

How to Cite:

Machendrawaty, N., Kusnawan, A., Sadiyah, D., Junaedi, J., & Miharja, S. (2022). Trash bin for medical smart waste as entrepreneurs Da'wah output and Islamic work professionalism implementation. *International Journal of Health Sciences*, 6(S9), 536–551.
<https://doi.org/10.53730/ijhs.v6nS9.12446>

Trash bin for medical smart waste as entrepreneurs Da'wah output and Islamic work professionalism implementation

Nanih Machendrawaty

UIN Sunan Gunung Djati Bandung, Indonesia
Email: nanihmachendrawaty@uinsgd.ac.id

Aep Kusnawan

UIN Sunan Gunung Djati Bandung, Indonesia
Email: aep_kusnawan@uinsgd.ac.id,

Dewi Sadiyah

UIN Sunan Gunung Djati Bandung, Indonesia
Email: dewi.sadiyah@uinsgd.ac.id

Jujun Junaedi

UIN Sunan Gunung Djati Bandung, Indonesia
Email: junaedialjauhari@gmail.com

Sugandi Miharja

UIN Sunan Gunung Djati Bandung, Indonesia
Email: Nanihma4@gmail.com

Abstract---Entrepreneurs Da'wah is related to success in business which cannot be separated from religious life. Doing business does not mean greedy and does not like to accumulate or live happily. The attitude of a religious businessman is part of the elements of upholding da'wah. At the practical level, da'wah is to realize Islamic teaching activities by doing good, preventing evil deeds, giving warnings and giving good news. This study focuses on the problem of building a corporate ladder, marketing strategy, human resource development, and the meaning of work. The company ladder from the beginning of the healthcare business. Healthcare businesses are now adjusting to a new reality where bargaining power has shifted to consumers. Consumers now play a key role in the commercialization process, making them important stakeholders to meet their needs. Health business reforms have convinced consumers to make protection a bigger priority than ever since the COVID-19 pandemic escalated around the world. Health care businesses in Indonesia are

no exception, must increase their brand trust, because of the great responsibility to protect consumers from COVID-19 prevention, and brand trust also gives added value to the hospital brand itself. The Smart Waste concept is here to answer the challenge of trust in the brand of hospitals in Indonesia, especially in the city of Bandung, increasing the sense of safety from consumers is the main goal of this concept where hospital safety boxes work together with sensors and microcontrollers, disposal of syringe waste can be done smarter, it is safe and the risk of medical personnel being punctured by infected needle waste can be reduced, while still prioritizing Islamic elements in entrepreneurship, not taking advantage of circumstances, reasonable prices so that they can provide goodness for the benefit of many people. The results of the study showed progress in innovation starting with minimal capital and continuing to open branches in other areas around the city. The marketing strategy is through advertising promotions in various mainstream media such as the newspaper, magazines, banners, radio, websites, social media, as well as roles in business people's meetings. Coaching employees by providing direct examples in worship. The development of employees is very humanistic, religious.

Keyword--Da'wah, Entrepreneurs, Healthcare, Professionalism, Medical Waste.

Introduction

Da'wah is an obligation for every Muslim. It is a religious call. The call has the intent and purpose to change society from one condition to another that is better and more prosperous, both outwardly and inwardly, both individually and in groups (Ma'arif, 2011: 15). In order for this goal to be achieved effectively, the proponents of da'wah must organize all components of Da'wah appropriately. On the other hand, Islam strongly encourages its people to do entrepreneurship (Hamdani, 2010: 222). Entrepreneurship is the science, art, and behavior, traits, characteristics and character of someone who has the ability to bring innovative ideas into the real world creatively in order to create added value in order to be able to compete, take risks, be honest, and take responsibility with the aim of creating individual prosperity and community (Kristanto, 2009:3).

In the context of Islamic history, an example of entrepreneurs, it is better to listen to the story of a friend of the prophet, namely Abdurrahman bin Auf. When Abdurrahman bin Auf left to migrate from Mecca to Medina, he did not bring any provisions. When he arrived in Medina, he was offered a plot of palm plantations and some of his wealth by his brother the Ansar. However, he did not accept the offer, but instead asked to be shown the way to the market (Fauzi, 2002: 21). The reality of this history is really interesting to note, Abdurrahman bin Auf prefers to look for a hook rather than receiving fish, so that in a short time he also managed to become a very rich entrepreneur. Interestingly, although Abdurrahman bin Auf was very rich, he was also very generous and he often preached with sincerity, ready to sacrifice his life, property, and energy. Even when the war broke out, he

gave many camels to the warriors. Abdurrahman bin Auf often provided various kinds of weapons and food supplies for Islamic troops. Living and taking the good side of the lives of previous successful people not only serves as a sense of being longing, but can have a positive influence on the thinking, attitude, and mental maturity of those who follow them. By imitating the independence of entrepreneurs, it is expected to be able to develop entrepreneurial values to the Muslim generation as early as possible. Coupled with education and training as early as possible, it is hoped that the desire to aspire to become an entrepreneur who dares to start a business will grow.

