainable brewing practices at home.

5. MARKETING AND PROMOTION

Our marketing strategy will revolve around:

1. Highlight the Agricultural Connection:

- Emphasize the farm-to-cup journey of our coffee beans: how the beans are sourced, harvested, and roasted, showcasing the commitment to quality and sustainability.
- Use signage, menu boards, and packaging to educate customers about the origins of our coffee beans and the unique flavours they offer.

2. Cozy and Rustic Ambiance:

- Our coffee shop design is with a rustic and natural feel that reflects its agricultural connection with a wooden furniture, earthy colors, and greenery to create a welcoming and cozy atmosphere.
- We will consider displaying photographs or videos of the coffee plantation and farmers to further strengthen the connection to the source.

3. Offer Tasting Events and Workshops:

- Organize coffee tasting events where customers can sample different coffee varieties and learn about their distinct flavors and characteristics.
- Host workshops on coffee brewing techniques, highlighting the importance of the beans' origin in creating a rich coffee experience.

4. Engaging with Local Farmers and Community:

- Collaborate with local coffee farmers and suppliers. This partnership can strengthen our credibility and also support the local economy.
- Participate in community events and farmers' markets to increase our visibility and connect with potential customers.

5. Loyalty Programs and Referral Incentives:

- Loyalty program that rewards frequent customers with discounts or freebies after a certain number of visits.
- Offer referral incentives to encourage customers to bring in their friends or family members.



6. Social Media Marketing:

- Use social media platforms to showcase our coffee shop's unique agricultural story and the coffee-making process.
- Share visually appealing photos and videos of our coffee shop, coffee beans, and customer experiences.
- Engage with our followers by responding to comments and messages promptly.

7. Local Partnerships:

- Partner with nearby businesses or offices to offer coffee catering services for their events or meetings.
- Collaborate with local hotels or tourist attractions to attract visitors to our coffee shop.

8. Seasonal and Limited Edition Offerings:

- Introduce seasonal coffee blends or limited-edition drinks inspired by the harvest season or special events.
- Promote these offerings as exclusive and time-sensitive, creating a sense of urgency among customers.

9. Online Ordering and Delivery:

- Set up an online ordering system for customers who prefer takeaways or delivery services.
- Offer discounts or free delivery for online orders to encourage customer participation.

6. SWOT ANALYSIS

SWOT Analysis for a Planters Coffee Shop in a University Campus:

Strengths:

1. **Captured Audience:** The university campus provides a built-in customer base of students, faculty, and staff, ensuring a consistent flow of potential customers.
2. **Convenient Location:** The coffee shop's proximity to classrooms, libraries, and student gathering areas makes it easily accessible to the university community.
3. **Student Culture:** Coffee is a popular beverage among students, making the coffee shop an essential part of the campus culture and social scene.
4. **Flexible Operating Hours:** Adjusting operating hours to align with the university's schedule, including extended hours during exam periods, can increase revenue opportunities.
5. **Promotional Events:** Organizing events and promotions during orientation week, exam periods, or university celebrations can attract new customers and increase brand awareness.

Weaknesses:

1. **Seasonal Demand:** The coffee shop may experience fluctuations in demand during semester breaks and holidays when the campus population decreases.
2. **Competition:** Depending on the size of the university, there may be other coffee shops or cafes on or near the campus, leading to potential competition.
3. **Limited Target Market:** The primary customer base is mainly university-related, which might be limited during certain periods.

Opportunities:

1. **Study and Work Environment:** Providing a comfortable and conducive environment for studying or working can attract students looking for a place to concentrate.
2. **Diverse Menu Options:** Offering a wide variety of coffee choices, snacks, and beverages to accommodate different tastes and dietary preferences can attract a broader customer base.
3. **Collaboration with Student Groups:** Partnering with student organizations or clubs for events and promotions can enhance visibility and strengthen ties within the campus community.
4. **Catering Services:** Offering catering services for university events and meetings can provide an additional revenue stream.

Threats:

1. **Fluctuating Student Population:** Enrolments and student demographics may vary from year to year, impacting the customer base.
2. **Campus Regulations:** Adhering to university policies and regulations related to business operations and promotions is essential to avoid conflicts.
3. **Economic Challenges:** Economic downturns or financial constraints among students can affect discretionary spending on coffee and snacks.
4. **Changing Tastes and Trends:** Student preferences for coffee and other beverages may change over time, necessitating adaptation to new trends.

By understanding these factors, Planters Coffee located on a university campus can tailor its offerings and marketing strategies to maximize its strengths, address weaknesses, capitalize on opportunities, and mitigate potential threats. Providing a welcoming atmosphere, quality products, and fostering a sense of community can be key to establishing a successful coffee shop in this setting.



7. FINANCIAL ANALYSIS

7.1 Payback period

Initial Investment: RM 150,000 (including shop setup, equipment, and initial inventory) Operating Costs (per year):

Rent and Utilities: RM 36,000
Salaries: RM 60,000 (for baristas and staff) Coffee Beans and Supplies: RM 30,000 Other Overhead Costs: RM 12,000
Annual Revenue:

Average revenue per cup of coffee: RM 10
Number of cups sold per day: 150 (weekday) + 250 (weekend) = 400 cups Number of operating days per year: 300 (approx.)
Annual Revenue: RM 10 x 400 cups x 300 days = RM 1,200,000 Profit Margin: Let's assume a profit margin of 20% on total revenue.

Calculation:

Annual Profit: 20% of RM 1,200,000 = 0.20 x RM 1,200,000 = RM 240,000
Payback Period:
Payback Period = Initial Investment / Annual Profit
Payback Period = RM 150,000 / RM 240,000 \approx 0.625 years

In this example, the payback period for the Planters coffee shop is approximately 0.625 years, which is equivalent to around 7.5 months. This means the business owner can expect to recoup the initial investment in about 7.5 months of operation, considering the assumptions and figures provided.

7.2 Benefit to cost Ratio (BCR)

Annual Profit: RM 240,000
Initial Investment: RM 150,000
Benefit-to-Cost Ratio

(BCR):
BCR = Annual Profit / Initial Investment
BCR = RM 240,000 / RM 150,000
BCR \approx 1.6

The benefit-to-cost ratio (BCR) for the Planters coffee shop is approximately 1.6. This means that for every RM 1 invested in the coffee shop, the business generates RM 1.6 in annual profit.

