ICEBIV

3rd International Competition of Entrepreneurship Business Innovation

" Promoting Innovative Entrepreneurship for a Sustainable Economy: Pioneering Tomorrow's Business Models"

EXTENDED ABSTRACT

UNIVERSITAS ISLAM BANDUNG UNIVERSITY

25 TAHUN 1999-2024
UiTM SEBUAH UNIVERSITI

UNIVERSITI TEKNOLOGI MARA

UiTM di hatiku

اوسها، تقوى، موليا

EXTENDED ABSTRACT

ICEBIV

3rd International Competition of Entrepreneurship Business Innovation

" Promoting Innovative Entrepreneurship for a Sustainable Economy: Pioneering Tomorrow's Business Models"

5th September 2024

In the joint collaboration involving:

Faculty of Business and Management,
Universiti Teknologi MARA Kedah Branch,

Faculty of Economics and Business,
Universitas Islam Bandung, and

Malaysian Academy of SME &
Entrepreneurship Development (MASMED)

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِيْمِ

Assalammu'alaikum Warahmatullahi Wabarakatuh.. Salam UiTM Dihatiku..

It is with immense pride and enthusiasm that I welcome you to the 3rd International Competition of Entrepreneurship Business Innovation (iCEBIV) 2024, hosted by the Faculty of Business and Management, UiTM Kedah Branch. This prestigious event is organized in collaboration with the Malaysian Academy of SME & Entrepreneurship Development (MASMED) and the Faculty of Economic and Business, Universitas Islam Bandung (UNISBA), Indonesia. This competition exemplifies our deep commitment to advancing creativity, entrepreneurship, and a spirit of innovation among our students and the wider community.

In today's rapidly evolving world, the ability to innovate has become a fundamental necessity rather than a mere option. Our institution understands the critical importance of innovative thinking in propelling economic growth, addressing urgent societal challenges, and paving the way for a sustainable future. This competition is designed to encourage participants to think critically, challenge conventional ideas, and develop groundbreaking solutions that can leave a meaningful impact in various areas.

This competition is not merely a challenge; it is a valuable platform for learning, collaborating and exchanging ideas. It brings together talented individuals from diverse disciplines, fostering an innovative culture that extends beyond academic boundaries. We encourage our students to apply their knowledge, channel their creativity, and turn their ideas into actionable business solutions.

As the Rector of UiTM Kedah Branch, I am deeply committed to supporting initiatives that help students reach their full potential. This competition provides them with a unique opportunity to showcase their abilities, gain critical experience, and establish networking that will be instrumental in their future careers. I am confident that the skills and insights gained from this experience will empower them to excel in an increasingly competitive and dynamic global landscape.

I would like to extend my heartfelt thanks to everyone who has contributed to the success of this event, including our dedicated faculty and staff, esteemed judges, sponsors, and partners. Your unwavering support and commitment have been integral to the successful realization of this initiative.

To all participants, I urge you to approach this competition with passion, creativity, and determination. This is your moment to shine, to challenge the limits of what is possible, and to create a lasting impact. Regardless of the outcome, your participation itself is a significant achievement, demonstrating your commitment to innovation and excellence.

Let us come together to make this competition a celebration of ideas, creativity, and the entrepreneurial spirit that embodies UiTM and UNISBA. I wish you all the best in your endeavours.

With warmest regards,

Profesor Dr Roshima Haji Said
Rector
Universiti Teknologi MARA (UiTM) Kedah Branch

Bismillaahirrahmaanirrahiim

Assalamu'alaikum Warahmatullahi Wabarakatuh

Every participant in the third International Competition of Entrepreneurship Business Innovation (ICEBIV) 2024 deserve my heartfelt congratulations and warmest regards. I extend these to the organizing committee and every one of them. This initiative is a demonstration of the productive collaboration that exists between universities in the ASEAN region. Maintaining a positive relationship between the two institutions, UNISBA and UiTM, will result in the production of academic programs and community service works that are both productive and innovative. In future collaboration, the implementation of this program is something that Universitas Islam Bandung (UNISBA) is strongly advocating for.

Universitas Islam Bandung (UNISBA) has reaffirmed its commitment to the internationalization program and has stated that it will continue offering assistance for various initiatives. It has been beneficial for the university to gain experience by participating in this program. The big ideas instilled in iCEBIV 2024 are thriving.