Entrepreneurs now should be able to think creatively, be able to communicate, value time, be able to control emotions, be able to share with others, and be able to take responsibility. However, based on several realities that occur in society, some entrepreneurs today are still far from the entrepreneurial character instilled by Abdurrahman Bin Auf. Today's entrepreneurs are more likely to look for instant ways to succeed, the culture of hard work is weak, demoralized, and religious values are weak. Today's entrepreneurs are also many who are dishonest, thwart any means to make a profit, there are those who just want to be rich but don't want to be difficult or work hard. The need for a sense of security and comfort for consumers to visit hospitals during the Covid-19 pandemic decreased sharply, especially in the city of Bandung which was recorded as a red zone for the spread of the Covid-19 virus. It is an important note for marketers and public relations in several large hospitals in Bandung, Indonesia to be able to rise up and ensure that their hospitals are safe and comfortable to visit. Data from the Ministry of Health in August 2020, the condition of almost all hospitals serving Covid-19, hospital revenues fell by 20-50 percent throughout Indonesia (Kemenkes.go.id). Every effort to prevent consumers from coming to the hospital is also an obstacle for this business to rise. Competitive advantage and innovation are needed to survive in this pandemic era. Hopkins (2013) states that in the medical business, consumers choose brand names because they believe that the brand can be trusted. A well-known brand with a proven track record of providing assurance and comfort. Branding is so strong that consumers are willing to pay more for a trusted name than a lesser-known brand – even when the services offered are similar. To answer this challenge, the concept of smart waste is present. Management of brand trust with smart waste is expected to be able to improve the ability to improve hospital hygiene, medical staff and the surrounding environment so that patients and people who need medical services are no longer afraid to come to the hospital.

Currently, waste in the form of medical waste is still being sorted and sorted manually. it is necessary to automatically classify the types of waste by computer with reference to the classification of filled waste. The collected data is used as a collection of data to classify waste, especially medical waste, whose handling method is more specific and requires special attention because medical waste will be toxic if left too long in the trash because chemical changes in the waste. Previous research has conducted benchmarking tests for deep learning algorithms and support vector machine (SVM) to analyze data patterns used as classification based on image processing. From the research results, SVM gets the best accuracy for waste classification. The SVM algorithm is a suitable algorithm for classifying garbage. The advantages of the SVM algorithm are generalizations for

classifying patterns that do not contain data used in the method learning stage, and there is also feasibility, which means that SVM can be implemented relatively easily. In this trial, the SVM system was connected to an IoT device to use image processing techniques, then processed for image processing before computer vision was applied.

Literature Study

Entrepreneurial Da'wah

Entrepreneurial Da'wah is related to success in business which cannot be separated from religious life (Ma'arif, 2011:15). Doing business does not mean greedy and does not like to accumulate wealth or live in luxury and fun. Doing business is a charity and an obligation whose success will increase the closeness of the soul to Allah SWT and make sacrifices in the way of Allah SWT (Dinsi, 2015:14). The secret in fostering a thriving trade or commerce, is not selling defective goods and I don't want too much profit. Allah SWT blesses those He wills.

A story about the figure of a rich man who should be imitated. His wealth does not necessarily make him forget himself, be arrogant, and like to show off. Islam invites tawaduk (humility), the spirit of worship, and likes to give charity. This is the concept of entrepreneurship da'wah. Alms in the way of Allah SWT will be successful in the field of entrepreneurship. The concept of entrepreneur, dynamic, his pleasure in noble charity is always stuck wherever he is. Entrepreneurs set the pace in developing their commerce. By sticking to the teachings and values of Islam, business will actually develop towards success as well as bring blessings to life in this world and the hereafter.

Secrets of Success in Entrepreneurs

The secret to achieving success in the field of entrepreneurship is as follows: having high self-confidence and independence; halal business; solid team; superior belief system; maintain the trust of business relations; simple life, not extravagant; maintain the quality of goods and services (Fitri, 2017: 175-181). Businesses need to have high self-confidence and independence. To start a business, self-confidence is treated, because without self-confidence it is difficult to start a business. No matter how much capital you have, if you don't have the courage, it's still difficult to start a business. However, if you already have self-confidence, even without a large capital, you can start a business. Independence and trust are entrepreneurial mentality and high independence.

Halal business starts from capital, process to sales. Capital is indeed an important issue in the business world, however, it is not the most decisive thing for the success of a business. However, without sufficient capital, businesses are often difficult to develop. Even so, it doesn't mean that you have to go to great lengths to get capital without paying attention to where the capital comes from, whether it's from a lawful or unlawful way. As a believer, this issue cannot be underestimated because it will determine the fate of humans in the hereafter. In the hereafter, human wealth will be calculated from two aspects, namely: where

did the treasure come from and what was it spent for? That there needs to be accountability, where his wealth is spent, about his knowledge how he puts it into practice, about his wealth from where he got it and where he spent it, and about his body for what he used.

In the Hereafter, people will be asked about four things, namely: age, knowledge, wealth and body. Regarding age, humans will be asked during this life what he has done, regarding the knowledge he has and what he uses that knowledge to do. Regarding the body, humans will be asked what they use their limbs to do: good or bad, and lastly, people will be asked about wealth, where does it come from or how to get it, through lawful or unlawful means, and what use it is for, whether to buy halal or haram goods.

If the capital has been obtained in a lawful way and in accordance with Islamic law, then the next step is to run the business in a lawful way too. All processes from capital to sales must be based on Islamic values and teachings. It is not even surprising that the reckoning process or calculation of human deeds related to wealth will take longer. This is because the issue of property will be taken into account from two sides at once, namely where the process comes from and how to carry out the process. Therefore, the source of capital must come from the right or lawful process. In other words, in obtaining capital, one must stay away from ways that are forbidden by the Shari'a and based on instructions from Allah SWT and Rasulullah SAW.

