International Teaching Aid
Competition 2023

Reconnoitering Innovative Ideas in Postnormal Times

iTAC 2023

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INTERNATIONAL TEACHING AID COMPETITION
E-PROCEEDINGS

PREFACE

iTAC or International Teaching Aid Competition 2023 was a venue for academicians, researchers, industries, junior and young inventors to showcase their innovative ideas not only in the teaching and learning sphere but also in other numerous disciplines of study. This competition was organised by the Special Interest Group, Public Interest Centre of Excellence (SIG PICE) UiTM Kedah Branch, Malaysia. Its main aim was to promote the production of innovative ideas among academicians, students and also the public at large.

In accordance with the theme "Reconnoitering Innovative Ideas in Post-normal Times", the development of novel ideas from the perspectives of interdisciplinary innovations is more compelling today, especially in the post-covid 19 times. Post-pandemic initiatives are the most relevant in the current world to adapt to new ways of doing things and all these surely require networking and collaboration. Rising to the occasion, iTAC 2023 has managed to attract more than 267 participations for all categories. The staggering number of submissions has proven the relevance of this competition to the academic world and beyond in urging the culture of innovating ideas.

iTAC 2023 committee would like to thank all creative participants for showcasing their innovative ideas with us. As expected in any competition, there will be those who win and those who lose. Congratulations to all the award recipients (Diamond, Gold, Silver and Bronze) for their winning entries. Those who did not make the cut this year can always improve and join us again later.

It is hoped that iTAC 2023 has been a worthy platform for all participating innovators who have shown ingenious efforts in their products and ideas. This compilation of extended abstracts published as iTAC 2023 E-Proceedings contains insights into what current researchers, both experienced and novice, find important and relevant in the post-normal times.

Best regards,

iTAC 2023 Committee
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UniMAIL MOBILE APPLICATION

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ABSTRACT

UniMAIL Mobile App is a product developed with the aim of enhancing the customer experience in tracking parcels, making payments, and reserving lockers for UniMAIL Hub situated in UiTM Cawangan Kedah. The development of UniMAIL Mobile App aligns with the growing trend of mobile app usage among consumers, as consumers downloaded over 31 billion apps worldwide and spent over \$32 billion on in-app purchases in Q1 of 2021 (App Annie, 2021). Mobile apps have become crucial for businesses to engage with customers and remain competitive. Pitney Bowes' survey conducted in 2017 found that 97% of consumers want to track their packages in real-time, 70% consider package tracking a critical factor when choosing a retailer, and 47% prefer to track packages using a mobile app. Offering a mobile app for parcel tracking and related services is, therefore, a key factor in providing a positive customer experience and differentiating a parcel hub from its competitors. It can also increase customer loyalty and satisfaction while streamlining operations for the parcel hub. UniMAIL's transition from manual workflow to a digital system will make business operations more efficient. By downloading the app, students can track their parcel delivery status. Through the "Pay Now & Collect Later" concept, customers can make payment via the app, either through

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online banking or a QR code, before collecting their parcel at the hub. Additionally, customers can reserve lockers to collect parcels after UniMAIL operation hours, providing them with 24/7 access to their packages. This ensures that customers have a seamless buying experience, allowing them to avoid long queues at the hub. UniMAIL also provides group locker reservations for customers to share costs and experiences, with each locker able to accommodate up to five parcel packages, depending on the parcel size. The intelligent locker system aims to exceed customer expectations, ensuring that they keep coming back for more. Developers will use cross-platform app development tools like React Native and Xamarin to create mobile apps that can run on multiple platforms such as iOS and Android. By writing code once, developers can deploy the app across multiple platforms, saving time and effort compared to creating separate apps for each platform. In conclusion, UniMAIL's mobile app contributes to increased efficiency, improved customer satisfaction, cost savings, and competitive advantage. The app provides students with a good customer experience in checking their parcel location, locker reservation, and making online payments for the parcel fee.

Keyword: uniMAIL, mobile application, parcel tracking, customer experience

INTRODUCTION

Innovation is a process that involves the development and implementation of new ideas, products or procedures that provide added value to individuals or organizations, and involves the conversion of imaginative concepts into tangible results with economic or social value. Innovation can be produced in many forms, such as technological, organizational and social innovation. According to the The Organisation for Economic Co-operation and Development OECD (2019), innovation includes the implementation of new or significantly improved products or processes, new marketing methods or new organizational methods in business practices, workplace organization or external relations. Innovation is important for economic growth and development because it increases productivity and competitiveness, and it also plays a key role in addressing societal concerns such as climate change, healthcare and education.

Innovation is crucial for company survival and to remain competitive for long term period especially for courier service provider. As the world becomes increasingly digital and technology-driven, courier companies must adopt innovative strategies and technologies to remain competitive and provide better services to customers. According to a report by Grand View Research (2020), the global courier, express, and parcel market is expected to grow at a CAGR of 6.7% from 2020 to 2027. This growth is largely driven by the increasing adoption of e-commerce and the rising demand for faster and more efficient delivery services. To meet these demands, courier companies are turning to innovation in various forms, including the use of advanced technologies such as drones, robotics, and automation, as well as improving last-mile delivery and customer experience through real-time tracking and personalized delivery options. A study published by Kim and Lee (2016) found that innovation positively affects the

performance of courier companies, particularly in terms of customer satisfaction and operational efficiency.

