

Optimising Information System in Business

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Abstract— World of business is getting bigger from time to time. In beginning of business, it was started by barter system then change to currency system which requires an exchange between goods and money by face to face. However, internet has been introduced and used by all people in this world. The advances in information and communication technologies (ICT) affect the social with negative and positive thought. In this paper, we will discuss about the positive thought of information system (IS) in business. Nowadays, most of organizations are using IS to create an easy way to expand their businesses while giving maximum benefits to customers. Al-Ikhsan Cooperation is selected as an organization to study about how information system helps an organization to have a better performance of the operation in the world of business. This project will give a lot benefit to both of the customers and sellers. Literature review, BMC (Business Model Canvas) and 4 Lenses of Innovation tools are used as methodology for this paper. By this project, the operation of the business will become smooth in all aspects, including supply chain and customer relationship management.

Index Terms— Information system, Al-Ikhsan Cooperation, Business Model Canvas, 4 Lenses of Innovation

I. INTRODUCTION

Al-Ikhsan Sports was established in 1993 with a single 150 square feet store in Holiday Plaza, Johor Bahru. From sole proprietorship enterprise, the company has evolved to Private Limited Company named as Al-Ikhsan Sports Sdn Bhd. Since inception, the business has grown up to 134 doors all over Peninsular Malaysia. In 2011, the company has been awarded with ASEAN Business Outstanding Award 2011 – Industry Class Sector Sports Retail by ASEAN Retail & Franchise Federation. The Sports Good Intelligence Report on 2015 had ranked Al-Ikhsan as the 77th largest Sporting Goods Retailer in The Galaxy. In the era nowadays, Al-Ikhsan needed to come up with a good business model in order to compete and maintain to be relevant in the industry. Thus, an information

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system such as a mobile application is needed in order for the business to adapt the trend of today's business.

II. PROJECT BACKGROUND

Purpose

The primary purpose of this paper is to create a platform that is interactive towards the customers and also upgrading the operation management of the business. It is essential to do so as it can help to create a modern design website and mobile application for customer connectivity. The current situation is lacking of ability for customer to view the content of the products and their details. If we look at other business organization website like Lazada.com for instance, they have a more systematic and conducive layout to enhance their customer with a user friendly and easy solution to purchase their item. Furthermore, Al-Ikhsan's website has not been updated and it seems dull and not interesting compared to many other sports warehouse's website such as Adidas and Nike. For the reason stated above, it is a good step for them to update their company profile so that they can boost their performance as the most favourite sport apparels company by their customer to go for. In addition, they can add few more security for their website to secure their customer's business transaction.

In order to ensure the process is a successful, the organization needs to outsource the ability to create a new mobile application called Al-Ikhsan GO (AI GO). This will apps will be synchronized with the existing website in order to inform the customers about the new products and promotions done by the business. Therefore, the numbers of reachable customers will be increase and thus will boost up the sales of the business as well as reducing the cost for marketing.

III. PROBLEM STATEMENT

Business trending is changing rapidly nowadays. With the internet of things becoming the trend setter, things could change within just an overnight (Clevenger, 2015). Financial institutions such as bank had started to develop a friendly program such as e-commerce in order to meet the demand and expectation of the customers and giant sports retailer such as Adidas had already implemented the system in their businesses. With these developed programmes, businesses start to adapt with the changes in the economic world. To be the top company in the industry and maintaining the relevant, the company should also adapt and merge with these changes.

IV. PROGRAM OBJECTIVE

Based on Hoos, Groger, Kramer, and Mitschang (2014), they stated that "The employment of mobile apps in enterprises creates new possibilities for business process improvement." Thus, the main objective of this new Information System, Al-Ikhsan GO (AI GO) is to develop a platform application for the business is so that the company can keep up with the current development such as the online sales done by big business of the industry such as Lazada and Food Panda. Not

only that, with the development of the application, the operation of the company could also become more efficient and the customers' satisfaction will also improve. The application will involve not only in selling Al-Ikhsan products, but it is also open to the used products by the customers. The development of AI GO can benefit the organization as costs can be optimized, time to serve customers regardless of geographical locations can be shortened, and customers' service can be further enhanced, while sustaining business effectiveness, efficiency, and profitability.

V. LITERATURE REVIEW

The customers of today's world are on the move and they are using mobile application platform to get there. That is why mobile apps are so much important in today's market (Vallabhan, 2012). Pieri (2016) stated that "An additional finding for the region showed that 86% of transactions in the GCC are conducted via smartphone, leaving the region in second place." This indicates that the first place customers go to do searching for a product or service is via online. According to Hartmut Hoehle and Viswanath Venkatesh (2014), mobile phone penetration rate has reached over 100 percent per capita, with individuals often owning more than one mobile phone in most developed countries (BBC News, 2010). In conjunction with this trend, over the last 5 years or so, mobile phone technology has changed significantly, with devices and operating systems becoming more sophisticated. These developments have led to a large variety of mobile applications designed for smartphone operating systems provided by mobile operating system vendors, such as Apple, Google and Microsoft.