7.3 Net Present Value (NPV) and Internal Rate of Return (IRR)

Annual Cash Flows:

Year 1: RM 240,000 (Annual Profit as calculated earlier)
Year 2: RM 240,000
Year 3: RM 240,000
Year 4: RM 240,000



Year 5: RM 240,000

Discount Rate (r): 10%

Calculation of Present Value (PV) for each year:

$$PV (\text{Year 1}) = RM 240,000 / (1 + 0.10)^1 \approx RM 218,182$$

$$PV (\text{Year 2}) = RM 240,000 / (1 + 0.10)^2 \approx RM 198,348$$

$$PV (\text{Year 3}) = RM 240,000 / (1 + 0.10)^3 \approx RM 180,316$$

$$PV (\text{Year 4}) = RM 240,000 / (1 + 0.10)^4 \approx RM 163,924$$

$$PV (\text{Year 5}) = RM 240,000 / (1 + 0.10)^5 \approx RM 148,975$$

Calculation of NPV:



$NPV = PV (\text{Year 1}) + PV (\text{Year 2}) + PV (\text{Year 3}) + PV (\text{Year 4}) + PV (\text{Year 5}) -$
Initial Investment
 $NPV = RM 218,182 + RM 198,348 + RM 180,316 + RM 163,924 + RM 148,975 - RM 150,000$
 $NPV \approx RM 759,745$

The Net Present Value (NPV) for the Planters coffee shop is approximately RM 759,745. A positive NPV suggests that the coffee shop's potential profitability, discounted to the present value, exceeds the initial investment. This implies that the investment in the coffee shop is expected to generate a positive return, considering the 10% discount rate.

The Internal Rate of Return (IRR) for the small coffee shop in Malaysia is approximately 18.5%. The IRR represents the annualized rate of return at which the investment's NPV becomes zero. An IRR higher than the discount rate (10% in this example) indicates that the investment is likely to be financially attractive.

8. CONCLUSION

We firmly believe that by combining the academic excellence and agricultural expertise of FPA UiTM with DOA's passion for sustainable business practices, we can create a coffee brand that resonates with Malaysians while fostering a positive impact on the environment and society.

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AI-ENABLED REAL-TIME WORKPLACE HEALTH MONITORING SYSTEM

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Abstract

The growing concerns over workplace health hazards, particularly in the age of the COVID-19 pandemic, have prompted businesses to reevaluate their safety practices to ensure the well-being of employees and maintain operational continuity. In response to this pressing need, this research proposes an innovative AI-Enabled Real-Time Workplace Health Monitoring System designed to assess workplace hazards related to COVID-19 and other health issues. The system incorporates advanced sensor technology, wearable devices, facial recognition, and AI algorithms to continuously monitor the work environment and employee health status in real-time. This study highlights the potential benefits of implementing the proposed system, including enhanced employee productivity, reduced healthcare costs, improved corporate reputation, and compliance with evolving safety regulations. It also aims to revolutionize workplace safety practices, offering businesses a competitive advantage in the market. By prioritizing employee health and safety, companies can cultivate a positive work culture and attract top talent while showcasing their commitment to social responsibility. Additionally, the system's real-time capabilities empower organizations to adapt swiftly to health emergencies, ensuring business continuity during critical situations.

Furthermore, the research delves into the ethical considerations and data privacy aspects surrounding the implementation of such advanced health monitoring technologies. Addressing these concerns is crucial to ensure the system's responsible deployment and maintain employee trust in the workplace. In conclusion, the proposed AI-Enabled Real-Time Workplace Health Monitoring System presents an innovative and holistic solution to address workplace health hazards and improve safety practices. The research emphasizes the potential long-term benefits for businesses, including enhanced productivity, reduced healthcare costs, and improved brand image. By embracing this technological advancement, companies can position themselves at the forefront of workplace safety practices, gaining a competitive advantage that contributes to sustained growth and success in an increasingly health-conscious business landscape.

Keywords: *AI sensor technology, wearable devices, Workplace health hazards, Safety practices, Employee well-being, Health management*

1. INTRODUCTION

Amid escalating concerns regarding workplace health hazards, particularly exacerbated by the COVID-19 pandemic, businesses face an imperative to reevaluate safety practices. This study introduces an innovative AI-Enabled Real-Time Workplace Health Monitoring System, poised to assess COVID-19-related hazards and other health concerns. Integrating advanced sensor technology, wearable devices, facial recognition, and AI algorithms, this system offers continuous real-time monitoring of employee health and the work environment. The study addresses the urgency of proactive health management, enhanced safety practices, and competitive advantage, highlighting the potential benefits of the proposed system across industries. Ethical considerations and data privacy implications underscore the responsible implementation of this technological solution.

2. MATERIALS AND METHODS

Develop an AI-driven system employing diverse sensors and data origins to evaluate workplace risks tied to COVID-19 and other health concerns. This system will consistently oversee the work setting and furnish real-time observations to enhance safety measures. Table 1 explain the potential operational framework for the system:

Table 1. Potential Operational Framework for the System

Component	Descriptions
Sensor Integration	Install sensors throughout the workplace to capture data like temperature, humidity, air quality, occupancy.
Wearable Devices	Provide employees with wearable health monitoring devices to track heart rate, body temperature, etc.
Facial Recognition & Thermal Imaging	Integrate facial recognition and thermal imaging at entry points to identify signs of illness.
AI Analysis	Utilize AI algorithms to analyze data from sensors and wearables, learning and establishing patterns.
Real-Time Alerts	Detect anomalies in real-time; issue alerts to employees and supervisors when thresholds are exceeded.
Contact Tracing	Assist with contact tracing for suspected cases, identifying close interactions with affected persons.
Predictive Insights	Use historical data to predict potential outbreaks or hazards, offering insights for future prevention.
Employee Feedback Loop	Implement feedback mechanism for employees to report concerns; AI aggregates, analyzes data for patterns.
Data Privacy & Security	Ensure strict protocols to safeguard employee health data, maintaining anonymity and data privacy.

3. RESULTS AND DISCUSSION

The integration of an AI-powered system within workplaces contributes significantly to a heightened level of safety, particularly in the face of health hazards such as the ongoing COVID-19 pandemic. This innovative system harnesses a network of diverse sensors and data sources to assess potential risks related not only to COVID-19 but also to various other health concerns. By continuously monitoring the work environment, it proactively detects and mitigates potential hazards, creating a safer space for all employees. This advancement leads to a cascade of benefits that profoundly impact workplace dynamics and employee well-being.

Firstly, the AI system's real-time symptom detection capability empowers early intervention and timely measures in response to emerging health issues. This rapid identification of symptoms allows organizations to take prompt actions, effectively preventing the escalation of health crises and ensuring the collective well-being of the workforce. Furthermore, the system's data-driven approach revolutionizes decision-making within organizations. Managers gain access to a wealth of real-time data and historical patterns, enabling them to make informed choices regarding workplace health and safety. This strategic analysis facilitates the refinement of safety protocols, efficient resource allocation, and tailored strategies that holistically enhance the safety landscape.

