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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

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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
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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.

FOREWORD



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.

ediBag

Zareef Hidayat Zulkiflee¹, Irfan Syaqr Sukimin¹, Raja Muhammad Haikal Raja Mohd Roslan¹, Muhammad Amiruddin Huzafah¹, Nor Azmawati Husain² & Khalilah Ibrahim²

¹Faculty of Computer and Mathematical Sciences (FSKM), Universiti Teknologi MARA (UiTM) Melaka, Jasin Campus, 77300 Merlimau, Melaka, Malaysia

²Faculty of Business Management (FBM), Universiti Teknologi MARA (UiTM) Melaka, Jasin Campus, 77300 Merlimau, Melaka, Malaysia

zareefhidayat03@gmail.com, noraz462@uitm.edu.my

Abstract

Watching a movie? Orthodoxly, the go-to-movie snack would be popcorn. It is the perfect snack to munch on while watching that long awaited film. But halfway through the movie the snack will always run out and you are only left with an empty box that is just a waste of space and dangerous for the environment. And that is where edible popcorn bags will change everything. Edible popcorn bags are the sustainable concept that uses edible plastic to switch from non-consumable to consumable packages to hold the popcorn. After you done eating the popcorn then later you can start munching on the bag itself. Even if it is thrown away it is safe for the environment because it is biodegradable. With this novel innovation, recycling will be a burden in the past since the product itself is edible and if it is thrown it will just naturally decompose. The edible popcorn bag would not be restricted to only one flavor but the bag itself can be flavored to appeal to a variety of consensus. The debut of this product potentially at the cinema but the edible plastic can be used in a variety of other sector and hope that it will catch on in the future of the food industry. The goal of this innovation is to minimize plastic wastage and to create an alternative to classic plastic food packaging.

Keywords: Edible Popcorn Bag, Innovative, Biodegradable, Plastic Waste.

1. INTRODUCTION

Plastic packaging has its advantages and disadvantages. Some of the advantages for plastic packaging are: it helps to protect and preserve foods, it is easy to carry many items and it reduces weight in transportation. On the other hand, the disadvantages of plastic packaging outweigh the advantages because recklessness of using plastic can become a major threat to the environment. It would be perfectly fine if people around the world practice recycling more actively. However, the problem is that percentage of people practise recycling is very minimum. Our local newspaper reported only 31.52% of Malaysia practise recycling in their daily lives even regardless of many campaign and awareness programmes conducted at all level. Therefore, the reduction of plastic pollution is becoming a primary priority of every nation around the globe.

2. OBJECTIVE

The major objective of this innovation is to minimize plastic wastage targeted to cinema industry. Edible popcorn bags eliminate plastic wastage for cinemas so that the consumers can eat the popcorn bag. If the customer have no intention to eat the bag, it sustainable and friendly

to our environment since it is a biodegradable plastic.

3. NOVELTY & INVENTIVENESS

The uniqueness of ediBag is that people who go to the cinema would be at ease since they do not have to worry about the used popcorn bag since it is edible. ediBag should be used instead of an ordinary regular popcorn bag for a better environment and a clean cinema since it reduces plastic waste that is scattered and useful for its practicality too. People may enjoy eating popcorn without being bothered by the used popcorn bag since it can be eaten afterwards. It also comes with a variety of flavours and different sizes such as small, medium and large. What's more about this product, it also has the potential to be a snack bag for other than popcorn such as potato chips, chicken popcorn, mini hotdogs and many more. By this, it can be commercialized widely and the usage of the edible bag can be broadened.

4. PRACTICALITY & USEFULNESS

Popcorn is common snack while watching movies at the cinema, so in this scenario it can also act as a snack after the popcorn itself is finished and if the bag is not eaten it won't damage the environment as it will just decompose safely due to it being biodegradable. The edible bag itself can be used with a variety of different types of snacks and not only limited to popcorn. Its major game changing capabilities is that it can be eaten. It might seem underwhelming but it can have a huge positive impact on our environment as it would not further damage our green earth.

5. CONCLUSION

Overall, ediBag is an edible bag that is designed as popcorn containers and it also can be a snack bag for other snacks such as potato chips, chicken popcorn and mini hotdogs. This special bag is created using edible plastic that can be consumed by anyone. It comes in multiple different flavors and sizes. Due to its edible nature, ediBag becomes a biodegradable product which means it is environmentally friendly and can become an alternative to normal plastic bags. Hence, it should help reduce plastic pollution in the world. The goal of this innovation is to find a new way of combating plastic pollution which is by reducing the usage of plastic in the cinema or even in the world. Hence Malaysian can reach the target of recycling at 60% like other developed nations. No more hassle to practise sustainable life, just much the ediBag.