A strong team is needed that has certain tasks and goals, interdependence among its members and goals can only be achieved together. The more the business grows and develops, the more people are involved in the business and that's when the business is determined by the existence of a good team. In a team, togetherness is very necessary even though he is a business owner but still goes directly to take care of his merchandise caravan. The entrepreneur is very careful in managing his trade, he always upholds the meaning of cooperation with all his colleagues. Even between Abdurrahman and his workers, it is impossible to distinguish between an employer and his assistant. This is one example of teamwork that can produce results in business or entrepreneurship.

The Belief System in business influences self-confidence and the conscious mind that determines one's attitudes and actions. Confidence comes from experience, from what is read, from what is heard, and what is felt. Both consciously and unconsciously, these beliefs underlie the way of thinking, speaking and acting in the present and in the future, and usually beliefs that are believed to be true. Likewise, people who have the belief "my family is not a trader, so it's no wonder I don't have business talent" as a result they will never want to try the business world. Some false and negative beliefs that can hinder, such as business is difficult and I am not talented to be a rich person must be changed into positive beliefs to be successful, such as business is easy if you know how and rich is not talent, rich is the result of work hard and work smart and I am willing and able to try hard and smart. Muslim entrepreneurs have the belief that Allah SWT provides sustenance for him as a trader. His great faith made him always believe that his sustenance would be obtained through trading. Entrepreneurs dare to start a business from scratch.

In a business, trust is an important priority. No business can run smoothly without trust, both from colleagues and from consumers or customers. The way to maintain the trust of business relations can be done by maintaining the quality of goods and also keeping payments in accordance with the specified time.³⁸ Meanwhile, the way that must be done to maintain customer trust (loyalty) is to provide excellent and satisfactory service. It must be ensured that the goods sold are of good quality and free from defects. Because, if this problem is ignored, the customer will no longer want to trust it. If it is so consumers will not buy merchandise again. Moreover, if the customer has a wide range of relationships and partners. It is possible that the low quality of the goods sold will also be reported to these relations. If this happens, it is certain that he will lose many potential customers. In fact, the existence of a business cannot be separated from the presence or absence of buyers. This is where the importance of maintaining the trust of business relationships, success cannot be separated from the discipline applied to maintain the trust of business partners and consumers. This method of maintaining the trust of business relations is proof of integrity. This method of maintaining the trust of business relationships can provide an example or motivation for entrepreneurs to be able to maintain their business so that they are trusted by customers.

The secret key to the success of Muslim entrepreneurs is to live a simple and not extravagant life. Because, an extravagant lifestyle will actually bring havoc in the future. With a simple life, a lot of income can be saved or used for additional capital in developing a business. Therefore, if you want to be a successful and successful entrepreneur, you must be able to refrain from spending money on things that are not important. It is necessary to make a priority scale for the necessities of life that we will fulfill. This method is very useful so that we can manage and organize expenses every month. In order to succeed in commerce and obtain blessings, always have capital and trade in halal goods and keep away from unlawful acts, even those who are doubtful. The quality of goods is very important in the field of business so that customers believe, honesty when trading practices by telling consumers where the defects or shortcomings of an item they sell are and even selling their merchandise at low prices, so that they are admired by many buyers and become a successful business.

The Relevance of Entrepreneurial Da'wah in the Contemporary Context

Among the relevance of Islamic entrepreneur da'wah in trading is never abandoning the values of honesty, justice, independence, alms and trust (Hadi, 2008:6). Honesty is the most important joint for the establishment of society. Without honesty, society will be destroyed, because there will be no mutual trust between one another. Entrepreneurship today should uphold the value of honesty in doing business or entrepreneurship. For a merchant who is honest and professional, always avoids things that are haram, even the subhat ones. Never practice usury or justify any means to achieve wealth. So that all of his assets are lawful assets. In running a trading business, he is always honest in explaining the advantages and disadvantages of the products he sells. It turned out that the virtue of his honesty became an effective marketing method to attract customers. He gets the love of his customers as much as he loves himself so, always serves them with all his heart. There is no difference between entrepreneurs and their

workers, they always gather and go directly to take care of their trade. For Muslim entrepreneurs, it is done honestly, so that buyers and the public can pray for good things and profits for the seller.

The key to successful trading starts with an extraordinary spirit of independence. He does not rely on and depend on others. The value of this independence can provide instructions for entrepreneurs to start their business from scratch, not from the help of others. Confident that his successful business will develop as planned. He has an entrepreneurial mentality and high independence to start a business with his own hands. In business, it is not only the pursuit of profit but partnership, but always helps others in the business. He is fair in his business, never reducing the scales. So that his business partners believe in their commerce. He is fair in managing his property.

The success achieved by entrepreneurs in the field of entrepreneurship cannot be separated from discipline. Not only business partners but also customers. The value of that trust makes for a resounding success in trade affairs. Maintaining this trust can also provide an example and motivation for entrepreneurs to maintain their business with the value of trust, both towards customers and their relationships. The nature of this trust is also one of the traits that must exist in humans both in the field of daily life and in business matters.

