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**JOHOR  
INNOVATION  
INVENTION  
COMPETITION  
AND  
SYMPOSIUM  
2023**



"Innovation Inspires a Society  
to be Critical and Creative"

# **JOHOR INNOVATION INVENTION COMPETITION AND SYMPOSIUM 2023**



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**Editors-in-Chief**

**AHMAD KHUDZAIRI KHALID  
NUR INTAN SYAFINAZ AHMAD**



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## **Preface**

**In the name of Allah, the Almighty who gives us the enlightenment, the truth, the knowledge and with regards to Prophet Muhammad (peace be upon him) for guiding us to the straight path. We thank to Allah for giving us guidance and strength to write this e-book.**

**This e-book compiles the extended abstracts that submitted to Johor Innovation Invention Competition and Symposium 2023 (JIICaS2023), where JIICaS2023 is a virtual platform for all creative minds to share and present their invention and innovation. The extended abstracts are divided into two categories, which are Category A (Higher Educational Student/ Any Recognized Institutional Students in Malaysia) and Category B (Primary/ Secondary School Students / Special Education School Students in Johor). Each abstract gives a brief background on the innovation or project.**

**We hope that this e-book will help the readers to get to know the innovation done by the students from both categories and get some ideas to develop future innovation products.**



## VACBAG: PACKING MADE EASIER

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### ABSTRACT

VacBag is an innovative packing solution designed to streamline the process of organizing and transporting personal belongings. The objectives of VacBag are to simplify packing, reduce luggage weight and volume and enhance convenience for travellers. Novelty in the VacBag lies in its unique design that combines a vacuum-sealed storage bag with built-in compartments and adjustable dividers. By incorporating these features, VacBag allows users to easily organize and pack their belongings while maximizing space efficiency and reducing the overall weight of their luggage. Additionally, VacBag addresses the problem when the airline loses luggage by having a built-in GPS and identification smart chip. The commercialization potential of VacBag is significant due to the increasing demand for efficient packing solutions and the need for optimized baggage handling processes in airports. The benefits of VacBag are distinct as it offers improved handling quality, simplified logistics, and trouble-free storage for travellers. It aims to revolutionize the packing process by offering a unique and innovative solution that simplifies packing, reduces luggage weight and volume, and enhances convenience for travellers.

**Keywords:** compressed bag, travellers, storage, organization

### 1.0 INTRODUCTION

In an era of constant travel and exploration, the way we pack and transport our belongings is undergoing a transformation. Traditional luggage and packing methods often lead to inefficiencies, increased weight, and sometimes even the loss of luggage during air travel. To address these challenges, VacBag has emerged as a groundbreaking solution. VacBag is a revolutionary packing innovation designed to simplify the packing process, reduce luggage weight and volume, and enhance convenience for travellers.

### 2.0 OBJECTIVE

The primary objectives of VacBag are as follows:

- **Simplify Packing:** VacBag aims to streamline the packing process, making it more efficient and less time-consuming for travelers. With its unique design, it offers a user-friendly experience that allows individuals to organize their belongings effectively.
- **Reduce Luggage Weight and Volume:** VacBag incorporates vacuum-sealed storage technology, which not only compresses clothing and other items but also eliminates excess air, reducing the overall weight and volume of luggage. This feature is especially valuable for those looking to avoid excess baggage fees and travel with greater ease.

- **Enhance Convenience for Travelers:** VacBag is designed with the traveler's convenience in mind. It includes built-in compartments and adjustable dividers, making it easy to separate and organize items. Additionally, it addresses the common problem of lost luggage by incorporating a built-in GPS and identification smart chip.

### 3.0 DESCRIPTION OF INNOVATION/METHODOLOGY

VacBag is a multifunctional packing solution that combines several innovative features:

- **Vacuum-Sealed Storage:** The core feature of VacBag is its vacuum-sealed storage technology. Users can place their clothing and other belongings inside the bag, and a built-in vacuum pump removes excess air, effectively compressing the contents. This not only saves space but also reduces the weight of the luggage.
- **Built-in Compartments and Adjustable Dividers:** VacBag includes compartments and dividers that allow users to organize their items efficiently. Whether it's separating clean clothes from dirty ones or categorizing belongings, VacBag offers versatility and organization.
- **GPS and Identification Smart Chip:** To address the issue of lost luggage, VacBag integrates a GPS tracker and an identification smart chip. Travelers can track the location of their luggage in real-time, and airline personnel can quickly identify the owner of any misplaced bags.
- **Durability and Portability:** VacBag is designed to withstand the rigors of travel. It is made from durable materials that protect belongings from moisture and damage. The bag is also designed to be lightweight and easy to carry, ensuring that travellers can move effortlessly through airports and other travel hubs.

### 4.0 ADVANTAGE/IMPACT/RESULTS/NOVELTY

The novelty of VacBag lies in its unique combination of features, which sets it apart from traditional luggage and packing solutions. The incorporation of vacuum-sealed storage, built-in compartments, adjustable dividers, and GPS tracking make VacBag a game-changer in the travel industry.

The commercialization potential of VacBag is significant for several reasons:

- **Growing Demand for Efficient Packing Solutions:** As more people engage in travel for business and leisure, there is an increasing need for efficient and space-saving packing solutions. VacBag directly addresses this demand by optimizing packing and reducing luggage volume.
- **Optimized Baggage Handling:** Airlines and airports are constantly seeking ways to improve baggage handling processes. VacBag's built-in GPS and identification smart chip can streamline luggage tracking, reduce the incidence of lost baggage, and enhance the overall travel experience for passengers.
- **Improved Traveler Satisfaction:** By simplifying the packing process, reducing luggage weight and volume, and offering convenience features like GPS tracking, VacBag has the potential to significantly improve traveller satisfaction. Happy customers are more likely to recommend the product to others and become loyal users.

## 5. CONCLUSION

VacBag is a groundbreaking innovation in the world of travel and luggage solutions. With its unique combination of features designed to simplify packing, reduce luggage weight and volume, and enhance convenience, VacBag is poised to revolutionize the way travellers prepare for their journeys. Its potential for commercial success is high, driven by the increasing demand for efficient packing solutions and the need for optimized baggage handling processes in airports. In a world where travel is a fundamental part of modern life, VacBag offers a distinct advantage by improving handling quality, simplifying logistics, and providing trouble-free storage for travellers. It is an innovative solution that promises to redefine the packing experience, making travel more convenient and enjoyable for everyone.

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