According to the study, which looks at data forecasts up to the turn of the next decade, 90% of the world's population over the age of six will have a mobile phone. By 2020, Ericsson predicts there will be at least 6.1 billion smartphone subscriptions globally. Other than that, the development of improved tools and technology has increased the demand for mobile devices for educational purposes (Maslin Masrom, Amirah Syahmi Nadzari, Nik Hasnaa Nik Mahmood, Wan Normeza Wan Zakaria, Nor Raihana Mohd Ali 2016). Hussin et al. (2012) have stated that mobile learning has great potential to be an effective learning tool due to the rapid growth of new generation of mobile devices for example tablets, mobile phones, and also the advancement in wireless technology. Some researchers suggested that learning activities must be supported by additional activities out of the classroom (Ozdamli, 2011). Nevertheless, 'm-learning' is still in the early stage in most country. Traxler (2009) believed on the perception of mobile education is still

a new issue and people still cannot get the picture of mobile learning.

In this paper, information system and technologies which are related to each other that have been used in business world are emphasized. Most companies are using information system to create an easy way to expand their business globally. By developing mobile application for business purpose will help people to involve in virtual transactions. According to Pieri (2016), a performance marketing Technology Company has recently announced the results of its H1 2016 State of Mobile Commerce Report, which explored consumer shopping habits and forecast predictions for the global mobile commerce market. The growth in the share of mobile transactions has been reported higher than the worldwide average which means shopping window habits increased higher than normal shopping. Therefore, it is highly recommended for Al-Ikhsan to create an interactive mobile application as a medium for their business instead of only sell through their stores. Generally the information proves that online shopping will rise the revenue of some organizations (Vallabhan, 2012).

Frost and Sullivan (2012), stated that there is a major shift from "Connecting Subscribers to Connecting Devices," where there will be 80 billion of devices are connected by 2020. They predict the world's population will have access to all the content of the world through devices that can be carried anywhere in 2025. Al-Ikhsan information only can be access through website however their stock and availability of products will stay unknown by customers. This project will help Al-Ikhsan as a seller to keep update their stock to fulfil the demand from the buyers.

According to Azevedo (2015) in his article, Uber is using information system in their organization by creating an application that enables any driver to generate revenue using their own car. He emphasizes that optimising information system in organization potentially benefiting both consumers and drivers. Our intentions are same like them which are benefiting both sellers and buyers. The advantages are reduction of search cost, have a better overview of quality and prices and expandable business. (Vallabhan, 2012) **According to research firm ABI Research, two-thirds of app users have spent money on an app at least once. For those who have bought apps, the average spend was around \$14 per month. It means, information system in business can be a method to generate profit and one of goals of organization and company.**

Proposed Conceptual Solution

Based on literature review, below is the current business model used by Al-Ikhsan in operating their businesses.

Key Partners: - Investors - Payment Supplier	Key activities: - Marketing - Production - Promotion & Selling	Value Proposition: - Establishing a well-known niche for the business. - Trusted seller	Customer Relationship: - Social Media	Customer Segments: User; - Athlete - Youth
	Key Resources: - IT Infrastructure - Premises		Channels: - Websites	

Cost Structure: - Launch events and Marketing - IT Infrastructure and Programming	Revenue Streams: - Sales product
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Based on the current business model implemented by Al-Ikhsan, it is still based a traditional-type of business. The business model is lacking in the terms of customers relationship. Thus, the operation is based on products rather than knowing what is the needs and preference of customers. Other than that, most of the transactions are done at the stores and premises of the business only. This can limit the products from reaching the potential customers who live outside of the Al-Ikhsan territory.

Therefore, as a solution, it is proposed to Al-Ikhsan to develop a new Information System (IS) that not only can reach higher number of customers but also it can save cost for

the business in term of money, energy, and time. It is also predicted that with the new proposed IS, Al-Ikhsan GO (AI GO), the revenue of the business can be further increased. Below, is the proposed business model for the organization after implementing the new IS. The four lenses of innovation is used to produce the solution for the organization. The operation of current process are challenged and the mega trends nowadays in using the internet of things are leveraged in order to produce the AI GO concept.

