

## Waste Bank as Green Business

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**Abstract.** The purpose of this research is to build a waste bank business using a mobile application. The method used in this research is descriptive method using a qualitative approach. Given the increasingly widespread problem of waste, one solution to this problem is that waste is processed through a waste bank. With an integrated special application, it can display a map of the location of waste banks spread across a number of areas, so that later it can be easier for the community. In addition, information about waste banks and waste education will be displayed in the application as an educational tool. The results of this study are using a mobile application to search for waste banks and increase public knowledge about waste.

### 1. Introduction

Waste is leftover material that is discharged from the production process or human activities. However, waste's economic value is low [1]. As a country with a high population (more than 200 million people) and a growth rate of 1.2% per year [2], Indonesia needs to deal with the waste increasing each year. Environmental problems can be caused by waste that is not treated properly. Therefore, the right solution is needed, one of them is a waste bank. At the waste bank, a collection and sorting process takes place, which then becomes more useful. Similar to the bank system, there are several employees to take care of administration and operations. Waste bank will pay customers in cash or save depending on administrative procedures [3]. As a result of technological developments, the use of waste banks is increasingly easy and effective. The public can find out the location of the waste bank with technology based on mobile applications. Mobile applications are small-sized software that is easy to operate and access anywhere and anytime [4]. Nowadays, many people operate mobile applications to communicate with family and friends, find information on the internet, make several documents as well as for entertainment [4]. In recent years, the use of mobile applications has increased significantly. Based on industry analysis data, it is estimated that there are more than 250,000 applications that can be downloaded including through the play store and application store [5]. Mobile applications that continue to develop resulting in a lot of community interest to use it [6]. The use of mobile applications has a positive impact on the sustainability of a business. The business will develop if the owner is creative in how to find, develop, and produce new business that are different from others [7]. By using this mobile application, you can create a sustainable business and have great prospects.

The purpose of this research is to build a waste bank business using a mobile application. Therefore, this research will explain the information contained in one mobile application as an effective and efficient waste bank business. The benefits of the Waste Bank are reducing the amount of waste in the community, increasing income for the community, creating a clean, healthy

environment and fostering community awareness of the importance of protecting, and protecting the environment [8]. The method used in this research is descriptive method using a qualitative approach.

## 2. Method

The method of this study is descriptive method with a qualitative approach. Descriptive method is the most theoretical method of all types of qualitative approaches, but this method is not grounded theory, because it cannot produce a theory from the data obtained [9]. Qualitative descriptive methods are used to find out how to build a business using mobile applications as well as to find out the ease of using mobile applications for the waste bank business.

## 3. Results and Discussion

The development of technology is resulting a more types of businesses that can be started. Every business is established, then explicitly or implicitly performs certain business models to describe the designs and concepts that will be used [10]. By using mobile applications, businesses prioritize the concept and ease of communicating with consumers. Figure 1 shows the interface of the waste bank business mobile application.

- *Home Menu*

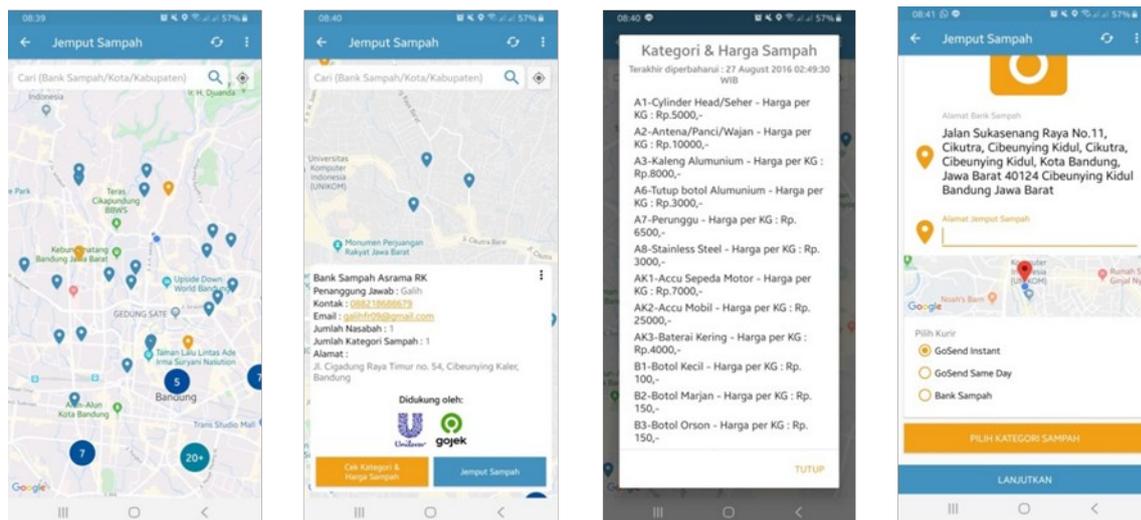
Figure 1 is the main menu display which contains a promo slide and several sub menus. This allows people to use several functions in this mobile application (See figure 1).



