



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

**SCHOOL OF COMPUTING**  
Faculty of Engineering

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**UHMT1012 – GRADUATE SUCCESS ATTRIBUTE**

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**STALL INNOVATION REPORT**

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DUE DATE : 10th DECEMBER 2019

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## Introduction

Food stall is typically a temporary structure that is used to sell and prepare to the public, usually food stall located outdoor where there is a lot of people. A common practice is for modern food stall to operate in special events, some food stall is operated by a vendor, catering, or maybe by a restaurant offering many kinds of food but sometimes food stall and also be used by a nonprofit organization for fund raising

Back in the late 14th century that in Cairo, people brought picnic cloths made of rawhide to spread on the streets and sit on while they ate their meals of lamb kebabs, rice, and fritters that they had purchased from food stalls ,also during the excavation of the Pompeii city that they already had a vast number of food stall. and in year 1502, Ottoman Turkey they became first country to legislate and standardize food stall.

Food stall was widely consumed by the poor in the ancient Rome whose tenement homes did not have ovens, the wealthy residents would send a servant to buy a street food and bring meals back for their masters to eat in their homes.

Food stall in Johor typically sell variety of food that the local mostly like and the operating hours is depending the seller itself some of the seller even has 24 hours. And we can find food stall in Johor right about everywhere we go so it's not hard at all if you want to buy a food or a product from a food stall in Johor.