BUSINESS MODEL CASE AI GO (Solution)

Key Partners: - Investors - Payment Service providers - Delivery and postage service providers - Companies - Supplier - Small sports retailer.	Key activities: - Marketing - Production - Online Banking - Promotion & Selling Key Resources: - Website - Server - Premises	Value Proposition: - Save time - Get known the sales - Trusted seller - Can pay through many options	Customer Relationship: - Social Media - Review, Rating & Feedback System Channels: AI GO - e-Commerce portal - Mobile App	Customer Segments: User; - Mobile users - Working person - Athlete - Youth - Seller (used Sports clubs & associations) - Corporate Sponsors - Suppliers
Cost Structure: - Courier cost - Launch events - Marketing - Programming		Revenue Streams: - Sales of products - Delivery payment - Ads fees (Google advertisement)		

Functions and Key Features of the Application:

AI GO will act as a platform for AL-Ikhsan to sell their products and updating any events and promotions for the business. Apart from that, the application is also made to be more interactive as the customers can directly communicate with the business. They are also given a chance to sell their used items. AI GO is creating a platform for the customers as well as other small sports retailer business to sell their items. However, the products and events of AL-Ikhsan will be the primary elements to be updated.

Customer Segment

There are many targeted customer for the software prepared. Firstly, the prime target is the mobile user. Nowadays, most of the people carry at least one smartphone with them. Thus, this application was made to be adaptable by the all the smartphone users. Other than that, working person who spend almost of their time working are recommended to use this application. Not only it will save their time and money, the delivery service is also provided to increases their satisfaction. Athletes and youths are also welcome to use the product as they are the biggest contribution towards the sports

product industry. Last but not least, the application is useful for the suppliers. With the application, they can monitor the stocks and determine the most and least preferred products by the customers.

Value Proposition:

The idea of implementing the Information System in the business is to save up time. Through online, not the business only can save customer time and cost, but also the time and cost of the business can also be save up. Other than that, information about the sales can be distribute fast and in a wide range to the customers, such as revealing the promotions to the customers. Trust can also be built by having a good branding. Thus, more customers will be interested in having a transaction with the business. Apart from that, the business is trying to adapt with the many channels of payment that being implemented nowadays such as through website, mobile apps and cash. This is to ensure that the business will keep relevant and strong in the future.

Customer relationship

This application is beneficial in maintaining a harmonious relationship between customer-seller-supplier. This is because, it can act as social media that can contribute in

spreading information about sales and promotion through the media. Other than that, the application can also be used as a Review, Rating & Feedback System. That way, the organization can measure the satisfaction level of the customer with the product and give feedback about services.

Channel

The channel that will be used by the organization is through website and mobile application as these are the trends of the world of today. Through these channels, the business can always be updating about new and the availability of the products.

Key activities:

One of the key activities of the business is to do a lot of marketing about the products through target marketing, advertising and business strategies. These activities will be conducted manually, physically and also computerized through online. Other than that, the business will be involving production of their own products. Last but not least, the business will try to implement Online Banking in the business so that the customer can easily purchase from website and mobile apps

Key Resources:

The key resources of the business are web server, and outlets. These are the assets that can support the enlargement of the business.

Key Partners:

One of the main elements of the business is the key partners and among them are investors, suppliers, courier companies, and payment service providers. Investors will provide the capital support needed by the organization while the payment processors such as Maybank can collaborate with the business in handling the payment of the customers. The shipping process will be handled by the courier company by the name of GDex and suppliers are beneficial in replenishing the products availability. Other than that, AI GO also welcomes other small sport retailers to sell their products.

Cost Structure:

The costs that will be involved for the business are the transportation cost, marketing, and programming. The transportation cost will be incurred due to the collaboration for the delivery item to the customers. This is to ensure a satisfaction from both the partners and the customers. Marketing cost incurred will be including the advertising, promotion and also events such as press conference and media attentions. With these marketing activities, the range of the business will be widened and easy to be access. Lastly, the important cost is investment in building a programmer. This investment will be resulting into the birth of the new application that can smoothen the business process.

Revenue Streams:

The main revenue for the business is surely through the sales of the products as it is the key and life to the business. Other than that, business can earn revenues through the delivery charges. Finally, revenue can also be collected through advertisement in the website and mobile application by other business.

CONCLUSION AND FUTURE WORK

As a conclusion, the development of the AI GO application and the new business model developed are essential for the growth and profitability of AI-Ikhsan business. Not only it will help the company in reducing cost, it also can increase the number of interaction towards the customers. Thus, it will help a lot in increasing the sales of the business and as well maintaining the relevance of the business in industry. A good relation with financial institute will become better for the organization and in the future, it is not impossible for the business to go into an international business. Thus, it is highly recommended for the organization to develop the AI GO and leverage it as one of the business strategies. By doing so, the sales and interaction of people, between the customers, suppliers, and employees of the business can become more interactive thus, providing a feedback for the company's improved business performance. Other than that, effectiveness and efficiency of the operations can be sustained at the optimum level, and more innovative actions can be developed for further enhancements of the AI GO.

Thus, it is highly recommended for the development of AI GO to be commercialized as it can benefit the organization as costs can be optimized, time to serve customers regardless of geographical locations can be shortened, extend market reach, and customers' service can be further enhanced, while sustaining business effectiveness, efficiency, and profitability.

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