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VIRTUAL-MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION

ROAD TO COMMERCIALISATION

V-MIEX BOOK



V - MIIEX BOOK

'ROAD TO COMMERCIALISATION'

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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.



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.

Multipurpose Smart Bag Detector (MSBD)

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Abstract

There are a lot of bags released everyday with different pattern, size, function and more. But, there are rarely to see the market release a bag that added safety features. Our idea is inspired by the current issues regarding the lost bag because of carelessness or stolen. The objective of this product is to help them to track their backpack and to ensure they will not loss their belongings especially their backpack. Multipurpose Smart Bag Detector (MSBD) is made up from two combination of products which are backpack and a chip. It is designed as a backpack that can be used by anyone especially student, traveller, and hiker. The size of backpack is adjustable, and it is made up from the most durable and waterproof backpack material, which is nylon and comes with different colour, the backpack will be equipped with a chip that will be hidden inside a tiny compartment. Users can track their backpack using application known as MyMSBD. The MSBD is to make things easier for the users to pack up their belongings and to trace their backpack if their backpack is stolen and misplaced. This application has safety features such as SOS button. User can download the application and connect it with the backpack. The comes with five different languages. The potential to commercialize this product by advertise, promote and more. We are focusing on creating new concept that is not mainstream but giving benefits to the society especially students and travellers.

Keywords: safety, features, lost, stolen, track

1. INTRODUCTION

Bags are used in a variety of everyday activities to make it easier for users of all ages to carry their belongings. There are now many other types of bags offered, including luggage, backpacks, purses, and more, all with unique patterns, capabilities, and prices. Nevertheless, most of the bags on the market lack a safety feature. Several students and traveller frequently lose their backpacks and luggage but are unable to track and detect them. Their valuable items may have been stolen or lost due to their own negligence. As a result, adding safety features will make it easier for them in reclaiming their belongings.

2. OBJECTIVE

We created the Multipurpose Smart Bag Detector (MSBD) because we want to help user could keep track their backpacks easily if they lost their backpack. MSBD comes with tracker that has a Motion Warning Detector that can detect 200m or more where it will send an instant loss report to the smartphone. The backpack comes with a safety future application that allows them to track their backpack simply and conveniently. This will reduce the number of cases where a backpack is misplaced or stolen.

3. NOVELTY & INVENTIVENESS

The significance of our product is our backpack and known as Multipurpose Smart Bag Detector (MSBD) are equipped with small and hidden GPS and comes with applications known as MyMSBD. For safety purposes, the small size GPS is installed in any part of the MSBD. The user can download the application on their smartphone and computer. The MSBD is compatible to be connected with all types of devices. The user needs to connect the MSBD with MyMSBD using Bluetooth. The application comes out in five languages which are Malay, English, Spanish, French and Chinese. The owner can set the maximum radius for them to get notification from the application. They will be notified when the backpack is far from the radius that has been set. We also add emergency button in our applications for them to get help whenever the user is not under safe situation, or their backpack got stolen. The user can add around three to five contact number under emergency features. The size of MSBD is adjustable. It is a backpack with two size that are separated by the zip to save more space. When the owner wants to use more space or carry more item, they just need to unzip the zip that located at the bottom of the backpack. For more convenient, we also add sponge and strap to minimize backpain for the user. To ensure the backpack are protected from the change of weather, the MSBD are made with waterproof and durable material such as nylon. It suitable for students and traveller. Our backpack comes with five colours which are black, white, green, blue, and pink. They are pockets at both side of the MSBD that is suitable for water bottle, or any accessories needed by the users. Lastly, it also comes out with compression strap and sternum strap to ensure the user will have less back pain while using our product.

4. PRACTICALITY & USEFULNESS

The MSBD is easily to be tracked by the owner since it connected with their smartphone. The owner will get notifications whenever their backpack is not in the radius that has been set by themselves. This will be helpful to reduce the issue regarding the loss of their backpack. At the same time, they also can get back their own backpack or belongings.

5. CONCLUSION

It is critical everyone to be aware of theft situations that will lead to valuable losses. Users should not have to worry about losing their backpack because they can always monitor the location with MyMSBD. This backpack is ideal for everyone to use, especially students and traveller, since it has a variety of convincing features, including safety features, as well as being simple to install and user-friendly.

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