



UNIVERSITI  
TEKNOLOGI  
MARA

Universiti Teknologi  
MARA Melaka

**V-MIEX**

28 JUNE  
06 JULY

2022

VIRTUAL-MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION

ROAD TO COMMERCIALISATION

**V-MIEX BOOK**



# V - MIIEX BOOK

## 'ROAD TO COMMERCIALISATION'

#### EDITORS AND COMPILERS:

Dr. Nur Hayati Abd Rahman  
Dr Syukri Abdullah  
Wan Hasmat Wan Hasan  
Aini Qamariah Mohd Yusof  
Norazlan Anual  
Dr. Khairunnisa Abd Samad  
Nordianah Jusoh @ Hussain  
Rozana Othman  
Norlela Abas  
Azira Rahim

#### COVER DESIGN:

Adi Hakim Talib

#### PUBLISHED BY:

Division of Research and Industrial Linkages  
UiTM Cawangan Melaka  
KM26 Jalan Lendu,  
78000 Alor Gajah, Melaka  
Tel: +606-5582094 / +0606-5582190 / +606-5582113  
Email: [miixuitm@gmail.com](mailto:miixuitm@gmail.com)  
Website: <https://www.miiex.my/>  
ISBN: 978-967-2846-04-8

All right reserved. No parts of this publication may be produces, stored in retrieval system or transmitted in any form by any means, electronic, mechanical, photocopying, recording, or otherwise without permission of the copyright holder.

# FOREWORD

ASSOC. PROF TS. DR MOHD RASDI ZAINI  
Rector  
Universiti Teknologi MARA (UiTM) Cawangan Melaka



Welcome to Virtual-Melaka International Intellectual Exposition 2022 (V-MIIEEX 2022). It is an honour for me on behalf of UiTM Melaka Branch to thank all of you for joining the programme and we are proud to inform you that this is the 12th year consecutively, UiTM Melaka Branch is organizing this exposition.

V-MIIEEX 2022 is a platform to improve the commercialization collaboration among industries and communities and at the same time, we also give the opportunity to academicians and students to share ideas and increase their potential innovation products with the industries and communities through their projects. This exposition also serves as a platform to cultivate and upload the nation's innovation culture by presenting new ideas and research by young people, especially from academia, universities, college, high schools, and primary school students.

The economy and development of the country faced a challenging phase in 2021 due to the Covid-19 pandemic. We faced changes in business, education, society, and lifestyle. However, the pandemic proved to be a blessing in disguise as it somehow gave people ideas which would be beneficial to improve their lifestyle and solve problems that might occur in the future. Besides, the new digital landscape also inspires more innovation and new ideas that contribute to various activities such as business and industries. As a university that encourages the "Research, Innovation and Commercialization", this exhibition is organized to encourage more commercialization of products that are beneficial to scholars, industries, and communities to tackle such issues to improve our present and future life.

Since 2009, UiTM Melaka Branch has successfully become the organizer for this innovation exposition. We are not only successful in organizing the exposition, but I would proudly say that we have also successfully embarked on commercialized products. With the number of participants for this year's exhibition, we believe that more commercialized products will be produced in line with the theme for this year, "Road to Commercialisation".

This exposition would never happen without dedication, teamwork, and commitment. A round of applause should be given to the committee teams as the backbone of this exposition. Their hard work, effort, and time made this exposition possible.

Finally, I would like to conclude this brief remark by thanking all the participants and stakeholders for joining the exposition, we hope that this collaboration never ends here.

Thank you.



**DR. NUR HAYATI BINTI ABD RAHMAN**  
Deputy Rector Research & Industrial Linkages  
Universiti Teknologi MARA (UiTM) Cawangan Melaka

It is a great pleasure to welcome all the participants and presenters to the Virtual Melaka International Intellectual Exposition (VMIIEX 22). I am delighted that through this periodic event, we managed to bring together scholars and professionals from various fields to engage through this virtual platform where ideas and breakthrough are discovered and leveraged for commercialization potential.

Since 2009 UiTM Cawangan Melaka has held twelve Invention and Innovation Design competitions and this year we are very honoured to have the second year of VMIIEX organized in digital platform. This has proven that despite the global challenges due to the recent pandemic, it is never an issue for UiTM Melaka to continuously organize this yearly prestigious event and to support the ministry's aspiration in leveraging creativity and innovation in the new norm.

VMIIEX 22 is organized with no sole objectives of accomplishing the University's KPI but instead we are determined to make this programme as the place to help heighten commercialization collaboration in research and innovation with the industry and community through joint exhibitions from various external organizations.

Our aspiration is to also provide exposure and opportunities to academic staff as well as students from public and private universities to engage in direct excellent scholarly activities with the industry and community through activities that can be measured and assessed. As for the Research and Industrial Linkages Office of UiTM Melaka, this exhibition is seen as the platform that can encourage active collaboration and knowledge transfer with industries; objectively to support various activities that will benefit all stakeholders from the various government agencies, local and international universities, industries and communities.