**Figure 1.** Home Menu

- *“Jemput Sampah” Sub Menu*

On the "Jemput Sampah" Sub Menu there is a map showing the locations of the waste banks. There is enough detailed information about the waste bank. Users can also find out the category and price of waste. If you have selected the desired waste bank, then the user enters your pickup address and courier category (See Figure 2).



Figure

e 2. “Jemput Sampah” Menu

- “Smart Drop Box” Sub Menu

Smart Drop Box is a smart trash dump which is equipped with a barcode scanner system and is connected to a mobile application. After using the application, the user will get points as a reward that can be used as online payments. However, these smart drop boxes only exist in a few locations (See Figure 3).

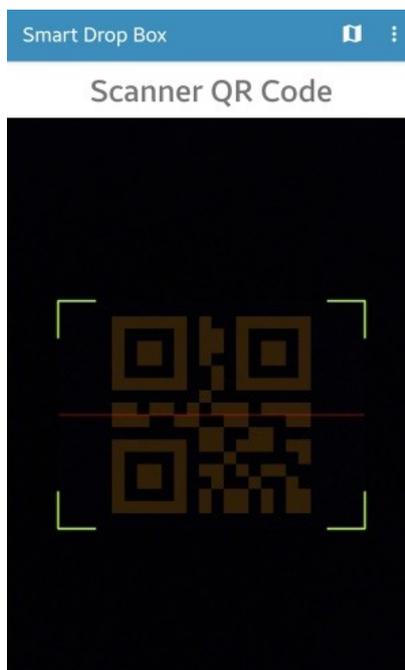


Figure 3. “Smart Drop Box” Sub Menu

- “Lindungi Diri” Sub Menu

By exchanging Rp.5000 junk bank balance, users will get insurance protection for 3 months (See Figure 4).



**Figure 4.** “Lindungi Diri” Sub Menu

- *“Blog Edukasi” Sub Menu*

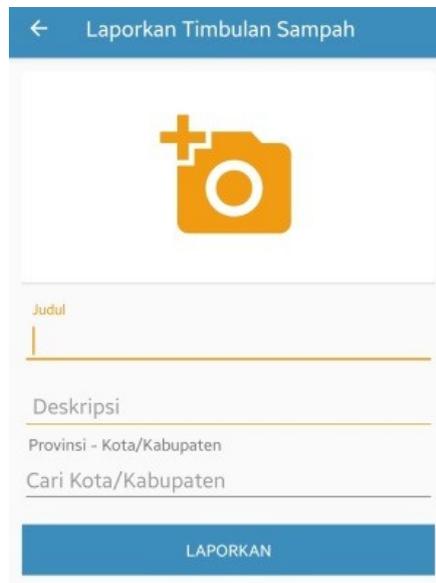
Educational blog contains information about waste issues, waste management, waste recycling, and others. Users can add insight and knowledge about waste and share it with others (See Figure 5).



**Figure 5.** “Blog Edukasi” Sub Menu

- *“Lapor Sampah” Sub Menu*

This sub menu serves to report the presence of piles of waste around the neighborhood. Users can take photos of landfill documentation, then fill in the title, description, and city / province fields. (See Figure 6).