The concept of da'wah entrepreneur is to use the signs of Islamic law. He describes the entrepreneur as a charity and a duty whose success will increase the closeness of the soul to Allah SWT. Success in the field of entrepreneurship, namely having high self-confidence and independence, doing business that is lawful starting from capital, processes, to sales based on the values of Islamic teachings. The relevance of entrepreneurial da'wah in the contemporary context can evoke the spirit of honesty, justice, trust, independence, alms, without worry and fear of loss. Therefore, the concept of entrepreneurial da'wah in its efforts so that its success is not only in the world but can increase the closeness of the soul to Allah SWT.

Professional Work

Meanwhile, among Muslims, in relation to the ethos of entrepreneurship, a stereotypical image appears of low enthusiasm for economic activities, and the low quality of capitalism (Djakfar, 2009:31). This shows the abundance of natural resources in Muslim countries that have not been exploited to the fullest, it will increasingly show the weakness of the entrepreneurial ethos among the Muslim community.

In fact, there is a relationship between religion and work ethic. In his thesis, Max Weber, a sociologist and political economist from Germany, argues that unlike Protestants, particularly those from the puritanical Calvinist sect, that Islam has no theological affinity with the development of capitalism. Indeed, judging by this opinion, it seems as if Weber was insulting the true influence of the teachings of other religions in the world on the work motivation of their people, especially Islam. In Islam, there are many Qur'anic terminology that can be used as a

source of encouragement to work or do business (theological underpinnings of Islam on work or entrepreneurship) that need to be explored.

Terminology about rizqi, for example, which is very popular in everyday life, is closely related to "work ethic." According to Dawam Rahardjo, about rizqi with all its variations, it is mentioned 112 times in 41 letters. Meanwhile, according to Muhammad Fuad Abd al-Baqi in his dictionary *Mu'jam al-Mufahras li al-Alfāzh al-Qur`ân al-Karîm*, mentions 123 words of rizq with all its variations. In general, the word rizq is associated with other words, such as 'amal, maisah, tijârah, barakah, infaq, shadaqah, and usury.

In relation to 'amal, for example, according to Mustaq Ahmad (2001), the Qur'an mentions 360 verses that talk about charity, and 109 which talk about fi'il, which are two words that both mean work and action. Work and charity, in Islam, will determine how a person's position in life, as He said: "And each person gets a degree with what he does. And your Lord is not heedless of what they do." Even further than that, the Qur'an promises abundant rewards for people who work to improve the quality and quantity of their work, "For those who do good among them and who are pious there is a great reward."

That is the teachings of Islam as a source of motivation that strongly encourages its people to work hard as practiced directly by the Prophet Muhammad. Thus, actually working according to Islam is a religious commandment that must be carried out by every Muslim with abundant rewards.

Entrepreneurship Concept

An entrepreneur is someone who creates a new business by taking risks and uncertainties in order to achieve profit and business growth by identifying opportunities and pooling the necessary resources to establish them. Alma (2002: 21), several characteristics that need to be possessed by Muslim business actors are piety, tawakkal, remembrance, gratitude, honesty, holy intentions and worship, azam and getting up early, tolerant, tithing and giving, and doing friendship. There are also other opinions regarding the characteristics of Muslim business actors, including not being afraid of the risks that will occur, having the spirit of iqra', never giving up, being patient in undergoing, appreciating the process, and not being wasteful. Furthermore, starting from these characters, various types of entrepreneurial characters can be mapped, namely entrepreneurs who have initiative, who organize social and economic mechanisms to produce something, and finally entrepreneurs who accept risk or failure.

In relation to the problem of small businesses, the Law of the Republic of Indonesia Number 20 of 2008 concerning Micro, Small and Medium Enterprises has been issued. In the general provisions of Article 1 of this law, it is stated that micro-enterprises are "productive businesses owned by individuals and/or individual business entities that meet the micro-enterprise criteria as regulated in this law." Whereas what is meant by a small business is "a productive economic business that stands alone, which is carried out by individuals or businesses that are not subsidiaries or not branches of companies that are owned, controlled, or become a part, either directly or indirectly, of medium-sized businesses or

businesses. large businesses that meet the criteria for small businesses as referred to in this law.” It's just that in practice, this type of business is often associated with small people or wong cilik-style businesses which often eventually develop into advanced companies (Susanta dan Syamsuddin, 2009:6).

The Islamic view of entrepreneurship professional work clearly does not need to be doubted, because this field has been practiced directly by the Prophet Muhammad since he had not raised a family. Exceeded the estimated duration of his prophetic mission of around 23 years. Henceforth, how concrete are the basic traits in the prophetic values of business and management exemplified by the Prophet Muhammad to develop the real sector (entrepreneurship), including *siddiq* (honest), *amanah* (trusted, responsible, transparent, punctual) characteristics, *fathanah* (have extensive knowledge), *tabligh* (communicative), and *syaja'ah* (brave). Another opinion states that the Prophet Muhammad SAW as an ideal entrepreneur model has the characteristics: fair, fair and honest in cooperation and transactions, oriented to the benefits of the world and the hereafter, trustworthy, zero defect minded in serving, leading by example, every behavior is value, visionary, live a simple life, and possess incomparable spiritual intelligence.

Marketing and Human Resources

In relation to this marketing, four characteristics of sharia marketing can be stated, namely theistic (*rabbaniyyah*), ethical (*akhlaqiyyah*), realistic (*waqi'iyah*), and humanistic (*insâniyyah*) (Darmolono, 2009:199). These aspects of sharia character are explained further by Kartajaya and Sula (2006:28). Theistic is meant that a sharia marketer believes that theistic sharia laws are the most just, most perfect laws, most in harmony with all forms of goodness, embodying truth and benefit, and most able to prevent damage and falsehood. While ethical is defined as a sharia marketer who will prioritize moral values in all their activities. As for realistic, that is, a sharia marketer must be flexible, as is the flexibility of sharia teaching itself which is always in accordance with real situations and conditions. Apart from being humanistic, in the sense of respecting human rights and dignity, not a greedy human being who justifies any means to gain profit.

