



اَوْنُوْرَسِيْتِي تِيْكْنُوْلُوْجِي مَارَا  
UNIVERSITI  
TEKNOLOGI MARA  
MALAYSIA

## TECHNOLOGY ENTREPRENEURSHIP BLUEPRINT

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**Faculty** : FACULTY OF ELECTRICAL ENGINEERING

**Program** : ELECTRICAL ENGINEERING

**Program Code** : EE241

**Course** : TECHNOLOGY ENTREPRENEURSHIP

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**Group Name** : 3R

**Group Members** :

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## **1.0 EXECUTIVE SUMMARY**

3R Sdn. Bhd offers food quality monitoring and waste management system products, which is called as HungerVibes. It provides an IoT-based system to monitor food quality and improve the waste management system. This product is implemented as a real-time monitoring system to cater to their everyday meals by using an app that will notify them whenever there's a surplus of food. The real-time monitor system will notify the student where the food is located and is it the food will rot or still can be eaten.

Our customers are identifying as a food handler, charity distributors, cafeteria or restaurant owner who wants to take advantage of using our product to give social benefits or distribute food to those who have difficulty purchasing enough to avoid hunger with affordable price and high quality of the product. We also targeting customers from all over Malaysia, including Singapore, Filipina, and Thailand because we have an online platform to sell our product that covers those places.

Nowadays, Malaysian have wasted food in one way or the other, but real food losses and waste matter is bigger than just consumer food waste. Food waste is simply food intended for consumption that is discarded along the food supply chain and cannot be used. It causes demand from our target market is rising over the year. While there is currently two business like us in Malaysia, but we only business has a special attribute and technology that used IoT-based.

3R Sdn Bhd's marketing strategy is to emphasize the quality and price of our products and services. We offer an affordable price because our customers are mostly to give benefits to society. Thus, we develop a marketing strategy that gives privilege to our customers.

The management of 3R Sdn Bhd consists of 3 management members that handled by Siti Nurhaslinda, Raja Farhanah, and Amiera Nadzira. Our team has extensive experience in finance, business, sales, and accounting. Each member of our team has different types of tasks and plays an important role in making this business run well and achieves our target. We already have a product commitment plan to aggressively build our brand through newspapers, ads, and signboards.

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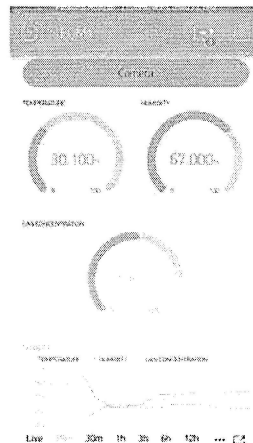
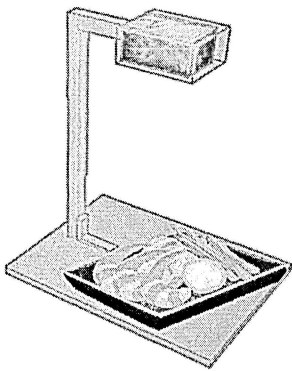
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## 2.0 PRODUCT DESCRIPTION

Nowadays, Malaysia has problems with inefficient food waste management as well as our Earth has pollution issue that affects all living things. Our company has come up with this idea in order to reduce this issue by implementing a real-time monitoring system that can help people with financial problems to cater to their everyday meals by using an app that will notify them whenever there's a surplus of food. The real-time monitor system will notify the student where the food is located and is it the food will rot or still can be eaten. This system will be put in the cafeteria or food courts this is to ensure that there's no food to be thrown out in the rubbish bin if it still can be eaten.



Food Quality Monitoring System (FQMs) is developed to increase food quality awareness and take precautions to maintain a healthy and foodborne illness. The proposed FQMs is the device is built on Arduino IDE and NodeMCU ESP8266 to process the data. NodeMCU interfacing with DHT-11 to monitor temperature and humidity, and MQ3 to detect ethanol gas to warn the user when the food became spoilage. It is an IoT device and sends the measured sensor data to the Blynk application. In addition, this project has been added by interfacing the ESP32 camera to set up the image of food. The function of the ESP32 camera is to take and store images to serve clients by display into the application. FQMs monitor the air quality over Blynk Apps provides easy access to the user. The Blynk application is free and available in both the iPhone Operating System (IOS) App Store and the Android Google Play Store Apps. The system is