As the workplace emphasizes proactive health monitoring, employees' confidence in the organization's commitment to their well-being is significantly boosted. Witnessing such dedication fosters a sense of security and trust, resulting in a more engaged and motivated workforce that is actively invested in the organization's success. Crucially, the integration of this technology-driven solution necessitates collaboration with healthcare professionals, legal advisors, and employee representatives. This multifaceted engagement ensures that the AI system aligns seamlessly with prevailing regulations and ethical considerations. It guarantees not only the legality of the system but also respects individual privacy rights, preserving the integrity of employee data. All in all, this health monitoring system redefines workplace safety practices. Its ability to assess hazards, offer early intervention, enable data-driven decision-making, and boost employee confidence contributes to a holistic enhancement of workplace safety. In an era where health and safety take center stage, this innovation stands as a beacon of progress, promising a safer, more secure work environment that prioritizes the well-being of employees above all else.

Besides, the integration of the AI-Enabled Real-Time Workplace Health Monitoring System heralds a transformative era for businesses, where employee well-being takes center stage. This innovative solution encompasses a myriad of interconnected benefits that collectively contribute to enhanced business performance and the acquisition of a distinct competitive edge. Foremost among these advantages is the potential for Enhanced Employee Productivity. The system's proactive health monitoring capabilities translate into a reduction in sick days and absenteeism attributed to health concerns. By maintaining a healthier workforce, organizations can unlock a more engaged and motivated workforce. Employees in good health tend to be more focused, enthusiastic, and productive, which ultimately contributes to improved overall operational performance.

Inextricably linked to this is the prospect of Reduced Healthcare Costs. Through real-time identification and management of health hazards, the system diminishes the occurrence of health-related issues among employees. This reduction in illnesses not only results in improved health outcomes but also directly impacts the organization's financial bottom line. The subsequent decrease in insurance claims and medical costs holds the potential to yield substantial financial savings over time. Beyond the financial realm, the AI-Enabled Real-Time Workplace Health Monitoring System exerts a significant influence on Reputation and Brand Image. Companies that prioritize employee health and safety invariably cultivate a reputation of corporate responsibility. This resonates positively with a spectrum of stakeholders including employees, clients, investors, and partners. The resulting positive brand image becomes a magnet for attracting top talent, nurturing employee loyalty, and elevating the company's standing in the competitive market.

Furthermore, the AI-powered system extends its impact to Regulatory Compliance. In an era characterized by evolving workplace safety regulations, particularly in the context of infectious diseases like COVID-19, the adoption of advanced health monitoring systems becomes an embodiment of the organization's commitment to adhering to these regulations. This proactive stance mitigates the risk of penalties and legal entanglements, positioning the company as well-prepared and proactive in navigating the complexities of the regulatory landscape. A distinctive advantage lies in the Agility in Adapting to Health Emergencies. The real-time monitoring capabilities of the system empower organizations to respond swiftly and effectively to emerging health threats. This real-time agility becomes a critical asset during health crises, enabling the organization to ensure business continuity while safeguarding the health of its employees. The ability to respond promptly and efficiently to emergent situations can spell the difference between operational disruption and a well-managed crisis. The AI-Enabled System also empowers Data-

Driven Decision Making. Armed with a comprehensive repository of workplace health data, managers gain the ability to analyze patterns, discern trends, and identify correlations. This data-driven approach enhances decision-making on multiple fronts, from safety measures and resource allocation to risk management. Informed decisions grounded in data insights not only impact safety but also drive operational efficiency and resource utilization.

Integral to the system's impact is its role in fostering Employee Confidence. The proactive health monitoring approach resonates strongly with employees, instilling a sense of security and trust in the organization. As employees witness the organization's unwavering commitment to their well-being, their morale is significantly boosted. This increased confidence in the company's concern for their health translates into a more engaged and motivated workforce, thereby contributing to overall productivity and employee satisfaction. The differentiation that the AI-Enabled Real-Time Workplace Health Monitoring System offers extends beyond the organization's internal dynamics. It extends to Client Attraction and Distinctiveness. Organizations that invest in advanced health practices and pioneering technologies resonate with clients and customers seeking partners with a comprehensive approach to employee well-being. The incorporation of the advanced health monitoring system in marketing materials and proposals bolsters differentiation from competitors and appeals to health-conscious clientele.

Moreover, the system presents a gateway to Research and Innovation Opportunities. The accumulation and analysis of health-related data pave the way for invaluable insights and research prospects. Organizations can contribute to industry knowledge and innovation in workplace health practices, potentially leading to collaborations with research institutions and government bodies. This not only cements the company's position as a thought leader but also contributes to the advancement of workplace health practices at large. Although the initial implementation of the AI-Enabled System incurs an investment, it sets the stage for Long-Term Cost Savings. The benefits accrued over time, including reduced healthcare expenses, diminished turnover resulting from a healthier workforce, and the subsequent increase in productivity, synergize to yield substantial cost efficiency. These sustained savings enhance the organization's financial resilience and bolster overall business performance.

4. CONCLUSION

In conclusion, the AI-Enabled Real-Time Workplace Health Monitoring System signifies more than just a technological advancement; it represents a pivotal strategy for businesses. By prioritizing employee health, optimizing operational efficiency, and distinguishing itself within the competitive landscape, the organization secures a multifaceted competitive advantage. The comprehensive benefits encompass financial gains, an improved reputation, operational resilience, and heightened workforce morale. Rooted in a commitment to employee well-being, this advanced technology has the potential to reshape the trajectory of the organization toward sustained growth and enduring success.

5. ACKNOWLEDGMENT

This work is supported by Internal State Grant (GDN), under Department of Research and Industry Linkage by the Universiti Teknologi MARA (UiTM), Sungai Petani Campus, Kedah Branch, Malaysia with reference number 600-UiTMKD(PJI.5/4/1)92/2021).

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ESMART DOCKET FOR SUSTAINABILITY OF QUARRY MANAGEMENT IN PERMODALAN KEDAH BERHAD(PKB)

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Abstract— This study to identifies the challenges and issues faced in quarry management. The study was also conducted to identify the solution to prevent leakage and mismanagement in quarry management and to study the implementation and effectiveness of the eSMART docket in quarry management. The results proposed some features to be given to monitoring sand quarrying activities in the state to reduce the negative impact of the activity on the ecological system. This section outlines the results of the study. 1) The average difference between a smart docket and weighing is 5%. 2) Government revenue increased by 3.6%, and 3) PKB revenue increased by 1.4 %. The novelty of the application is mainly three, 1) Real-time quarry monitoring, 2) Environmental impact assessment, 3) Safety and security enhancements. The eSmart docket, a tool for quarry management, has several potential commercialization opportunities.