Furthermore, in relation to the problem of developing human resources, we can refer to the opinion of Yusuf al-Qardlawi who suggests four characteristics of Islamic economics, namely *uluhiyah*, *insaniyah*, *akhlaqiyah*, and *washatiyah* (Djakfar, 2012). These four characters can be used as the basis for developing human resources in a sharia-based company.

Smart-Waste Management a Implementtion of Entrepreneurial Da'wah

In this study, it is an effort to improve monitoring of hospital safety boxes through collaboration between hospital safety boxes with sensors and microcontrollers, making it easier for medical officers not to forget to replace safety boxes when conditions are almost full and / or 3 days have passed. (Hiba Zeidan;Khalil Karam;Roy Abi Zeid Daou;Ali Hayek; Josef Boercsoek;Roy Abi Zeid Daou;, 2019). Waste is something that is not desired by those who have and comply with Law Number 18 of 2008 concerning Waste Management, which states that waste is

the remnant of daily human activities. The definition of waste according to SNI 19-2454-2002 regarding operational procedures for municipal waste disposal is waste made from organic and inorganic materials which are considered unusable and must be processed in such a way that the environment is not threatened and development investment is protected. According to PP No. 81 of 2012, related to the disposal of household types of waste, waste disposal is a systematic, comprehensive and sustainable activity that includes waste reduction and processing. Disposal of waste starts from the source, container, collection, transfer and transportation, administration and final disposal. Reductions include limiting the production, recycling and/or reuse of waste. Waste management includes activities related to sorting, collecting transportation and final processing of waste.

Mechanical learning support vector machines are also referred to as support vector networks. It is a guided method that refers to a learning algorithm to analyze the data patterns used for classification and regression in this type of medical waste data. Support Vector Machine (SVM) was developed by Boser, Guyon, Vapnik. It was first presented in 1992 at the annual workshop on Theory of Computational Learning. In contrast to the neural network strategy, which tries to find the hyperplane that separates classes, SVM tries to find the best hyperplane in the input space (Bernardo S. Costa ; Aiko C. S. Bernardes; Julia V. A. Pereira1, 2018).

The basic principle of SVM is a linear classifier which is further developed in order to solve non-linear problems. by integrating the concept of a trick kernel into a high-dimensional workspace. This development has sparked research interest in pattern recognition to examine the potential of SVM capabilities both theoretically and in terms of application. SVM has been successfully applied to real-world problems and generally offers a better solution than conventional methods on IoT devices. This method is able to classify and read trash can data according to the characteristics and datasets used (Umut zkaya; Levent Seyfi, 2018).

Open CV is a branch of computer science and engineering that aims to create computers that can see and understand events in the outside world. Computer Vision is dedicated to the discovery of algorithms, data representation, and computer architectures that embody the principles underlying visual capabilities. Computer vision is a combination of image processing and pattern recognition. Here is a part of computer vision (Mst. Shamima Hossain, Bidya Debnath, Adrita Anika, Md. Junaed-Al-Hossain, Sabyasachi Biswas, Celia Shahnaz, 2019).

- Image processing: the area assigned to the image or image transformation process. This process aims to get better image quality.
- Pattern recognition: Areas related to the process of identifying objects in images or interpreting images. This process aims to extract information or messages conveyed by the image or image Computer vision involves a series of primary manipulations (initial manipulations) of this binary data. Image processing helps to enhance and enhance image quality so that it can be analyzed and processed further more efficiently. Image processing improves the signal-to-noise ratio (signal-to-noise ratio = s/n). The signal is information that represents the object in the image. While noise is any form

of nuisance, there is a bit of obscurity to an object (Bernardo S. Costa ; Aiko C. S. Bernardes; Julia V. A. Pereira, 2019).

System requirements analysis is intended to describe the needs that must be provided by the system in order to meet user needs and in accordance with the objectives of this study. The system design describes interface requirements, input data requirements and output data that shows the system specifications to be made, and when analyzing system requirements it is divided into three areas, namely functional and non-functional software requirements and hardware requirements, described as follows.

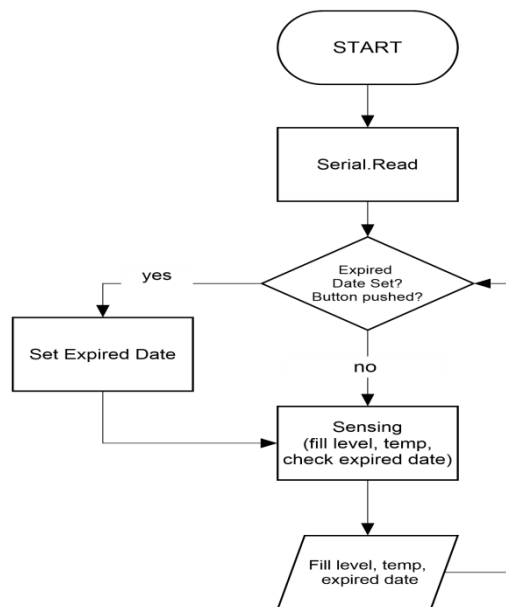


Figure 1 Medical Waste Sorting And Monitoring System

The prediction process from the file requires several steps that must be done before executing the two commands above. Make sure the data has included the prediction image in each directory provided for the file prediction process. The following image is a directory provided for predicting files for each alphabetic image. The function of providing the data is to facilitate the characteristics of the garbage type.