They will be ensured by the presence of entrepreneurs who have a global perspective and positively impact the surrounding community. Being an Islamic university, UNISBA, is obligated to establish a halal business ecosystem on a global scale by addressing contemporary issues such as the idea of innovation for sustainable business. This obligation is a requirement of the university. In light of this, the electronic proceedings that have been presented will prove to be advantageous for the development of scientific research and technological innovation. For their insightful and enthusiastic efforts in the successful implementation of the Memorandum of Agreement (MoA) between the two institutions, we would like to express our deepest gratitude to the Faculty of Economics and Business at UNISBA, the Malaysian Academy of Small and Medium Enterprise and Entrepreneurship Development (MASMED), and the Faculty of Business and Management at Universiti Teknologi Mara (UiTM) Kedah Branch. To be more specific, this partnership will result in many innovations, particularly in entrepreneurship, which is becoming an increasingly desirable occupation for the younger generation. When it comes to better understanding the global needs and challenges of today, international cooperation is evolving into an increasingly necessary requirement. Allah blesses the constructive actions that are being taken to generate benefits for society and universities. May Allah continue to bless these actions and our international collaboration for giving beneficial for our society and for the future.

Wassalamu'alaikum Warahmatullahi Wabarakatuh.

Warmest regard,

Prof. Dr. H. Edi Setiadi, S.H., M.H.
Rector Universitas Islam Bandung

بِسْمِ اللهِ الرَّحْمَنِ الرَّحِيمِ

Assalamu'alaikum Warahmatullahi Wabarakatuh

Alhamdulillah, under the grace and mercy of Allah Subhanahu Wata'ala, for this extraordinary occasion of the 3rd International Competition of Entrepreneurship Business Innovation (ICEBIV) 2024. This event is a testament to the strong bond between two great institutions which are Universiti Teknologi MARA (UiTM) and Universitas Islam Bandung (UNISBA). I am proud that our Faculty of Business and Management and MASMED have played a crucial role in bringing this collaboration to life.

I would like to express my heartfelt appreciation to everyone involved in making this event a reality. The 3rd ICEBIV 2024 is more than just a competition. It's a unique platform where we come together to celebrate creativity, unleash potential, and explore business ideas that have the power to impact our communities positively. It's inspiring to see so many bright minds gathered here today and ready to make a difference.

This year's competition offers three key categories namely Business Model Canvas Battle, Business Idea Battle, and Business Plan Battle. Each of these categories will serve as an invaluable platform for participants to validate their business ideas before turning them into successful ventures in the future.

These battles are not just about competition but about providing you with the feedback, guidance, and confidence to take your innovative ideas to the next level.

The theme of this year's competition, "Promoting Innovative Entrepreneurship for a Sustainable Economy: Pioneering Tomorrow's Business Model," resonates deeply with our mission. We live in a time where innovation and entrepreneurship are key to building a resilient and sustainable future. This competition is our way of nurturing that entrepreneurial spirit, encouraging you to think creatively and develop solutions that are not just innovative but also relevant to the challenges we face today.

To all the participants, I wish you a truly rewarding experience. Remember, every great idea starts with the courage to think differently and the willingness to take risks. Don't be afraid to dream big and this competition is your opportunity to do that. I hope you leave here with not just memories but valuable lessons that will guide you in your future endeavors.

As we look forward to the future, I sincerely hope that this won't be our last gathering. I'm already excited about the possibility of organizing the 4th ICEBIV next year. Let's keep this momentum going and continue to strengthen our collaboration in promoting entrepreneurship on a global scale.

Wassalamu'alaikum Warahmatullahi Wabarakatuh.

With Warmest Regard

Dr. Junaidah Ismail
Deputy Rector of Academic Affairs
UiTM Kedah Branch

بِسْمِ اللهِ الرَّحْمَنِ الرَّحِيمِ

Assalamu'alaikum Warahmatullahi Wabarakatuh,

Dear respected Rector of Universitas Islam Bandung (UNISBA), esteemed Rector of Universiti Teknologi MARA (UiTM), distinguished lecturers, talented competition participants, and ladies and gentlemen.

First, let us thank Allah Subhanahu Wata'ala, because by His grace and mercy, we can all gather in this prestigious event, the 3rd International Competition of Entrepreneurship Business Innovation (ICEBIV) 2024. This event is one of the collaborations between two educational institutions strongly committed to building an innovative and globally competitive young generation, the Faculty of Economics and Business of Universitas Islam Bandung and Universiti Teknologi Mara (UiTM).