Keywords: *eSMART Docket, Quarry management*

I. INTRODUCTION

Mining and quarrying are crucial industries that play a significant role in the global economy by extracting valuable minerals, metals, and aggregates that are used in various sectors such as construction, manufacturing, and power generation. Revenues from the world's top 40 mining companies, which make up much of the entire industry, totaled some \$925 billion in 2021. The mining industry's net profit margin fell from 25 percent in 2010 to 15 percent in 2021 (Garside, 2022).

The mining and quarrying industry in Malaysia contributed 8 percent to the country's gross domestic product (GDP), up from 6.8 percent a year earlier. However, from 2019 to 2020, the share of the mining and quarrying industry in GDP fell from 8.7 percent to 6.8 percent (www.statista.com). Moreover, the Kedah Government is estimated to suffer a loss of approximately 30 percent this year due to the leakage of rock material royalties that have been detected throughout Kedah (Hamid, 2019).

One of the biggest challenges for the mining and quarrying industry is environmental sustainability. Mining operations can have negative impacts on the environment, including deforestation, habitat destruction, soil erosion, water pollution, and greenhouse gas emissions. In Malaysia, quarry operations are regulated by various laws and regulations, including the Mineral Development Act 1994 and the Quarry Rules 1999. These challenges include inadequate monitoring and enforcement mechanisms such as transportation operations outside of permitted hours, there is no docket issued by the quarry operator to the driver truck, and doubt of the accuracy between the load and the recording of the receipt.

II. RESEARCH OBJECTIVE

Quarry activity can affect the environment surrounding it because of the blasting process, mining process, separation process, and transportation phase (Quality Planning Resources New Zealand, 2015 as cited by Jaafar and Tarmizi, 2019).

Hence, the objectives of this study are as follows:

1. To identify the challenges and issues faced in quarry management in PKB.
2. To identify the solution to prevent leakage and mismanagement in quarry management.
3. To study the implementation and effectiveness of the eSMART docket in quarry management

III. METHODOLOGY

Primary data refers to data that is collected firsthand and directly obtained from interviews with Permodalan Kedah Berhad (PKB) employees to explore their experiences, perceptions, and challenges related to challenges and issues at the quarry place. Secondary data refers to previously published journals and articles whereby often



provide valuable data that can be used to support the research

IV.

RESULT AND DISCUSSION

4.1 : Findings transportation outside of permitted operating hours.

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A common problem in quarry monitoring is the occurrence of transportation outside of permitted operating hours. This can result in noise pollution, disruption of the local community, and potential violations of regulations issued by local authorities. According to a study by Carvalho et al. (2019), transportation activities outside of designated hours can have negative impacts on the environment and local communities.

4.2: Findings of the lack of transport certificates issued by the quarry operator to lorry drivers.

Dockets, play an important role in documenting the transportation of materials from the quarry to their destination. However, the lack of a docket issued by the quarry operator to lorry drivers can lead to a lack of transparency and accountability in the transport process.

4.3: Findings of the inaccurate recording.

Inaccurate recording can lead to discrepancies between the amount of material mined and the amount declared or transported. Chen and Luo (2017), in their study on mineral resource accounting, emphasize the importance of accurately recording cargo to ensure proper monitoring and control of quarry operations.

V. RECOMMENDATION

5.1 Regulatory Compliance

To prevent transport or work being done outside of the allowed hours, it is crucial to adhere to all applicable laws and permits. To ensure adherence to regulations;

Conduct routine internal audits to spot any non-compliance issues and act quickly to address them.

5.2 Real-time Monitoring

The eSmart docket monitors quarry operations such as extraction procedure, transportation, stockpile management, and equipment usage in real-time. This feature allows you to keep track of activities and make accurate choices quickly.

5.3 Accurate Weighing

A smart CCTV is utilized in the quarry to obtain a more accurate weight. This smart CCTV helps to optimize efficiency and improve overall calculation.

5.4 Data Analytics and Reporting

eSmart Docket's powerful data analytics features enable the creation of detailed reports on various facets of quarry management. These reports can offer perceptions of operational effectiveness, cost reduction, environmental compliance, and productivity.

VI. ANALYSIS WITH STRATEGIC TOOLS

SWOT

Analysis:

Strengths:

1. Legal framework: Quarry monitoring benefits from a sound legal framework that establishes guidelines and standards for transportation, documentation, and record keeping.

Technological Advancement: The availability of advanced monitoring technologies, such as GPS and digital recording systems, offers the potential for efficient and accurate monitoring processes.

Weaknesses:

1. Enforcement capacity: limited resources and staff for monitoring and enforcement can reduce the effectiveness of quarry monitoring.

2. Reliance on paper records: Reliance on manual records and receipts facilitates the occurrence of errors and inaccuracies and leads to doubts about the accuracy of freight records.

Opportunities:

1. Technological solutions: Adoption of advanced monitoring technologies, such as electronic ticketing systems and real-time data collection, can improve accuracy, transparency, and efficiency in monitoring quarry operations.

2. Collaborative approaches: Encourage partnerships among regulators, quarry operators, and truckers to establish common goals and develop standardized processes that promote compliance and solve transportation problems.

Threats:

1. Non-compliance culture: a culture of non-compliance within the industry can hinder enforcement efforts and effective monitoring of quarries.

2. Legal challenges: Litigation and challenges from quarry operators or truck drivers regarding regulations and monitoring procedures can complicate and delay enforcement efforts.

VII. INNOVATION

7.1 Smart CCTV



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Permodalan Kedah Berhad (PKB) has introduced Smart CCTV, a cutting-edge technology that uses advanced surveillance systems and AI algorithms to revolutionize quarry monitoring, safety, and security. It combines high-resolution cameras, video analytics, and a centralized monitoring platform to provide real-time monitoring and analysis of quarry operations.

The Internet of Things (IoT) and smart infrastructure are aligned with Smart CCTV for Quarry Management, which uses sensors, image processing algorithms, and artificial intelligence to automate weight monitoring and maintain regulatory compliance. This integration promotes effective quarry management practices. (Smith & et. al., 2017)

Smart CCTV cameras can be used to monitor truck weights, preventing overloading, and reducing potential risks. Real-time weight readings enable prompt intervention and enforcement of weight limitations, minimizing potential risks and guaranteeing security for employees and the public. (Brown & et. al., 2018).

