

MELAKA
INTERNATIONAL
INTELLECTUAL EXPOSITION

MIIEX'24

12 JUNE '24

Dewan Taming Sari,
Universiti Teknologi MARA Caw. Melaka,
Kampus Alor Gajah, Melaka

*"Empowerment of Special
Needs through Invention
& Innovation"*

**EXTENDED
ABSTRACT**

MiiEX'2024

MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION 2024
**“EMPOWERMENT OF SPECIAL NEEDS THROUGH INVENTION AND
INNOVATION”**

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UiTM Cawangan Melaka
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Melaka Bandaraya Bersejarah
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MiiEX'2024

MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION 2024

**“EMPOWERMENT OF SPECIAL NEEDS THROUGH INVENTION AND
INNOVATION”**

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INNOVATION, INVENTION, AND DESIGN

FOREWORD BY THE RECTOR OF UiTM CAWANGAN MELAKA



Professor Ts. Dr. Mohd Rasdi bin Zaidi

Rector, Universiti Teknologi MARA (UiTM)

Cawangan Melaka

Welcome to the Melaka International Intellectual Exposition 2024 (MIIEX '24). It is an honour for me, on behalf of UiTM Cawangan Melaka, to thank all of you for joining MIIEX '24. We are proud to inform you that this is the 13th consecutive year that UiTM Cawangan Melaka is organizing this exposition. Since 2009, UiTM Cawangan Melaka has successfully hosted this innovation exposition. Not only have we succeeded in organizing the exposition, but we have also successfully embarked on commercialized products.

2024 is a special year where MIIEX 2024 emphasizes the development of special needs. As we know, special needs indicate a limitation in a person's ability to engage in and benefit from various aspects, such as daily activities and education. Hence, with the theme "Empowering Special Needs Through Invention and Innovation," it is a platform for industries, professionals, academicians, students, and communities to share their innovative ideas and products to increase accessibility for those with special needs.

The successful implementation of MIIEX '24 is our joint success. This event was supported by the Melaka state government through YB Datuk Fairul Nizam bin Roslan, the EXCO of Science, Technology, Innovation, and Digital Communication. I also want to express my

gratitude to Universitas Negeri Padang, Indonesia, Universitas Muhammadiyah, Makassar, Indonesia, the International Association of Economic and Businesses (IAEB), Universiti Sains Islam Malaysia, Ibnu Umami Maktum Research Center (UMMI), USIM, and The Southeast Asia Minister of Education Organization Regional Centre for Special Educational Needs (SEAMEO SEN) as our co-collaborators for MIIEX 2024.

The collaboration from various parties in MIIEX '24 is a platform that will improve cooperation and interweaving among industries, professionals, academicians, students, and communities in shaping their potential in developing innovation products. This exposition also serves as a platform to cultivate and uphold the nation's innovation culture by presenting new ideas and research by young people, especially from academia and universities. Indirectly, MIIEX '24 will encourage all inventors towards empowering Science, Technology, Engineering, and Mathematics (STEM), especially in primary and secondary schools.

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 "Research and Innovation," we aim to foster more innovative products that benefit scholars, industries, and communities, addressing issues to improve our present and future life.

This exposition would never happen without dedication, teamwork, and commitment. A round of applause should be given to the committee teams, who are 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 BY THE DEPUTY RECTOR (RESEARCH & INDUSTRIAL LINKAGES)



Associate Professor. Dr. Nur Hayati binti Abd Rahman

Deputy Rector (Research & Industrial Linkages), Universiti Teknologi MARA (UiTM) Cawangan Melaka

With much passion and privilege, let me warmly welcome all of you to the Melaka International Innovation Exhibition (MIIEX), UiTM Cawangan Melaka's flagship event. I firmly believe that events such as these demonstrate the gradual evolution of this platform in terms of its significance and its governing principles within the sphere of learning and the broader scholarly society.

The theme for this year, "Empowering Special Needs Through Invention and Innovation," strongly connects to our mission of using research and technology to make a positive impact on the world we live in. Besides enforcing the message of diversity, this theme also reaffirms our focus on creating products to improve the lives of people with disabilities (PWDs). Such innovations are vital as only through focused constructive changes can society become more sensitive to the needs of all members.

MIIEX allows researchers, students, and industry professionals to come together, share their innovative research, and develop viable research partnerships. It has been great to see the enthusiasm of the participants and the efforts they put into their projects, which can offer various social and economic benefits. This is why one can state that MIIEX is a great

opportunity for creating connections between the academic environment and industry, facilitating the implementation of innovative and promising projects.