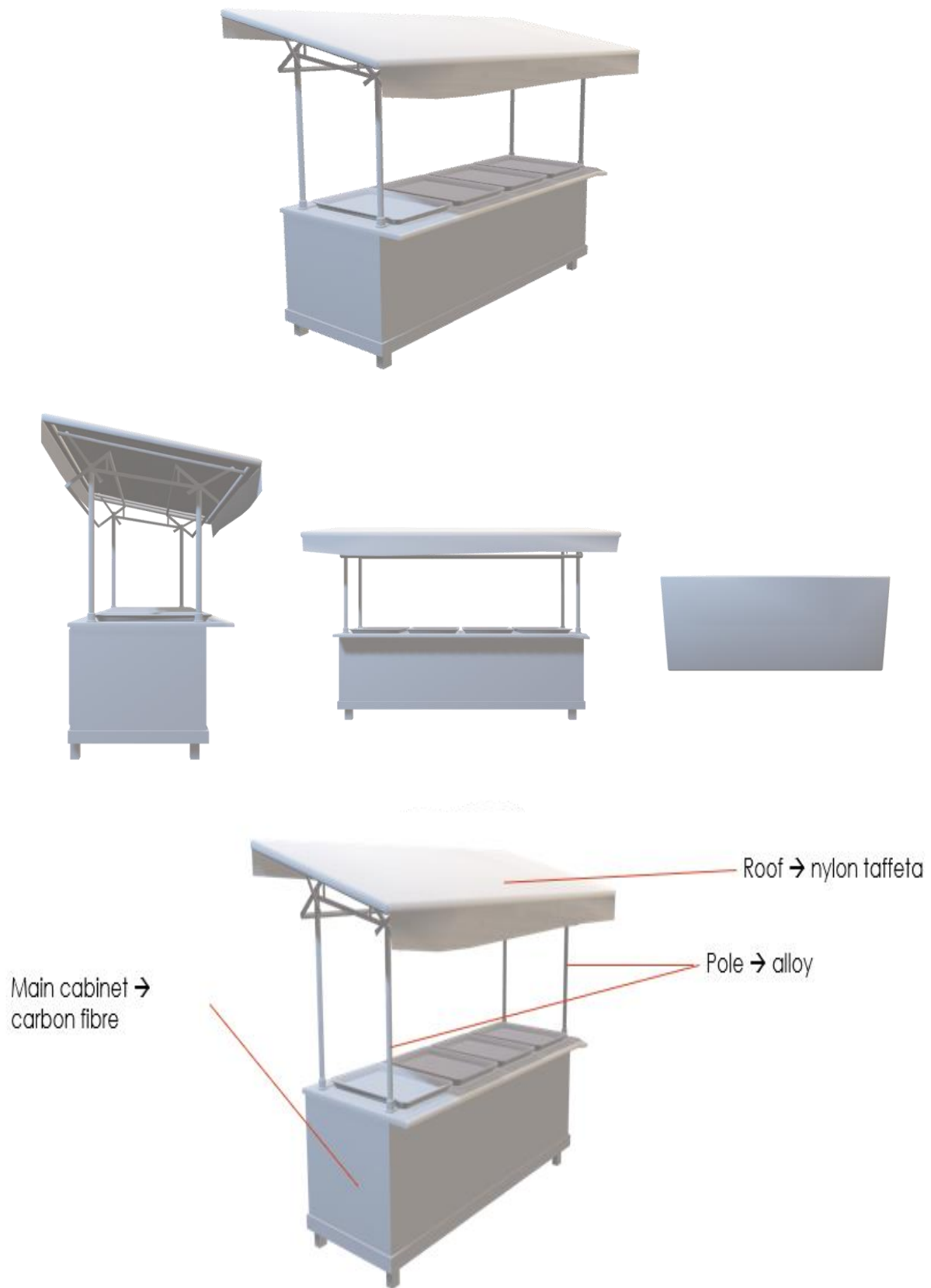
## Problem Background

In Malaysia, there were so many food stalls that sold varieties of meals either for breakfast, lunch or dinner. As the stalls were located at the spot where people could easily pass by and stop for their eat. However, one big problem arose when people questioned about the cleanliness and hygiene of the premises. As far as we concerned, these stalls were exposed to roads and vehicles' smoke. This might affect the foods served and could contribute to food poisoning cases. Therefore, our job is to find a new sustainable way for the stall to be operated. Our objectives include;

- ✓ To replace the current stall condition by the roadside in more sustainable way and hygienic
- ✓ To find any materials that can be used to substitute the structure of the stall
- ✓ To ensure that the stall is portable, easy carry and long lasting due to certain condition.

Based on the problem stated, we come out with an idea to create origami stall. Origami stall is design to make it easy for roadside stall to run their business without left their stall after finish their business. The concept of our innovation is like tent, install, remove and store in bag. Origami stall are made of carbon fibre, alloy, and nylon taffeta.

## Innovation of The Stall



## Material Used

### 1. Stainless steel

We chose stainless steel as the material for the poles because of its hygienic properties. The cleanability of stainless steel makes it the first choice in hospitals, kitchen, food and pharmaceutical processing facilities. Besides that, stainless steel is a durable, low maintenance material and is often the least expensive choice in a life cycle cost comparison. And most importantly it is easily and simply maintained resulting in a high quality, pleasing appearance. Unfortunately, stainless steel equipment tends to be more expensive than other materials. This is perhaps the most fundamental disadvantage of stainless-steel equipment, though it's worth reiterating that the resale value of stainless-steel equipment is quite high, which can help defray the costs. Further, stainless steel is more durable, and maintenance is easier, so — years down the line — you may find that the overall cost evens out.