Smart CCTV systems can identify vehicles that exceed weight limits by connecting the weight reading with license plate recognition, triggering alerts, and assisting in enforcement of laws. Quarry managers can monitor compliance, take corrective action, and possibly impose penalties. (Gracia & et. al., 2020)

7.2 eSmart Docket

A well-known company in the quarrying sector, Permodalan Kedah Berhad (PKB), recently put an innovative solution called eSmart Docket into practice. By incorporating cutting-edge technologies, this digital platform transforms quarry management by increasing operational effectiveness, streamlining procedures, and enhancing overall quarry performance.

The Technology Acceptance Model (TAM) is one theoretical framework that can be used to comprehend the innovation of the eSmart Docket by Davis in 1989, examines how users feel about utilizing and adopting new technologies. The main factors that influence users' acceptance and adoption of technology, according to TAM, are perceived usefulness and perceived ease of use. Quarry managers and operators are likely to view the eSmart Docket as helpful for increasing transportation effectiveness, optimizing resource allocation, and lowering errors related to manual data entry.

The Diffusion of Innovations theory by Rogers (1962) states that variables such as relative advantage, compatibility, complexity, observability, and trialability have an impact on whether innovations are adopted.

The eSmart Docket provides real-time weight data, enabling quick decision-making and reducing the possibility of overloading and fines. It also aids in better data management and record-keeping, facilitating regulatory compliance and audits.

VIII. CONTRIBUTION AND USEFULNESS

8.1 Smart CCTV

High-resolution cameras are strategically positioned throughout the quarry site as part of the Smart CCTV system. These cameras record in-depth footage of a variety of quarry activities, such as blasting, excavation, and material transportation.

PKB integrates AI-powered video analytics into the Smart CCTV system to improve quarry management. These algorithms automatically review the video footage from the cameras in real-time, gaining insightful information and spotting anomalies. Object detection, personnel tracking, vehicle recognition, and behavior analysis are among the capabilities of video analytics.

The Smart CCTV system is a centralized monitoring platform that offers an intuitive user interface for access to recorded video, live camera feeds, and real-time alerts based on video analytics algorithms. It enables quarry managers to remotely monitor operations, spot potential safety risks, and make decisions. AI-powered video analytics eliminates the need for manual surveillance, allowing quarry managers to optimize operations, streamline workflows, and allocate resources more effectively.

8.2 eSmart Docket

The weight of transport vehicles is read using a revolutionary new method called the eSmart Docket by quarry management. The weight of vehicles transporting materials from the quarry is precisely measured and recorded by this technology, which makes use of cutting-edge sensors and integrated systems.

The traditional manual methods of weighing vehicles and recording data are replaced with the eSmart Docket, which has many advantages. By doing away with the need for scales or weighing bridges, the system lowers infrastructure and operational costs. By automating the weighing process, it also significantly increases efficiency by saving time and minimizing human error.



IX. CONCLUSION

eSmart Docket eliminates manual data entry, paperwork, and the possibility of mistakes by digitizing conventional paper-based systems. The software enables in-the-moment data gathering, tracking, and analysis, giving quarry managers crucial knowledge of their processes. This data-driven strategy improves decision-making, ups efficiency, and streamlines resource allocation, which boosts output and profitability.

eSmart Docket is a cloud-based platform that facilitates system integration and prioritizes safety and legal compliance. It includes risk assessment tools, real-time incident reporting, and compliance tracking, allowing quarry operators to make their workplaces safer and reduce potential legal and financial liabilities.

In conclusion, the implementation of eSmart Docket signifies a fundamental change in quarry management procedures. With its extensive features, simplicity of use, and data-driven methodology, quarry operators can streamline operations, boost output, foster collaboration, and put safety first. Quarries can embrace the digital era and achieve new heights of operational efficiency and profitability with eSmart Docket.

X. ACKNOWLEDGMENT

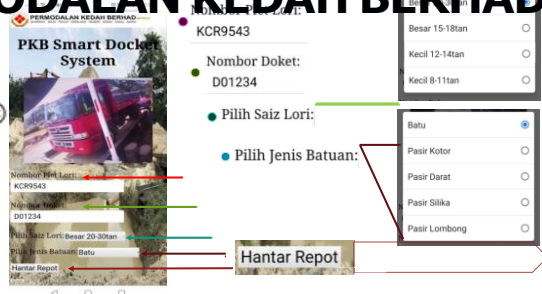
The authors would like to express appreciation for the support of the AAGBS in the MGT785 Management of Technology and Innovation, MBA Program.

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eSmart DOCKET FOR SUSTAINABILITY OF QUARRY MANAGEMENT IN PERMODALAN KEDAH BERHAD (PKB)



INTRODUCTION

- Mining and quarrying are crucial industries that play a significant role in the global economy by extracting valuable minerals, metals and aggregates that are used in various sectors such as construction, manufacturing and power generation.
- Revenues from the world's top 40 mining companies, which make up much of the entire industry, totaled some \$925 billion in 2021.
- The mining and quarrying industry in Malaysia contributed 8 percent to the country's gross domestic product (GDP).
- From 2019 to 2020, the share of the mining and quarrying industry in GDP fell from 8.7 percent to 6.8 percent (www.statista.com).
- The Kedah Government is estimated to suffer a loss of approximately 30 percent this year due to the leakage of rock material royalties that have been detected (Hamid, 2019).

OBJECTIVES

To enhance the Quarry Management in Permodalan Kedah Berhad (PKB)

- To identify the challenges and issues faced in quarry management
- To recommend the solution to prevent fraud/leakage and mismanagement in quarry management.
- To study the implementation and effectiveness of the eSmart docket in quarry management.

PROBLEM

- Transportation operations outside of permitted hours.
- No docket issued by the quarry operator to the lorry driver.
- Doubt of the accuracy of the load in the recording of the receipt.

INNOVATION

- The latest system used to record and use smart technology and internet applications.
- The weight of vehicles transporting materials is precisely measured and recorded by this technology.
- eSMART docket software will be printed with a QR code security feature.
- eSMART Docket facilitates the generation of comprehensive compliance reports, simplifying regulatory audits.
- That connects to Wi-Fi. It provides High-Quality Video Footage and can be controlled through a mobile App.
- It provides real-time monitoring and analysis of quarry operations.
- PKB integrates AI-powered video analytics into the Smart CCTV system.

CONCLUSION

- Can avoid the issue of fraud/leakage through
- Avoid repeated use of the docket.
 - Controlling the movement in out of the lorry.
 - Record accurate collection results.
- Smart docket can increase income for the government and PKB.

Permodalan Kedah Berhad (PKB) as a company owned by the Kedah State Government and has 25 years of experience in the field of quarries and mining in the State of Kedah is confident that it can manage, control and supervise sand quarry operations in the State of Kedah well and ensure the sustainability of this industry.