Methodology Research

The research method uses case studies. Technically, there are three alternatives that are carried out simultaneously, namely: observation (observation research) and literature study. Direct observation to the field by collecting data, information, and studying existing records and documents. When necessary, interviews can also be conducted with a number of consumers and medical staff. Literature study was conducted on reference books, journals, and internet browsing related to the focus of the problem.

Result and Discussion

The attitude in carrying out entrepreneurship practices based on this religious da'wah provides inspiration. Abdurrahman Alfaqih (2018), the basic principles of entrepreneurship in Islamic teachings, include monotheism, justice, Nubuwwah, caliphate, and ma'ad (results). The principle of monotheism is the fundamental foundation of Islamic teachings which is based on God as the true owner of the entire universe for human use. On the principle of justice, God considers all human beings equal (egalitarianism) before Him and has the same potential to do good. In the principle of Nubuwwah (Prophecy), Prophet Muhammad is an ideal model in all behavior, including entrepreneurship. The Prophet has 4 (four) characteristics, namely Siddiq (true, honest, valid), Amanah (responsibility, trustworthy, credibility), Fathanah (intelligence, wisdom, professionalism, intellectuality), Tabligh (communicative, transparency, marketable). With regard to the principle of caliphate, that humans are leaders on this earth by being awarded a set of mental, spiritual and natural resources by Allah SWT. Its main function is to maintain the orderliness of entrepreneurs in order to minimize chaos, dispute, and commotion in their activities. As for the principle of ma'ad (results), basically humans were created in this world to struggle and work as a provision for the happiness of the world and the hereafter.

System Implementation and Testing

This implementation section describes the steps to build a system from a previously designed design. The following is the implementation of the Safety Box Monitoring tool that has been created. This section only describes the part that the author does in carrying out practical work when he considers and takes into account the broad areas of the system that is made.

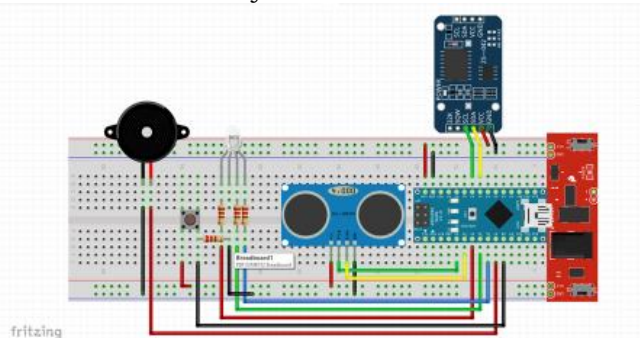


Figure 2. Assembly of The Trash Bin Monitor

Materials and components consisting of a microcontroller and a sensor are put together according to the sketch made. All components are already installed on the motherboard, namely the component board, which consists of the Powersupply component, then the microcontroller and ultrasonic sensor, RTC, bluetooth module, push button, bell and RGB LED. Each sensor is connected to the microcontroller using jumper wires and resistors according to electronic rules. Test results for the acquisition function:

- If the instrument is aimed at an object remotely or measures a value from 0% to 50% of the safety box, the RGB LED lights up blue, which means the remote sensing process was successful.
- If the device is aimed at an object at a medium or high distance of 50% to 80% of the safety box, the RGB LED will light green, which means the medium range detection process was successful.
- If the appliance is confronted with an object at close range or if the charge level measures >80% of the charge level in the safe, the RGB LED will glow red, which means the remote sensing process was successful.

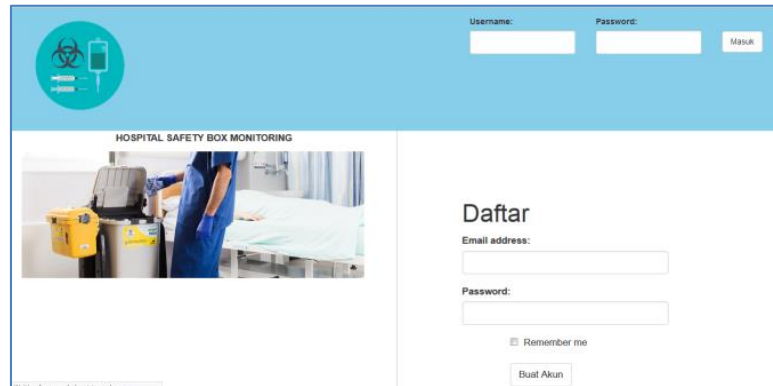


Figure 3. Trash Can Management Dashboard System

in the 3 pictures above are the implementation of a web-based safety box system, the menu is given access to a login page that will be used by officers, each officer will have different access rights data and must register first with the main administrator.