On this occasion, I express my highest appreciation to all the committees and parties involved in organizing this event. The 3rd ICEBIV 2024 is not just a competition but also an extraordinary platform to develop potential, explore creativity, and explore business ideas that can positively impact society, especially students and professionals.

We are all aware that innovation and entrepreneurship are crucial to building a resilient and sustainable economy in this era of globalization. Therefore, this competition has a crucial role in fostering the spirit of entrepreneurship among students and professionals while encouraging the creation of business solutions that are creative, innovative, and relevant to the needs of the times.

To the participants, I wish you enjoy and happiness by participating in this competition. Do not be afraid to dream big and take risks when developing your ideas. Remember that every great innovation always starts with the courage to think outside the box and take the first step. Hopefully, through the 3rd ICEBIV 2024 competition, all of you can gain valuable experience that will help you in your future career journey.

Finally, I hope the 3rd ICEBIV 2024 can run successfully and benefit all participants and institutions involved. Let us make this event a momentum to strengthen the cooperation between FEB Unisba and UiTM and advance the world of entrepreneurship internationally.

Allow me to provide a "pantun" to encourage the organizers and participants of the 3rd ICEBIV 2024, which characterizes literature and culture in Indonesia.

Jalan jalan ke Semanggi
Jangan lupa membeli batik bermotif
Ayo mahasiswa ramaikan ICEBIV bergengsi
Dikancah internasional dengan penuh ide inovatif

Wassalamu'alaikum Warahmatullahi Wabarakatuh

Sincerely,

Prof. Dr. Nunung Nurhayati, SE., M.Si., Ak., CA.
Dean Faculty of Economic and Business
Bandung Islamic University, Indonesia

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The editorial board would like to express their heartfelt appreciation for the
contributions made by the authors, co-authors and all who were involved in
the publication of this e-proceedings.

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3rd International Competition of Entrepreneurship Business Innovation (iCEBIV) 2024

KURUMA: MAKING CAR WASH GREAT

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Abstract

A mobile application called KURUMA brings together several vehicle wash service providers into a single, easily navigable platform, thereby revolutionizing the car wash sector. Convenience and efficiency are critical in today's hectic environment, and KURUMA meets these needs by providing car owners with an easy-to-use platform for finding, scheduling, and paying for car wash services. The need for car wash services expands along with urbanization and the number of vehicles on the road, yet the sector is still fragmented and inefficient. By offering a complete solution that benefits both customers and car wash businesses, KURUMA seeks to close this gap. By integrating with services like Stripe and PayPal, the app will use state-of-the-art technology to provide strong search and filter capabilities, real-time availability updates, and safe payment alternatives. Moreover, KURUMA will make use of the Twilio API for prompt email and SMS notifications as well as the Google Maps API for location-based services. KURUMA will provide car wash operators with better visibility, client engagement, and tools for effective booking and payment management. By removing the effort of searching for and scheduling vehicle wash services, KURUMA will improve customer happiness through a seamless experience that is designed with the user in mind. Operators of car washes will profit from improved consumer feedback and streamlined processes, which will allow for ongoing service enhancement. With prospective growth opportunities such as loyalty programmes, membership programmes, and alliances with auto repair companies, KURUMA is well-positioned to establish new benchmarks in the car wash sector. KURUMA wants to become the preferred platform for car wash services by fixing the present inefficiencies and fragmentation and providing an excellent and effective experience for all parties involved.

Keywords: *car wash industry, mobile app, service aggregation*

1. INTRODUCTION

The value of efficiency and convenience in today's hectic environment cannot be overstated. These elements are now vital success criteria in many industries, changing how companies run and engage with their clientele. Despite being a necessary service in our more urbanized lives, the car wash industry has not completely taken advantage of these drivers (Kumar, 2018; Pratama & Andesta, 2023). This offers a chance for innovation and expansion as well as a challenge.

The trend of more people moving from rural to urban regions, or urbanization, has been happening at a rate that has never been seen before. The United Nations projects that by 2050, 68% of the world's population - up from 55% now - will reside in urban regions (Desa, 2014). As a result of this change, there are also more cars on the road because living in cities generally requires personal transportation. Hence, there is an increasing need for car maintenance services, especially car washes. In addition to being a matter of pride and aesthetic appeal, keeping an automobile clean is crucial to preserving its condition and resale value.

There is still a lot of fragmentation in the car wash sector even with the increased demand (Jardine, Gardner & Trautrims, 2021). In contrast to more concentrated industries where big businesses rule, the car wash industry is made up of a significant number of small and medium-sized operators. For a variety of reasons, these operators frequently find it difficult to realize their full business potential.