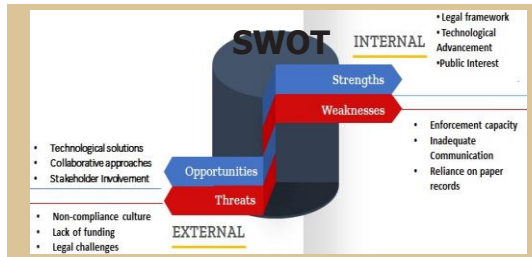


KAWAL PAGAR AUTOMATIK

OPERATOR TUNGGAL PENGURUSAN PASIR KEDAH

METHODS

- Primary : Interview
Secondary : Previous article

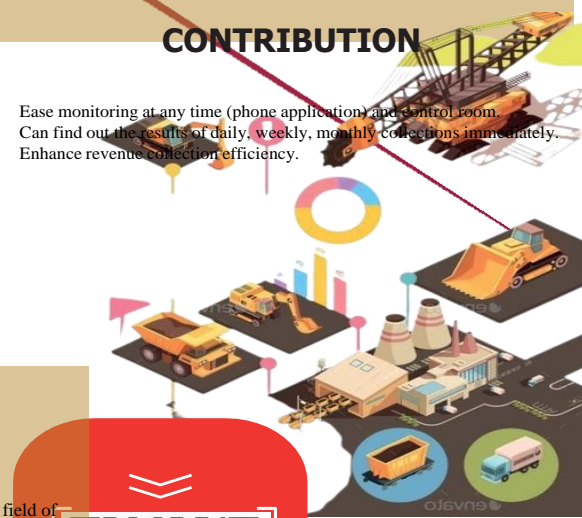


RESULTS

- Ease monitoring at any time (phone application) and control room
- Can find out the results of daily, weekly, monthly collections immediately.
 - Enhance revenue collection efficiency.

CONTRIBUTION

- Ease monitoring at any time (phone application) and control room.
- Can find out the results of daily, weekly, monthly collections immediately.
- Enhance revenue collection efficiency.





SHARI'AH COMPLIANCE RELAXATION & REFRESHMENTS

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Abstract— Physical treatment based on modern and traditional methods has become complementary for society to receive treatment and relaxation worldwide. It has become one of the medical treatments for them to get rehabilitation and recover from injuries. However, the time constraints and difficulties in reaching flexible treatment have become a significant problem to this Shari'ah compliance relaxation and refreshment application in the Google Play Store and Apps Store. Shari'ah compliance relaxation and refreshment designed an application combining five services: dry cupping, acupuncture, massage, physiotherapy, and chiropractic. A survey has been conducted online to determine the market's reliability among potential customers. Therefore, researchers aim to contribute a new application that can serve Halal digital innovation.

Keywords— Physical treatment, Halal application, Digital innovation

I. INTRODUCTION

Nowadays, physical treatment by modern and traditional methods is a popular treatment by society and sports people in reducing their pain or injuries before, during and after working hours or exercises. Combining modern and traditional methods is also considered part of complementary and alternative medicine that can treat disease and maintain a healthy body. Ahmad et al. (2019) stated that most people are increasingly considering alternative therapies for managing chronic conditions because they are optimistic about their efficacy and safety. Good preservation of the body can make people enjoy doing their daily activities. According to Zhang et al. (2022), 60 minutes of receiving treatment like massage, acupuncture or cupping may improve physical condition through the psychology and mental. The different treatments and techniques offered have their advantages that can make users achieve its objective. Therefore, this study proposed a shari'ah compliance application combining services such as dry cupping, acupuncture, massage, physiotherapy and chiropractic to enhance halal digital innovation.

Based on past research, the time constraints and difficulties in reaching flexible treatment have been given full attention among digital application users worldwide (Rowe & Sauls, 2020). This is due to the limitations of accessibility to reach applications that cover several services in treating a customer. The problem addressed has given challenges to people who are interested in assessing injury rehabilitation. The consensus of the problem has provided a solution known as Shari'ah compliance relaxation and refreshment apps that can overcome accessibility issues and simultaneously provide job opportunities for society. According to the data retrieved from the Department of Statistics Malaysia (2023), the unemployment rate in Malaysia was at 3.5%. This situation has unemployed people struggling to sustain their living costs since the economic challenges hit. By having the innovation of this shari'ah compliance application, it may provide benefits and safety to cater to society's needs in consuming the service. Thus, we are sure our product idea is convenient and will be fitted with the future trend to solve the problems and fulfil the demands of targeted customers.

II. METHODOLOGY

A survey will be conducted among targeted customers to analyze the reliability of this shari'ah compliance application in the business world. The survey method enables the evaluation of the target market's perception of the product or service. In this study, a preliminary that consists of 10 questions describing the profile, purchase intention, and features of the product will be distributed to the samples. The questions will be rated by using three Likert scale formats ranging from (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, and (5) strongly agree.

III. RESULTS AND DISCUSSION

TABLE 1. DEMOGRAPHIC PROFILE OF RESPONDENTS

Gender	Frequency	Percentage (%)
Male	23	37.7
Female	38	62.3
Total	61	100

Table 1 shows the demographic profile of respondents in the preliminary study of the shari'ah compliance apps. In this study, males represented 37.7% while females 62.3%. Females are more likely to answer the questions rather than males.

TABLE 2. HOW INTERESTED WOULD YOU CONSUME THIS SERVICE?

Description	Frequency	Percentage (%)
Strongly disagree	1	1.6
Disagree	10	16.4
Neutral	16	26.2
Agree	15	24.6
Strongly Agree	19	31.1
	61	100.0

Table 2 describes the purchase intention of potential customers on the shari'ah compliance application. The result is that 1.6% of people strongly disagree, 16.4 % disagree, 26.2% are neutral, 24.6% agree, and 31.1% strongly agree. This demonstrates that most of the preliminary study's respondents have a good intention to consume this service.

TABLE 3. HOW INNOVATIVE IS THIS APPLICATION?

Description	Frequency	Percentage (%)
Strongly disagree	0	0
Disagree	4	6.6
Neutral	14	23.0
Agree	24	39.3
Strongly Agree	19	31.1
	61	100.0

Table 3 above represents the features of the shari'ah compliance application. 6.6% of respondents disagree, 23% are neutral, 39.3% agree, and 31.1% strongly agree on the innovation of this application. This indicates that respondents perceived the good features represented in this application.

TABLE 4. OVERALL, WHAT IS YOUR REACTION TO DESCRIBE OUR PRODUCT DESIGN?