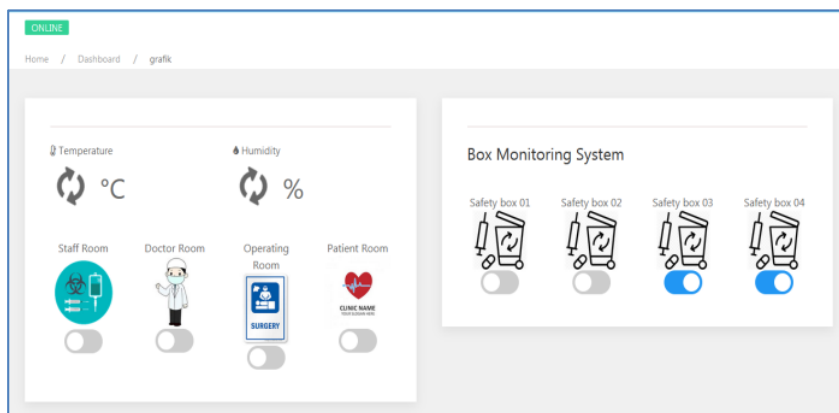


Figure 4. Trash Can Management Monitoring System

In Figure 4 above is a system for managing trash cans stored in several rooms in the hospital, each trash can sends data wirelessly via server clouds and forwards the data to the server, on the dashboard menu you can see several trash cans are stored in the staff room, room doctors, operating rooms and treatment rooms, besides that there is a menu to measure the temperature of the trash can and its

humidity, on the next dashboard there is a menu icon that regulates and monitors medical waste where each trash can is named safety box 01 to 04. and the name of the trash can can be adjusted to the number of available trash cans as needed.

Based on the experimental results above, the trash can detection system and its monitoring can be implemented easily using IoT devices, each IoT device will be installed in all medical waste bins and can use several sensors, including ultrasonic sensors to measure whether the bin is full or not and DHT 11 sensors. and humidity for humidity to changes in substances in the trash, a web-based monitoring system makes it easy for application users to view and record which trash bins will be activated and in full or empty condition, the trash can can be activated or deactivated according to the requirements. needs.

Obstacles and challenges in this effort provide valuable lessons in interpreting business and work for the benefit of two dimensions at once, namely this world and the hereafter. In this case, it can be understood that work cannot be separated from worship, supporting oneself, wife and children and worship helping others in the form of providing jobs for them. The essence of Islamic da'wah is the theological actualization in human activities in various social fields, including the field of entrepreneurship. Munir and Ilaihi (2006: 16-21), da'wah is manifested in practical expanses and managerial procedures. At the practical level, da'wah is an activity to realize Islamic teachings by doing good, preventing evil deeds, giving warnings and giving good news. In the procedure, this da'wah contains at least elements of Da'i (da'wah actors), Mad'u (da'wah partners), Maddah (da'wah material), Wasilah (da'wah media), Tariqah (da'wah method, and Atsar (da'wah effect). This can be done internally within the company.

Entrepreneurs work of course to make a profit, because with that profit he will be able to fulfill his obligations to meet the needs of himself and his family. All of this certainly has an economic meaning that must be translated and actualized into a form of business with hard work. This has been done by entrepreneur invented a medical business called "Smart Waste" who help medical staff to reduce waste without touching the waste itself, reduce the risk of covid 19 spreading from medical waste and make business with affordable price but still have value for business and making profit .

The practice of entrepreneurship in Islam will base it on the main sources of Islamic teachings. Just as in other activities, every Muslim who carries out entrepreneurial activities refers to the Qur'an and Hadith, as well as developing reference sources on ijma', qiyas, istihsan, istishab, sad al-dzari'ah, 'Urf, and syar'. man qablana (Fathurrahman Djamil, 2013:73). In the identification of Fauroni (2006), the basic principles of entrepreneurship in Islam are reflected in an integrated bond (Unity), balance (equilibrium), free will (freedom), responsibility (responsible), and honesty (truth).

References

Abdurrahman Alfaqiih. 2018. Prinsip-Prinsip Praktik Bisnis dalam Islam bagi Pelaku Usaha Muslim. *Jurnal Jh lus Quia Lustum* 2017 (24-3).