First of all, a lot of car wash businesses depend on tried-and-true strategies like physical signs, word-of-mouth, and regional ads to draw in clients. These techniques have inherent limitations in terms of their breadth and reach, even though they can be somewhat effective. In the current digital era, where people are increasingly relying on online platforms to get information and services, not having a good online presence can cost you a sizable clientele.

Second, the fragmentation of the market is increased by the lack of a centralized mechanism for scheduling car wash services. Usually, car owners have to manually search for local car washes, call to check on availability, or just show up and hope for the best. Inefficiencies, protracted wait periods, and uneven service experiences are the outcome of this unstreamlined reservation procedure. These little annoyances can be a big turnoff for city people who lead hectic lives, making them put off washing their cars or choose less successful do-it-yourself solutions.

Moreover, small and medium-sized car wash companies frequently lack the funding necessary to engage in cutting-edge equipment and marketing plans that may improve their customer base and operational effectiveness. Independent operators may face challenges with limited funds and technological know-how, in contrast to huge chains that can afford sophisticated booking systems, customer relationship management software, and intensive marketing campaigns.

The customer experience is also impacted by the car wash industry's fragmentation. Customers are left in the dark about the quality and dependability of the service they may receive in the absence of a standardized system for ranking and assessing car wash services.

This ambiguity may cause discontent and make people reluctant to try out new or unknown car wash services.

The competitive pressures from rising trends like automated vehicle wash equipment and mobile car wash services exacerbate the issues the fragmented car wash sector faces. Although these technologies are efficient and convenient, they also show how traditional car wash operators must change and adapt.

Adopting a customer-centric strategy and incorporating technology are necessary to address these difficulties. Car wash companies may improve client satisfaction, increase visibility, and streamline operations by utilizing digital platforms (Barreto & Góngora, 2015; Sergeevna, Alexandrovich, Alexandrovich, & Anatolyevich, 2023). To make it simpler for drivers to locate and reserve high-quality services, a mobile app that compiles car wash providers, for example, may provide a centralized booking system, real-time availability updates, and user ratings. Additionally, by giving car wash owners the means to handle reservations, take payments, and analyze client feedback, such a platform might empower them.

2. MATERIALS AND METHODS

Our smartphone app, "KURUMA," is a work in progress that aims to transform the car wash experience by facilitating communication between vehicle owners and a network of car wash providers via an intuitive interface. KURUMA intends to improve customer satisfaction and increase revenue for car wash operators by streamlining the process of locating, scheduling, and paying for car wash services through the use of technology.

2.1 Materials

For the user interface design, we will utilize tools such as Figma and Sketch, which will be essential for creating wireframes, mockups, and prototypes. These tools will enable us to visualize the app's user interface (UI) and user experience (UX) effectively. Adobe XD will also be employed as an alternative for UI/UX design, allowing for the creation of interactive prototypes that will facilitate user interaction and feedback.

In the development phase, we will leverage several platforms. Android Studio, the official Integrated Development Environment (IDE) for Android app development, will support our work with Kotlin and Java programming languages. For iOS development, Xcode will serve as the official IDE, utilizing Swift and Objective-C. To ensure cross-platform development, we will employ React Native, a framework that will allow for building native apps using React.

Our backend infrastructure will be primarily supported by Firebase, which will provide a real-time database, authentication, cloud storage, and analytics. This will make it suitable for managing user data and app functionalities. Additionally, Amazon Web Services (AWS) will offer scalable cloud computing

services, which will be crucial for hosting the app's backend, managing databases, and handling serverless functions.

For integrations, we will use several application programming interfaces (APIs). The Google Maps API will facilitate location services, allowing users to find nearby car wash services easily. We will incorporate payment gateways like Stripe and PayPal to ensure secure and seamless in-app transactions. To manage communications, we will utilize the Twilio API for sending booking confirmations and notifications via SMS and email.

Testing tools will be vital to ensure the app's reliability and performance. JUnit will be used for unit testing in Java, while XCTest will be employed for unit testing in Swift. Selenium will be instrumental in automated UI testing, ensuring the app functions correctly across different browsers and devices.

2.2 Methods

The first step in our process will be requirement analysis and planning. We will conduct surveys and interviews with car wash owners and potential users to gather requirements, analyzing the data to identify key features and functionalities needed for the app. This phase will culminate in a detailed project plan outlining milestones, timelines, and necessary resources.