Description	Frequency	Percentage (%)
Strongly disagree	4	6.6
Disagree	2	3.3
Neutral	12	19.7
Agree	18	29.5
Strongly Agree	25	40.9
	61	100.0

Table 3 demonstrates the overall reaction of respondents toward our potential product design. The result indicates that 6.6 % strongly disagree, 3.3 % disagree, 19.7% neutral, 29.5% agree, and 40.9% strongly agree. This expressed that our product design in a preliminary study perceived by respondents was in good condition.

IV. CONCLUSION

In summary, this shari'ah compliance refreshment and relaxation application shows various benefits for future customers. Therapists' high qualifications, experience and expertise will make users more comfortable and trusted with our service. It also



enables prospective customers to get this service with reasonable safety and privacy in dealing with the therapist chosen. This shows shari'ah compliance application has catered to the needs and reduced the difficulties of customers and jobless issues in Malaysia. Therefore, in maintaining applications in the business world, we will use the entire customer's feedback in the Google/apps store and feedback after the session to upgrade our service every three months.

ACKNOWLEDGEMENT

All team members contributed significantly to preparing and completing this extended abstract.

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HALAL CATCHER

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Abstract

Malaysia halal industry played a vital role in supporting and bolstering the country's economic growth. Although Malaysia is known as the center of the global halal industry, there are still challenges faced by this industry which are lack of awareness and misunderstanding about the halal principles, lack of expertise in certification, lack of cost effectiveness in compliance measures and others. From this issue, this study is intend to generate an innovative idea to develop an application that called as Halal Catcher. This progressive application is designed to increase awareness regarding halal principle in the same time to enhance sustainable halal business through digitalization. Halal Catcher is like an ordinary application but it contains differences in terms of key features and functions that can give benefit to everyone in the market. Besides to raise user awareness of a product's cleanliness and purity among both Muslims and non-Muslim consumers, it is believe that these several innovations towards this product will produce a positive impact on the economy. In order to support and promote the slogan "*Yakini Halal Malaysia*" by Department of Islamic Development Malaysia (JAKIM) with the benefits of the various functions provided, it is believed that this application is able to meet the needs of the market.

Keywords: *Application, Awareness, Halal, Industry, Malaysia,*

1. INTRODUCTION

The term of halal is derived from Arabic word define what is legal and permitted in Islamic Law for example in term of food, drinks, ingredients, actions and others. On the contrary, haram means forbidden and not allowed Islam extends to various aspect of life (Jallad, 2008). The demand of halal product increase tremendously especially in Asian countries like Malaysia and Indonesia (Khan and Haleem, 2016). Halal play an important role in Malaysia due to the predominantly Muslim population in the country. Adding to that, Malaysia has been recognized as a global halal hub (Birruntha, 2023). Various initiatives and infrastructure in place to support the growth of the halal industry. Malaysia also has taken several steps to promote halal awareness for example in term of regulatory framework and education activities. There are two important organization play a vital part to support this effort which are Department of Islamic Development Malaysia (JAKIM) and Halal Development Corporation Berhad (HDC). In order to eradicate halal issue, Malaysian government has put great initiatives developed a structured procedures of halal enforcement.

2. LITERATURE REVIEW

The rapid development of halal industry in Malaysia received a positive response locally and globally (Hamid, 2017). However, there are still challenges faced by halal industry which are lack of awareness and misunderstanding about the halal principles, lack of expertise in certification, lack

of cost effectiveness in compliance measures and others (Elias et.al, 2016). Hamid (2017) highlighted several challenges faced by Malaysian government in developing halal industry which are misunderstanding about halal legislation concept, lack of knowledge about halal certification process, unclear about role of each designated organization involved etc. In addition, there are a lot of offenses related halal certification such as the misuse of halal logo, fake halal certificate, unrecognized halal certificate from foreign organization and others. Hanzala et.al (2021) state that, halal certification is the most critical issues in this industry. This is because a lot of misunderstanding about certification authenticity, inconsistent issue of letters and symbols used on the logo and consumers thrust issue about the process in determining whether a producer uses halal ingredients or not. By using the information obtained from the provision of article through literature review, this study wants to produce an innovation product which is Halal Catcher to increase awareness regarding halal principle and practices, in the same time to enhance sustainable halal business through digitalization.

3. PRODUCT DESCRIPTION

Halal Catcher is a mobile application provides comprehensive details about more than 500 consumer products available on the market. It can also function as a scanner that can be installed in the supermarket designed to save customers time and provide comprehensive product information while shopping. Besides price, this application provides comprehensive product details such as weight, manufacturing and expiration dates, company information, ingredients, and more. In order to prevent fraud, it can also determine the legitimacy of a product's halal logo. It is built using the latest technology, very user friendly and the application instructions are easy to understand and suitable for all ages. Both retail establishments and personal phones can be linked to the system. The participating ministries such as JAKIM can utilize this app to keep an eye on enforcement, particularly in the food and beverage industry. This application also will show the hygiene certificate grade of a facility for the food and beverage business. Hopefully, through this innovation will be able to raise user awareness of a product's cleanliness and purity among both Muslims and non-Muslim consumers.

4. MARKET OVERVIEW

Halal Catcher is an innovative product that focused to increase awareness of a product's cleanliness and purity among users. It provides comprehensive product information, especially in terms of the purity and safety of the ingredients used as well as the authenticity and validity of the product's halal logo to prevent fraud among users. It comes with many new features that will increase the efficiency of the current application in the market. Halal Catcher will also attract many consumer and producer in the market. In order to support and promote the slogan "*Yakini Halal Malaysia*" by JAKIM with the benefits of the various functions provided, it is believed that this application is able to meet the needs of the market. Target market for this product are JAKIM, HDC, retailer, whole seller and consumer.

5. SWOT ANALYSIS

5.1 STRENGTHS

Halal Catcher is an application to help users get detailed information about products in the market when shopping or buying groceries. It also can act as a scanner designed to save customers time to provide comprehensive product information. From the barcode of the product all the details such as price, weight, ingredients, manufacturing and expiration dates, company information, ingredients, and others. It can also determine the legitimacy of a product's halal logo. Besides that, if any hazardous or illegal ingredients are utilized, this app will able to issue a warning to the user.

5.2 WEAKNESS

The display in the application needs to be constantly updated and requires large data usage and a strong internet network. Besides that, the development of this application requires considerable expertise and funds.

5.3 OPPORTUNITY

Our product can collaborate with Department of Islamic Development Malaysia (JAKIM) and Halal Development Corporation Berhad (HDC) others ministry and institutions to market the Halal Catcher application and scanner. Plus, by hiring Malaysia's influencers and artists to promote Halal Catcher. Besides that, this item may potentially draw customers from international markets.