- Afzalurrahman. Muhammad sebagai Seorang Pedagang, terj. Dewi Nurjulianti, dkk. Jakarta: Penerbit Yayasan Swarna Bhumi, 1997
- Ahmad, Mustaq. Etika Bisnis dalam Islam, terj. Samson Rahman. Jakarta: Pustaka Al-Kautsar, 2001
- Aizuddinur Zakaria. Rahasia Jutawan Islam Abdurrahman bin Auf. Malaysia: Profesional, 2012.
- Alma, H.Buchari. Kewirausahaan, Cet. IV. Bandung: Penerbit Alfabeta, 2002.
- Asmaul Husna. Komodifikasi Agama: Pergeseran Praktik Bisnis Dan Kemunculan Kelas Menengah Muslim. Jurnal Komunikasi Global, Volume 2, Nomor 2, 2018.
- Antonio, Muhammad Syafii. Muhammad SAW the Super Leader Super Manager. Jakarta: Prophetic Leadership and Management Centre, 2007
- Bungin, Burhan. Analisis Data Penelitian Kualitatif. Jakarta: PT RajaGrafindo Persada, 2003
- Bernardo S. Costa ; Aiko C. S. Bernardes; Julia V. A. Pereira1. (2018). Artificial Intelligence in Automated Sorting in Trash Recycling. Researchgate.
- Bernardo S. Costa ;Aiko C. S. Bernardes; Julia V. A. Pereira. (2019). Artificial Intelligence in Automated Sorting in Trash Recycling . Reseachgate.
- Burtovaya, N. B. (2020). Teenagers' maladjustment problem. International Journal of Social Sciences and Humanities, 4(2), 21–29. <https://doi.org/10.29332/ijssh.v4n2.402>
- Darmolono, Wasi. Winning Mindset Potret Otak Entrepreneur Sejati, Berpikir Cemerlang di Saat Terbelit Hutang Merilis Bisnis di Saat Kondisi Kritis. Yogyakarta: Nuha Offset, 2009.
- Dawam, M. Ensiklopedi Alquran: Tafsir Sosial Berdasarkan Konsep- konsep Kunci. Jakarta: Paramadina, 1996
- Deakins, David. Entrepreneurship and Small Firms. London: The McGraw-Hill Companies, 1996
- Dhavamony, Mariasusai. Fenomenologi Agama, terj. A. Sudiaraja, dkk. Yogyakarta: Penerbit Kanisius, 1995
- Djakfar, Muammad. Etika Bisnis: Menangkap Spirit Titah Langit dan Pesan Moral Ajaran Bumi. Depok-Bogor: Penebar Plus, 2012
- Effendy, Bahtiar. Pertumbuhan Etos Kerja Kewirausahaan dan Etika Bisnis di Kalangan Muslim. Yogyakarta: Galang Press, 2001
- Fathurrahman Djamil, Hukum Ekonomi Islam; Sejarah, Teori dan Konsep, Sinar Grafika, Jakarta, 2013
- Fauroni, R. Lukman, Etika Bisnis Dalam Al-Qur'an, Pustaka Pesantren, Yogyakarta, 2006.
- Ghazali, Al. Abdurrahman bin Auf Berdagang Demi Akhirat. Malaysia: Litera
- Hamdani. Entrepreneurship: Kiat Melihat & Memberdayakan Potensi Bisnis.
- Heru Kristanto. Kewirausahaan Entrepreneurship. Yogyakarta: Graha Ilmu, 2009.
- Hiba ZEIDAN;Khalil KARAM;Roy ABI ZEID DAOU;Ali HAYEK;Josef BOERCSOEK;Roy ABI ZEID DAOU;. (2019). Smart Medicine Box System. Researchgate.
- Ikhwan Fauzi. Sebuah Biografi Abdurrahman bin Auf. Jakarta: Sinar Grafika Jogjakarta: Starbooks, 2010.
- Jusmaliani, dkk, Bisnis Berbasis Syariah, Bumi Aksara, Jakarta, 2008.
- Kartajaya, Hermawa dan Muhammad Syakir Sula. Syariah Marketer. cet.2, Bandung: Penerbit Mizan, 2006

- Muh. Yunus. *Islam & Kewirausahaan Inovatif*. Malang: UIN Malang Press, 2008
- Muhammad, *Etika Bisnis Islami*, UPP AMP YKPN, Yogyakarta, 2004, hlm. xvi.
- Munir, Muhammad dan Wahyu Ilaihi. 2006. *Manajemen Dakwah*. Jakarta: Kencana.
- Mst. Shamima Hossain, Bidya Debnath, Adrita Anika, Md. Junaed-Al-Hossain, Sabyasachi Biswas, Celia Shahnaz. (2019). *Autonomous Trash Collector Based on Object*. Researchgate.
- Najma, Siti. *Bisnis Syariah dari Nol Langkah Jitu Menuju Kaya, Penuh Berkah dan Bermakna*. Jakarta: Hikmah, 2008
- Rizaldi Hadi. *Pembelajaran Nilai Kejujuran dalam Berbisnis*. Jakarta: Aswaja Pressindo, 2008.
- Samsul Ma'arif. *Mutiara-mutiara Dakwah K.H. Hasyim Asy'ari*. Jakarta: Kanza Publishing, 2011.
- Sri Anafarhanah. *Peran Ekonomi Islam dalam Dakwah Nabi Muhammad SAW*. Vol 14, No 28 tahun 2015.
- Sumadi Suryabrata. *Metodologi Penelitian*. Jakarta: Rajawali Pers, 2012.
- Suryana. *Kewirausahaan Kiat dan Proses Menuju Sukses*. Jakarta: Salemba Empat, 2013
- Susanta, Gatut dan M. Azrin Syamsuddin. *Cara Mudah Mendirikan UMKM*. Depok: Raih Asa Sukses, 2009
- Susilo, C. B., Jayanto, I., & Kusumawaty, I. (2021). Understanding digital technology trends in healthcare and preventive strategy. *International Journal of Health & Medical Sciences*, 4(3), 347-354. <https://doi.org/10.31295/ijhms.v4n3.1769>
- Suryasa, I. W., Rodríguez-Gómez, M., & Koldoris, T. (2021). Health and treatment of diabetes mellitus. *International Journal of Health Sciences*, 5(1), i-v. <https://doi.org/10.53730/ijhs.v5n1.2864>
- Umüt Özkaya; Levent Seyfi. (2018). Fine-Tuning Models Comparisons on Garbage Classification for Recycability. *ISAS 2018*.
- Valentino Dinsi. *7 Rahasia Kaya dan Sukses Abdurrahman bin Auf*. Jakarta: Indonesia Publishing, 2015.
- Weber, Max. *Etika Protestan dan Semangat Kapitalisme*. Terj. Yusup Priasudirja, Jakarta: Pustaka Prometha, 2003
- Yunus, Yunus. *Islam & Kewirausahaan Inovatif*. Malang: UIN Malang Press, 2008