Through the theme of "Road to Commercialization" this year, V-MIIEX 22 is committed to have this event as a boulevard to inspire and cultivate creativity and innovation to the numerous levels of inventors through exposure on latest technologies, astonishing ideas and creative designs with great potential to be commercialized. For this year, we proudly introduce a special category which is the "Endemic Challenge" as the provision to the government of Malaysia's goal of moving towards the endemic.

To ensure that the competing products in this exhibition is not exclusively for the purpose of competition, V-MIIEX 22 is dedicated for the commercialization of highly potential innovation products, which is attained through its active collaboration with tailored needs industries. The commercialization effort was not for income generation purpose only but it aimed to spearhead the development of quality products in line with industrial needs and community benefit.

Therefore, it is a great honour for me on behalf of the Research and Industrial Linkages Office as well as the organizing committee to have all participants in this competition and I would like to express my highest gratitude especially to the Rector of UiTM Melaka and all strategic partners and sponsors for supporting the event.

To finish, I sincerely wish VMIIEX 22 a remarkable success. I believe that this will not be the only collaboration between UiTM Melaka and the respective partners and linkages, but a beginning of a long and fruitful cooperation in future.

Thank you very much.

*road to commercialisation...*

**WAN HASMAT WAN HASAN**  
Project Director V-MIIEEX 2022  
Universiti Teknologi MARA (UiTM) Cawangan Melaka



Assalamualaikum and Warmest Greetings.

It gives me an enormous pleasure, on behalf of the organizing committee to welcome all participants and presenters to the Virtual -Melaka International Intellectual Exposition 2022 (VMIIEX '22) with the theme "Road to Commercialisation". We are honoured and glad to welcome all participants to this biennial event.

This is the second time that we have organized this biennial event virtually. V-MIIEEX 22 is an innovation competition, in which, innovation products, ideas and systems related to various science and technological fields are exhibited as a solution for the presented problems.

V-MIIEEX22 expectantly will be a platform that gathers experts from academies, scientists, and researchers, locally and internationally, to contribute towards the growth of scientific and technological knowledge in each participant's specialisation and expertise.

The competition also serves as a platform to give fresh exposure to the various level of inventors, as well as to encourage the culture of innovation design focused on latest technologies and related to new norms technologies and inventions due to COVID-19.

V-MIIEEX 22 is also hoped to be an avenue for gathering and disseminating the latest knowledge on ideas and acquisition of innovation among the participants. It is hoped that the competition will be able to open the mind of the participants towards latest technologies and design. It is also in line with the government's aspiration to encourage innovation activities in Malaysia.

As a final note, I would like to congratulate my fellow committee members for their tremendous effort, which have been critical to the event's success. In addition, I would like to thank our co-organizer, event sponsors and supporters. Optimistically, we wish that all new knowledge that is discovered, invented, or innovated will drive towards our future sustainability.

Thank you.

# ABOUT V-MIIEEX

The world after COVID-19 is unlikely to return to the world that was. Despite the challenging pace during the pandemic, the strong rebound is expecting in this exciting year 2022. Malaysia is welcoming the great prospects ahead with positive impact on the country's economy and development. Hence, the hope for greater opportunities motivates for more creative thinkers to come up with innovative ideas that can be put forward to be harnessed to overcome similar problems in the future. V-MIIEEx 2022 is one of these platforms which contribute relevant ideas that could help communities of all walks of life cope with this pandemic.

UiTM has identified research, innovation, and commercialization to be among the core components and strategic effort towards becoming a well-known and prominent university. Aside from realizing this goal, with these components and efforts, fostering the development of knowledge, generating financial stability of the university, and producing knowledgeable academicians are also potentially achievable.

By having invention and innovation competition yearly, UiTM Cawangan Melaka is confident that it could further enhance creative and innovative abilities among staff and students. In support of the government notion which upholds the importance of innovation, UiTM Cawangan Melaka has taken the initiative of organising the Virtual Melaka International Intellectual Exposition (V-MIIEEx).

In instigating and nurturing the continuous culture of inventing and innovating, this event is an ideal platform for lecturers, administrative staff, students, and the public to showcase and commercialize their products or prototypes as well as novel ideas. The first IID which was held nationally in UiTM Cawangan Melaka in 2009, has successfully gathered and displayed more than 37 inventions and innovations. Accordingly, to continue this strong passion towards inventing and innovating, the IID competition should be continued and celebrated.

With that, the Division of Research and Industrial Linkages will be organising its 12th IID competition, the Virtual - Melaka International Intellectual Exposition (V-MIIEEx 2022) with the theme, 'Road To Commercialisation'. V-MIIEEx 2022 hopes to welcome 200 competing products to be showcased and commercialized, at the same time, attract attention of related and matching industry.

## Objectives

1. Encourage and instill passion towards inventing and innovating among UiTM Cawangan Melaka staff, students and academicians of local and international higher education institutions;
2. Highlight distinguished talents of skillful inventors and exhibit intellectual products, inventions and innovations among local and private tertiary institutions, government and private agencies, including international participants;
3. Become an effective Business Matching platform for participating research products, matching industries and partnering government agencies;
4. Recognise, inspire and promote invention and innovation products to be patented and commercialized;
5. Increase passion towards inventing and innovating through research and boost interests of government and non-government agencies to obtain consultancy services from a line up experts of higher education institutions and UiTM Cawangan Melaka.