**Figure 6.** “Lapor Sampah” Sub Menu

- *“Smash Store” Sub Menu*

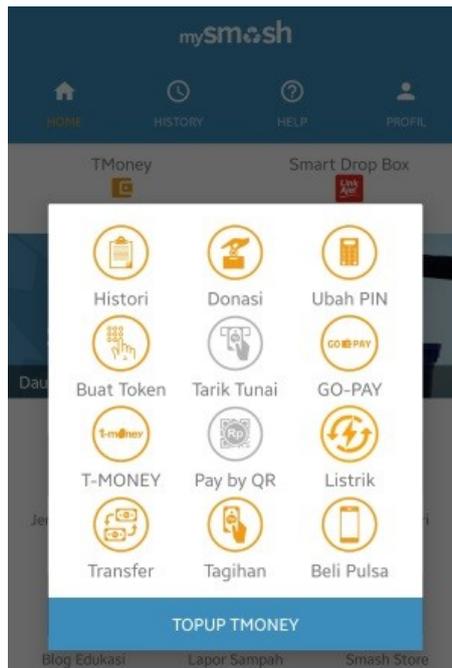
Users can buy a variety of a good waste recycling product. There are umbrellas, bags, sandals, and etc. There is also information on the price and location of the product being sold (See Figure 7).



**Figure 7.** “Smash Store” Sub Menu

- *“TMoney” Sub Menu*

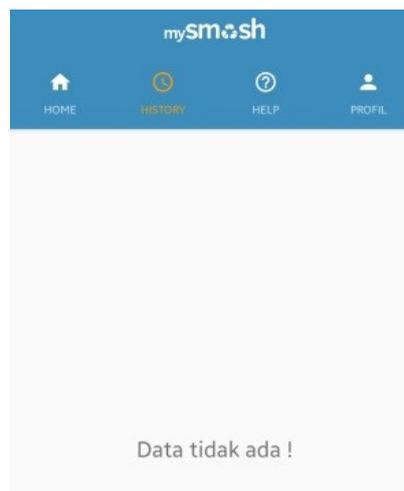
In this sub menu, several other menus are displayed to top up the electronic money balances and payments, such as payment for electricity, credit, and donations (See Figure 8).



**Figure 8.** “TMoney” Sub Menu

- *History Menu*

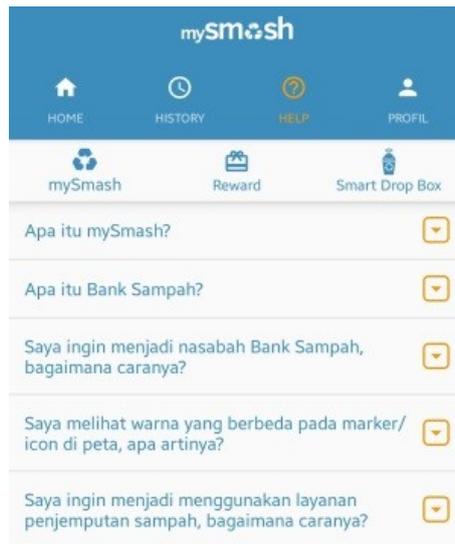
See transaction data with a waste bank that was conducted (See Figure 9).



**Figure 9.** History Menu

- *Help Menu*

If the user still does not understand about this mobile application. The users can go to the "help" menu. It displays some information about the use of mobile applications, about waste banks, and some other information (See Figure 10).



**Figure 10.** Help Menu

- *Profile Menu*

Information about users of this mobile application is in the profile menu. There is also the weight of the waste that has been transported to the waste bank and the remaining balance (See Figure 11).



**Figure 11.** Profile Menu

#### 4. Conclusion

The use of mobile applications to build a waste bank business is effective. One of the the impacts for the users is they can send the waste easier with the help of the application. Users only need to use a smartphone to call the waste bank courier and does not need to goto the waste bank location. In terms of payment, it is also easy and simple. It only needs to use e-money without having to spend cash. In the future, businesses using this mobile application have high prospects and will continue to develop bringing new innovations.

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