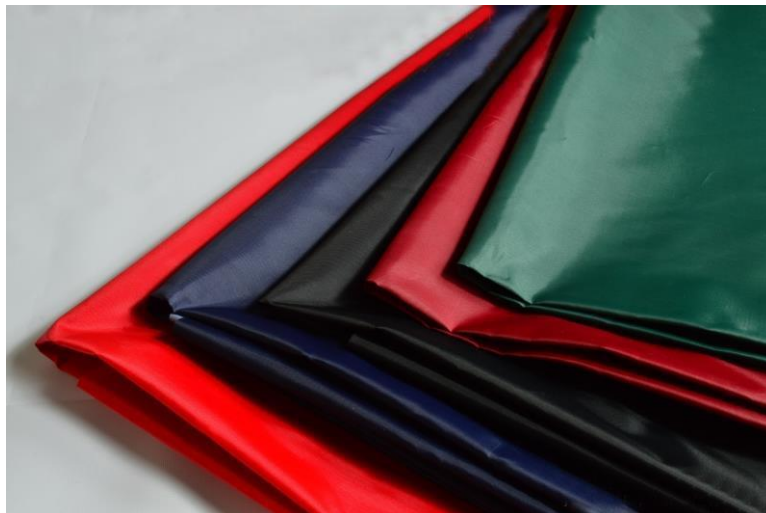
## 2. Carbon Fibres

Carbon fibres also called graphite fibre or carbon graphite, consists of very thin strands of the element carbon. It is made of thin, strong crystalline filaments of carbon that is used to strengthen material. Thus, it has high stiffness, high tensile strength, low weight, high chemical resistance, high temperature tolerance and low thermal expansion. The strongest carbon fibres are ten times stronger than steel and eight times that of aluminium. It is also lighter than steel making it the ideal manufacturing material for many parts. These properties have made carbon fibre very popular in aerospace, civil engineering, military, and motorsports, along with other competition sport.



### 3. Nylon taffeta

Besides, we using nylon taffeta for the roof of origami stall. Nylon taffeta is a lightweight lining material made out of synthetic nylon fibre. There are also have other properties that we choose this material which are water repellent, breathable wind resistant, durable, soft, anti-UV and flame retardant. Thus, this is practically strong and useful for outdoor applications. Other than that, it easy to get highly reasonable price in various colour, prints, sizes to meet the varied. This material is often used for tent, jacket, sportswear, military umbrella and backpacks.





## Giving Back to The Society

There are many advantages by using our product instead of the old model of roadside stall. First of all, our product is feather light in weight and easy to bring around because it can be packed up. Thus, our product can enhance community living by solving the problem of unattended roadside stall in our country. This is because the hawkers can bring their stalls back to their home easily since our product is not heavy at all. Since our product is easy to move, the surrounding neighbourhood can become clean and tidy as the problem of unattended roadside stall can be solved. Furthermore, the hawkers can choose to start business at anywhere when the condition of their usual business place is bad as they can move the stalls easily by using our product. Thus, the income of the hawkers can increase significantly as they can now start their business at anywhere and more people can enjoy tasty roadside snack and food.

Second, the materials used in each part of the stall are affordable and easy to find. For example, the main cabinet of the stall is made by carbon fibre, roof is made by nylon taffeta and the poles to support the roof are made by alloy. All these materials are easy to find and affordable for the hawkers. Thus, it can help to lower the cost of the hawkers to start their business and reduce their burden even by a little. The stall is able to last long as all these materials used are durable and sturdy. Therefore, the hawkers are able to do their business with lower cost by using our product as they don't have to spend extra money to repair the stall. With this feature, the hawkers can sell their food at lower price compare to the market price because their cost to start business is lower than the others. Accordingly, the people around are able to enjoy delicious food with a cheaper price.

Last but not least, the advantage of using our product is it is hygienic as the stall won't be left unattended by the roadside. The hawkers can pack up their stalls and bring it home to avoid the stalls are left unattended by the roadside. Therefore, the stalls won't be covered by dust and trash that contain harmful bacteria. The problem of animal excretions on the roadside stalls can also be avoided. Accordingly, the hygiene of the stall can be assured and the people that patronized the stall can be at ease when enjoying the food. This is the most important aspect when we are designing our product as the case of food poisoning from the roadside stall's food increased each year. The action of leaving the stall unattended is irresponsible as the stall might be covered by harmful bacteria from the trash or dust that were blown to the stall. Thus, the rate of food poisoning can be reduced if our products are used by the hawkers.

## Conclusion

In conclusion, we found that our innovation is applicable to be used widely in this country. With those advantages that we mentioned in the previous pages, it is hoped there will be any organisation that may lend a hand in making our project plan come through in order to transform the way of roadside sellers for having better environment with the best hygienic state soon.