# OTEHIVE.CO TOTE BAG

Alyssa Gabrielle Lo<sup>1</sup>, Gillian Sikajat<sup>2</sup>, Ahmad Salehur Raziqin Norfin Bin Firmalis<sup>3</sup>,  
Muhammad Syafiq Bin Rosli<sup>4</sup>, Nurul Laila 'Ayunni Binti Abd Rahman<sup>5</sup>, Madam Rafidah  
Abdul Azis<sup>6</sup>

<sup>1,2,3,4,5,6</sup> Universiti Teknologi Mara (UiTM), Kampus Alor Gajah, Melaka

alyssagabrielle293@gmail.com

## Abstract

In light of the constant problems revolving around traditional canvas tote bags, ToteHive.Co aims to bring a multi-functional tote bag that resolves the flaws of traditional by bringing our consumers much needed functionality and sustainability whilst still adhering to the aesthetic of traditional tote bags. As users of traditional tote bags, we have found that users battle with its functionality as well as it's sustainability as items carried tend to be in a clutter and cannot hold as many items in one sitting.

As an eco-friendly company, we want to change views of tote bags by giving users multi pockets inside and outside of the bag (laptop sleeve and bottle holder included) as well as including a water-resistant finish by using a Durable Water Repellent (DWR) finishing on the outer layer of bags to improve its sustainability.

Our objectives are to provide our users with a sustainable, eco-friendly tote bag that has a high functionality whilst still maintaining the traditional aesthetic of canvas tote bags. We believe that our product has a high potential of commercialization as tote bags have been booming in the market and we want to put an edge to it's design by answering the problems of tote bag users around the world.

Keywords: Sustainable 1, Functional 2, Eco-friendly 3, traditional aesthetic 4

## 1. INTRODUCTION

Functionality and sustainability are important aspects of our tote bags as we aim to deliver an eco-friendly solution to our canvas tote bag users by providing high functionality as well as sustainability which proves to be an edge to the traditional canvas tote bags. As avid users of tote bags, we have found flaws in which the traditional tote bags have that shuns its simple versatility and ease of use. These flaws include functionality as well as sustainability problems.

## 2. OBJECTIVE

ToteHive.Co aims to provide our consumers with a multi-functional, versatile and simple tote bag that has multiple pockets that includes multiple pockets, an inner laptop sleeve and bottle holder as well as pockets outside of the bag to help users organize their items and avoid any cluttering inside the bag. Other than that, we also aim to provide an eco-friendly and sustainable alternative to canvas tote bags which have proven to not be as durable and eco-friendly as what they claim. In ToteHive.Co we want our products to be durable by using quality non-woven

cotton canvas material with a Durable Water Repellent (DWR) finishing that will not only be more eco-friendly but as durable over the years.

### **3. NOVELTY AND INVENTIVENESS**

As an added novelty to the traditional tote bag, ToteHive.Co tote bags have an added functionality that helps users to organize their items in their tote bags which helps them declutter easily by adding multiple pockets for all types of items that an individual might carry in their bags. We also add a water repellent (DWR) finishing for added durability as canvas tote bags are prone to getting wet all the time. Moreover, for a more personal touch to our bags, we provide an embroidery service of any design by using high-quality Perle cotton thread. With these, we facilitate all needs of any tote bag enthusiast by putting an edge to our bags that will not only accessories one's outfit but also provide a higher function to our consumers.

### **4. PRACTICALITY AND USEFULNESS**

Decluttering and organization are crucial for any bag user as it eases any individual to locate their items quickly without going through the hassle of rummaging in your bags. We believe that our totes will help in that aspect and will be proven useful to anyone with multi-pockets for easier access and organization. With a DWR finishing, our totes may also have a water-resistant element that may prove to protect sensitive items in the bag. With these added attributes, our tote bags still maintain ease-of-use and versatility whilst maintaining a traditional tote bag aesthetic that thrives in this generation.

### **5. CONCLUSION**

In conclusion, we believe that any user of tote bags will benefit greatly by purchasing our product as it puts an edge from traditional tote bags which do not have an added function and durability. ToteHive.Co tote bags provides a highly functional, sustainable and personal touch to our bags which greatly promises quality to all our users.

### **REFERENCES**

- Adiya, K. (2021, April 12). *The Ultimate Guide to the Best Tote Bags - Everything You Need to Know About Totes*. Retrieved from Tote Bag Factory.com: <https://totebagfactory.com/pages/canvas-tote-bags-guide#:~:text=The%20main%20purpose%20of%20a,tents%2C%20backpacks%20and%20other%20items>.
- BAKSHI, P. (2021, August 26). *There's A Canvas Tote Bag Crisis?* Retrieved from Refinery29: <https://www.refinery29.com/en-au/canvas-tote-bag-sustainability-crisis>