5.4 THREATS

Halal Catcher will difficult to gain loyalty from the customer. Also, there will be a lot of competitors in the future in term of more updated and interesting application. Lack of expert marketers and agents also contribute to this threats.

6. CONCLUSION

All parties must fulfill their responsibilities if the Malaysian halal business is to be strengthened. Consumers must exercise self-initiative to learn more about the halal concept. The implementation of the halal concept in production activities must be taken seriously by producers, who must adhere to all established requirements. Despite the fact that the government must offer a clear framework to aid in the implementation process at all levels and including all parties. There are a number of noteworthy changes, including the improvement of communication and collaboration between agencies and the application of laws by each agency. Besides that, the government can enact several Halal Acts as well as strengthen a special commission appointed to monitor and regulate all matters related to halal in order to sustain the Malaysian halal industry's growth and development.

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PEMERKASAAN PROFESIONAL KOMUNIKATOR MELALUI UJIAN META-PSIKOMETRIK, SISTEM PENGURUSAN DIRI BERKESAN (ESMS)

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Nurul Nisha Binti Mohd Shah*

Abstract

(Times New Roman 10, Justify, 250-300 words)

Keywords: Professional communicator, self-management, training, ASSURE Model

1. INTRODUCTION (headlines: Times New Roman Bold, 12pt)

In conjunction with the iCEBIV theme, authors are requested to submit an extended abstract not exceeding four (5) pages in English.

The extended abstract must include the title, author(s) introduction, material and methods, results and discussion, conclusion and references. The manuscript should be prepared with single spacing using size 12 Times New Roman font. All illustrations must be prepared inside of the main text.

2. MATERIALS AND METHODS (headlines: Times New Roman, Bold, 12pt)

The methodology must be clearly stated and described in sufficient detail or with sufficient references.

3. RESULTS AND DISCUSSION (headlines: Times New Roman Bold, 12pt)

The findings and arguments of the work should be explicitly described and illustrated. Supporting figures, tables and images should be included accordingly.

All the tables, images and figures should be centered. Figures and images should be numbered and figure headers should be placed under the figure or image; as for the tables, they should also be numbered and the table header should be placed at the top. References (if any) of the tables, figures and images should be presented right under the tables, figures and images in the form of author surname and publication date.



4. USING THE TEMPLATE FOR SEVERAL COMPONENTS (headlines: Times New Roman, Bold, 12pt)

4.1 Equations

Equations should be centered and numbered consecutively, as in Eq. [1]. An alternative method is given in Eq. [2] for long sets of equations where only one referencing equation number is wanted. (1 line spacing here)

$$n^2 + 2n + 1 = (n+1)^2 \quad [1]$$

$$F((A \oplus b), c, D) \oplus (23 \oplus) \oplus 3 \oplus i \oplus (A \oplus b \oplus D \oplus c)$$

(1 line spacing here) where,

$$A \oplus \oplus E_{11} E_{12} + E_{21} + E_{22} \oplus \oplus \quad [2]$$

$$\oplus \oplus \oplus E_{12} E_{13} + E_{22} + E_{23} \oplus \oplus$$

4.2 List

Lists can be provided using either numbers or bullets:

- i. List item 1 like this;
- ii. List item 2 is an example of a longer list item that wraps to a second line, where the second line is indented.

The example for bulleted items like this:

- List item 1;
- List item 2.

4.3 Tables and figures

Tables and figures should appear in one column of a page and be numbered consecutively. Figures and texts may appear on the same page, and a centered caption should appear directly beneath the figure. It is preferable that figures be mounted in portrait style and figure captions are no longer than two lines. On figures showing graphs, both axes must be clearly labeled (including units if applicable).

Tables should be designed to have a uniform style throughout the paper, following the style shown in Table 1. Table captions should be in 10pt “Time News Roman” bold, centered, and the texts in Table should be set in 9pt “Time News Roman” font.

Table 1. Caption heading for a table should be placed at the top of the table and within table width. (Use “time news roman” font, size 10pt, No spacing after table title)

	A	B	C	D
A	Aa	Ab	Ac	Ad
B	Ba	Bb	Bc	Bd
C	Ca	Cb	Cc	Cd

D	Da	Db	Dc	Dd
E	Ea	Eb	Ec	Ed

Authors are advised to prepare their figures in either black and white or color. Please prepare the figures in high resolution (300 dpi) for half-tone illustrations or images. Pictures must be sharp enough otherwise they will be rejected. Figures must be originals, computer-generated or drafted, and placed within the text area where they are discussed. Figure 1 shows one example. Figure captions should be in 10pt “Time News Roman” font, bold, centered. When applicable, the texts in graphs, illustrations or images should be set in 8pt “Time News Roman” font.

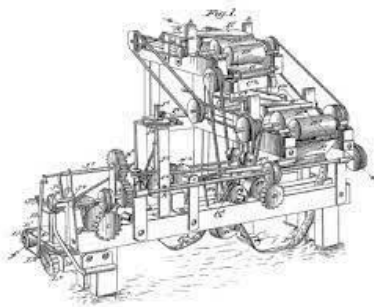


Figure 1. The caption heading for a figure should be placed below the figure and within figure/illustration width. (Use “Time News Roman” font, size 10pt, no spacing between title and figure)

4.4 Footnotes

Footnotes are denoted by a character superscript in the text ¹.

4.5 Units

Use either SI (MKS) as primary units. English or CGS units may be used as secondary units (in parentheses). Avoid combining SI and CGS units. This often leads to confusion because equations do not balance dimensionally. If you must use mixed units, clearly state the units for each quantity that you use in an equation. Do not mix complete spellings and abbreviations of units. Spell out units when they appear in text.

5. CONCLUSION (headlines: Times New Roman Bold, 12pt)

Conclusions should include (1) the principles and generalisations inferred from the results, (2) any exceptions to, or problems with these principles and generalisations, (3) theoretical and/or practical implications of the work, and (5) conclusions drawn and recommendations.

6. ACKNOWLEDGMENT (headlines: Times New Roman Bold, 12pt)

The authors would like to express appreciation for the support of the sponsors [Project Number = XXXXXXXX].

7. REFERENCES (headlines: Times New Roman Bold, 12pt)

References should be listed arranged in alphabetical order beginning with the author’s names and initials, followed by the year of publication, title of periodical, volume and page. Example:

¹ Just like this one.



Derwing, T. M., Rossiter, M. J., & Munro, M. J. (2002). Teaching native speakers to listen to foreign-accented speech. *Journal of Multilingual and Multicultural Development*, 23(4),245-259

In the text, references should be cited with the name of the author(s) with the year of publication in parenthesis, e.g., Philip (1957), Taylor and Baker (1986), Smith et al. (1987).