During the design phase, we will use Figma or Sketch to create wireframes and mockups of the app's UI. Usability testing with a small group of users will help refine the design, ensuring it meets user needs. We will then create interactive prototypes using Adobe XD to simulate the user experience, providing a clear vision of the final product.

In the development phase, frontend development will be carried out using React Native to ensure cross-platform functionality. We will implement UI components and integrate them with backend services. For backend development, we will set up infrastructure using Firebase for real-time databases and user authentication, and AWS to host the backend, ensuring scalability and reliability. We will develop APIs to handle data exchange between the frontend and backend, integrate Google Maps API for location services, implement payment gateways like Stripe and PayPal for secure transactions, and use Twilio API for SMS and email notifications.

The testing phase will involve several layers of testing to ensure robustness. Unit tests will be written and executed using JUnit and XCTest to validate individual components. Integration testing will ensure seamless operation of different modules like UI with backend and payment gateways. User Acceptance Testing (UAT) will be conducted with a group of beta users to identify usability issues and gather feedback. Automated testing with Selenium will ensure the app's UI performs consistently across devices and browsers.

Deployment and maintenance will follow thorough testing. The app will be deployed to Google Play Store and Apple App Store. Performance will be

monitored using analytics tools from Firebase and AWS, and user feedback will be collected continuously to release regular updates, fix bugs, improve performance, and add new features.

Finally, marketing and promotion will be crucial for the app's success. We will develop a marketing strategy to promote the app through social media, online advertisements, and partnerships with car wash businesses. Promotional discounts and incentives will be offered to attract initial users and build a loyal customer base.

3. RESULTS AND DISCUSSION

The notion behind KURUMA originated from the realization that conventional approaches to finding and utilizing car wash services are frequently laborious and time-consuming. Car owners usually rely on suggestions from other drivers or conduct manual searches to find car wash locations, which may not always yield the greatest or most convenient possibilities (Anuroop, Varshith, Hemanth, Gitesh & Patel, 2023). Furthermore, clients frequently experience ambiguity regarding availability and service quality due to the lack of a centralized booking system. By providing a centralized platform that brings together different car wash companies, KURUMA solves these problems by letting customers easily compare services, read reviews, and make well-informed decisions.

The extensive search and filter capabilities of KURUMA, which enables customers to find vehicle wash providers based on particular parameters like location, service type, pricing range, and user ratings, is one of its key advantages. This guarantees that automobile owners can swiftly and effectively locate the ideal fit for their requirements. The app will also provide real-time availability updates and booking alternatives, saving users from having to deal with erratic service timings or lengthy lines.

Additionally, KURUMA wants to help car wash businesses by giving them a specialized platform on which to market their business, take care of reservations, and easily accept payments. Car wash operators may join KURUMA to get more exposure, draw in more clients, and streamline their business processes with an integrated booking and payment system. Small and medium-sized car wash businesses who do not have the funds to spend in specialized marketing and technical solutions can especially benefit from having a digital presence.

Additionally, the app will have a customer feedback feature that lets users review and rate their experiences. This feature helps car wash businesses to continuously enhance their offers by providing vital insights and upholding high service standards. With the help of KURUMA's rating and review system, operators will be incentivized to provide superior services in order to draw in and keep clients in a competitive market.

Figure 1. Concept of the KURUMA mobile application

4. CONCLUSION

To summarize, KURUMA is poised to revolutionize the car wash sector by effectively tackling the enduring issues of disarray and inefficiency. The app is going to greatly improve car owners' convenience and satisfaction by combining a wide variety of car wash services into one easy-to-use platform. Car wash service search and booking will be made easier for users with an easy-to-use interface, real-time service availability, and safe payment choices. Conversely, car wash businesses will benefit from enhanced client reach and exposure as well as capabilities for managing reservations, accepting payments, and getting insightful feedback. KURUMA is positioned to play a key role in transforming the vehicle wash experience because of these advantages.

In the future, KURUMA may add other features, such loyalty programmes, membership programmes, and alliances with vehicle repair shops, all of which would improve its value offer. These improvements will increase the number of users and encourage recurring business. In order to achieve operational excellence and customer happiness in the car wash sector, KURUMA will continuously adjust to the needs and preferences of both users and service providers. In the end, KURUMA wants to establish itself as the go-to platform for car wash services by providing a flawless, effective, and exceptional car wash experience that satisfies the changing needs of the fast-paced world of today.

5. ACKNOWLEDGMENT

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