At UniMAIL, innovation is taken into consideration in order to serve it's customer better. A trending mobile apps technology is used by UniMAIL to enable faster and reliable parcel distribution service. Mobile applications are the best part that has come into use and continuous advancements since the advent of smartphones. Applications have made life easiest, always there to save time, effort and dependencies. UniMAIL Mobile Apps is an easy-to-use system developed by UniMAIL to enhance customer experience in tracking parcels, making payments, and reserving lockers. Customers can simply download the mobile app to track their parcel delivery status. With the concept of 'Pay Now & Collect Later', customers have the option to make payment via the app, either through online banking or a QR code, before collecting their parcel at the hub. Additionally, customers can reserve lockers to collect parcels outside of our operation hours, providing them with 24/7 access to their packages. This offers customers a seamless buying experience, allowing them to avoid long queues at the hub. We also provide group locker reservations for customers to share costs and experiences, with each locker able to accommodate up to five parcel packages, depending on the parcel size. Our intelligent locker system aims to exceed customer expectations, ensuring that they keep coming back for more.

OBJECTIVES

1. To streamline the UniMAIL parcel collection and distribution service.
2. To enhance communication between UniMAIL and the customers
3. To increase customer satisfaction.

PROBLEM STATEMENT

Unimail Hub is our physical parcel collection center, which is located in the HEP Building of UiTM Kedah and serves as the main hub for receiving and distributing parcels to students and staff. The previous method of delivery often results in parcels being sent to the wrong college, causing inconvenience for students. With a strong commitment to finding a solution, UniMAIL was created with the help of MASMED, based on effectuation principles. Today, UniMAIL is the main hub for parcel distribution, serving the UiTM Kedah community. By targeting the niche markets of staff and students, UniMAIL aims to build a strong customer base and deliver a seamless parcel delivery experience.

CONCEPT AND APPROACH

UniMAIL Mobile App

An integrated parcel information management system used by UniMAIL benefits customers by providing fast-tracking information and convenient locker services. Developers will use cross-platform app development tools like React Native and Xamarin to create mobile apps that can run on multiple platforms such as iOS and Android. By writing code once, developers can deploy the app across multiple platforms, saving time and effort compared to creating separate apps for each platform. There are four types of services provided in the UniMAIL Mobile App, which are hub, locker, online banking, and trainee. Every parcel that arrives at the UniMAIL hub will generate a reference code, and it is different for every parcel. Based on this uniqueness, the system will automatically detect the location of the parcel at the hub when customers scan it during the collection period. Customers can choose whether they want to pick up or put the parcel in the provided locker. Our daily received parcel rate is quite high, so it is very important to make sure that we have good system management to organize all the parcels. UniMAIL Mobile App also connects customers. When consumers communicate their issues by email, phone, social media, or chatbot, we must reply to inquiries instantly and give accurate information, thoroughly resolving the issue. We believe this would be an effective tool to enhance our engagement with customers.

App users are an important key element in an organization. The idea of "giving back something" provides a powerful impact on the customers and can create networking with them. For instance, we offer 10 points for every RM1.00 spent, voucher redemption for free locker service for the first user, and exclusive loyalty. In essence, this will make them repeatedly use the app to pick up their parcels. The app provides convenience, and customers can track the parcel status without having to go to the UniMAIL hub. With the innovation of the lockers, customers have the opportunity to pick up their parcels at any time. It will simplify the process and give an advantage to both the customer and the management of UniMAIL.

UniMAIL Locker

Additionally, UniMAIL provides a locker service to students as an additional feature in the mobile application. This service features a premium-quality stainless steel locker equipped with state-of-the-art technology that provides a simple and secure locking mechanism for storage, ensuring the utmost security for parcels stored inside. The locker is integrated with an electronic system that allows for the automation of parcel collection and distribution. To ensure maximum security, different pin codes are generated each time the locker is reserved. Customers can effortlessly enter their pin codes to open the locker. This service is not only intended for customers who wish to pick up parcels after operating hours but also for those who seek to safeguard high-value parcels.

COMMERCIALIZATION

UniMAIL current commercialization plan involves collaborating with the UiTM Kedah Infostructure Department to develop and host the UniMAIL app on the UiTM server. The app is targeted towards other UiTM branches providing similar services to their students. The app will also be available for rental at competitive pricing plans tailored for businesses in the parcel industry, starting with an introductory offer of RM119 per month. In the future, UniMAIL plan to expand it's reach by marketing the UniMAIL app to courier market players and making it available on popular App Stores such as Google Play. By leveraging the UiTM infrastructure and partnering with other institutions, we believe that the UniMAIL app has great potential for growth and success in the market.

CONCLUSION

In conclusion, UniMAIL surpasses the mere concept of parcel hubs; it is purposefully crafted to aid students in diverse aspects. By amalgamating a digital system with a brick-and-mortar establishment, our objective is to build a robust commercial model and cultivate enduring associations with our clients. We firmly uphold the belief that a strategy that augments the business should also enhance the welfare of the customer

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