

# AN INNOVATIVE SOLUTION TO ENHANCE THE SAFETY OF THE CACTUS PACKAGING

Muhammad Shafiq Bin Shahrudin

*Printing Technology Department, Universiti Teknologi MARA Puncak Alam, MALAYSIA*

*E-mail: shafiq.shahrudin123@gmail.com.my*

## ABSTRACT

Cactus is one of the most liked plants by plant enthusiasts. Although it is a very durable plant compared to other plants, it can also be damaged if not handled with care. Conventional way of to package they plant by simply wrap the cactus using used newspaper or a magazine. Improper handling of cactus affected the cactus appearance and resulted in loss to the seller and buyer. With this in mind, the goal of this project is to produce innovative packaging which addresses this problem. Special attention was given to the print production substrate and a newly developed holder to ensure safety and ergonomics. In addition, the researchers also develop unique visuals and a cross media in the form of Augmented reality as a novelty way to engage customers to the products. Ukay Nursery was chosen for this applied research project, and has proven beneficial to this business. This project has high commercialization value since this is an applied research project and can be implemented in an actual business environment. It is hoped that this innovation will enhance the plant nursery business as a whole.

**Keywords:** augmented reality, innovative packaging, commercialization

## 1. INTRODUCTION

Average plant sellers in Malaysia normally wrap cactus plants by simply using newspapers or magazine paper and then placing them in a plastic. This will cause the soil to spill and scatter, while affecting the sensitive parts like the leaves and thorns. The goal of this research is to make a packaging that might benefit the products in terms of marketing and the safeness of the product.

## 2. METHOD

In order to gain important information about this project, the researcher will make an observation towards their target client and their potential threats, and from that, the researcher can identify the weakness of the packaging which will be represented. Besides, primary and secondary data collection also being used to provide the researcher more information in making the innovative packaging.

### 2.1. Opportunity Identification

During this phase, the researcher must observe the current packaging trend that is used to package the cactus plant among all the florists nearby. From making an observation, the researcher can identify which part is the weakness and strength of the packaging.

### **2.1.1. Concept Exploration and Refinement**

As we know, there are many cactus lovers out there who love to buy plants. Based on the observation, major change towards the packaging for the cactus is a must especially in terms of the safety of the products and its benefit towards the user. The step that is used includes sketching and mixing the parts of packaging that can be fit into one die cut. After getting the overall layout of the packaging, the mockup or prototype will be made. Finally, after the prototype completed with several experiments consists of its handle, the plant holder, the material used. Finally, after getting the approval for the mockup/prototype, the design of the packaging will be made.

### **2.2. Technical Requirements**

For technical Requirements, there are several workflows that need to follow including the material selection, preflight process and plate output. Finally, the printing process will begin.

## **3. FINDINGS**

The innovation of this packaging is to ensure the safeness of the products with new style packaging. Besides, the use of Augmented Reality (AR) into the packaging can benefit the customers in terms of the product information and more.

## **4. CONCLUSION**

In conclusion, this packaging is suitable for the cactus plant and it is made to protect the plant from any physical damage. Besides, it can gain the customer's trust and can promote the nursery towards other plant enthusiasts with the new style packaging, design and new method of promoting the products by applying the Augmented Reality (AR) towards the packaging.

## **REFERENCES**

1. Urban Succulents,2019 Cactus Gift Box Retrieved November 28,2019,from <https://www.succulentlyurban.com/shop/cactus-gift-box/>
2. For The World To See,2012 stars masquerading Retrieved September 4,2019,from <https://starsmasquerading.tumblr.com/post/27848901825>
3. FTDcom,2018 Fresh: The FTD Flower Blog Retrieved November 25,2019,from <https://www.ftd.com/blog/design/types-of-cactus>
4. Green and Vibrant,2019 55 Types of Succulents & Cacti – Growing Tips and Photos Retrieved November 15,2019,from <https://www.greenandvibrant.com/types-of-succulents>
5. Botanical,2018 Garden Surgery – Additional Techniques for Grafting Cacti Retrieved December 26,2019,from <https://baetanical.com/2018/01/09/garden-surgery-additional-techniques-grafting-cacti/>



Surat kami : 700-KPK (PRP.UP.1/20/1)  
Tarikh : 30 Ogos 2022

YBhg. Profesor Ts Sr Dr Md Yusof Hamid, PMP, AMP  
Rektor  
Universiti Teknologi MARA  
Cawangan Perak



YBhg. Profesor

**PERMOHONAN KELULUSAN MEMUAT NAIK PENERBITAN UiTM CAWANGAN PERAK  
MELALUI REPOSITORY INSTITUSI UiTM (IR)**

Perkara di atas adalah dirujuk.

2. Pihak Perpustakaan ingin memohon kelulusan YBhg. Profesor untuk membuat imbasan (*digitize*) dan memuat naik semua jenis penerbitan di bawah UiTM Cawangan Perak melalui Repositori Institusi UiTM, PTAR.
3. Tujuan permohonan ini adalah bagi membolehkan akses yang lebih meluas oleh pengguna Perpustakaan terhadap semua bahan penerbitan UiTM melalui laman Web PTAR UiTM Cawangan Perak.

Kelulusan daripada pihak YBhg. Profesor dalam perkara ini amat dihargai.

Sekian, terima kasih.

**“WAWASAN KEMAKMURAN BERSAMA 2030”**

**“BERKHIDMAT UNTUK NEGARA”**

Yang benar