Finally, I would like to express my sincere appreciation to all the members and supporters of the organizing committee, all the participants, sponsors, and everyone involved in preparing this event. I want to express my gratitude for your commitment and involvement, as the success of MIIEX and the development of an active culture of innovation in our university and beyond is partly owed to your support.

Thank you

FOREWORD BY THE PROJECT DIRECTOR



Dr Zulkefli bin Muhamad Hanapiyah

Senior Lecturer

Assalamualaikum and Warmest Greetings,

It gives me a great pleasure, on behalf of the organizing committee, to welcome all participants and speakers to the Melaka International Intellectual Exposition 2024 (MIIEX '24) with the theme "Empowering Special Needs Through Invention and Innovation." We are honoured and pleased to welcome all participants to this biennial event.

MIIEX '24 is a platform that gathers experts from local and international industries, academia, scientists, researchers, and the community to contribute to the advancement of scientific and technological knowledge. This knowledge helps develop disruptive innovation products that improve daily activities for businesses and the community, especially those with special needs.

MIIEX '24 provides an atmosphere for inventors of all levels to gain new exposure and collaborate. Indirectly, this promotes a collaborative and innovative culture that focuses on cutting-edge technologies and new standards in technology and creativity.

MIIEX '24 is anticipated to serve as an arena for participants to acquire and disseminate revolutionary information on ideas and innovation. It is intended that the competition will expose the contestants' minds to the latest technologies and designs, aligning with the government's goal of encouraging innovation in Malaysia.

Finally, I want to compliment my fellow committee members on their amazing efforts, which were vital to the event's success. In addition, I want to thank our co-organizers, event sponsors, and participants. Optimistically, we hope that all new knowledge discovered, invented, or innovated will lead us toward future sustainability.

Thank you.

**FOREWORD BY MELAKA STATE EXCO OF SCIENCE, TECHNOLOGY,
INNOVATION AND DIGITAL COMMUNICATIONS**



YB Datuk Fairul Nizam bin Roslan

Melaka State Exco of Science, Technology, Innovation and Digital Communications

Welcome to the Melaka International Intellectual Exposition 2024 (MIIEX '24). It is an honor for me, on behalf of UiTM Cawangan Melaka, to thank all of you for joining MIIEX '24. We are proud to inform you that this is the 13th consecutive year that UiTM Cawangan Melaka is organizing this exposition. Since 2009, UiTM Cawangan Melaka has successfully hosted this innovation exposition. Not only have we succeeded in organizing the exposition, but we have also successfully embarked on commercialized products.

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Thank you.

MIIEX'24 ORGANISING COMMITTEE

COMMITTEE	NAME
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	DR NORASHIKIN ADAM
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	AFZAN SAHILLA BINTI MOHD AMIR HAMZAH
	MUHAMMAD FURQAN BIN AZHAR
	KHAIRUL AZHAR BIN LOCHMAN

ABOUT MIIEX'24

MIIEX'24 is an innovation competition annually organised by UiTM Melaka with the intention to bring together ideas and inspiration that could fit in for commercialization needs.

This event creates a platform for researchers to establish networking, partnership and opportunities to collaborate with industries.

OBJECTIVES

1. Encourage and instil 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 skilful 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.

THEME

'EMPOWERMENT OF SPECIAL NEEDS THROUGH INVENTION AND INNOVATION'

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InventNic (Investment Application for Visual Impairment)

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Abstract

In this modern era, investment is a piece of property as well as an object purchased with the intention for producing income and appreciation. As we know, the demand for the mobile application keeps increasing from day to day. However, there aren't many mobile applications that are appropriate for persons with impairments, especially applications for visual impairments. For version impairment person, , investing applications provide a portal to financial independence, allowing them to manage their accounts from home and explore investment alternatives , given their restricted capacity to obtain financial resources to support their expenses. However, the lack of accessibility to these programmes might make it difficult for users to learn how to invest and understand the direction of their investments. With this, we have come up with the idea to make an investment application specifically for visual impairments to generate income through investing in applications that are particularly suitable for them.

Keywords: investment application, visual impairments, gain profit, secure transactions

1. INTRODUCTION

Financing for visual impairment within banking systems addresses the critical need for financial services tailored to people with visual disabilities, with the goal of removing the barriers to financial participation and independence it can make it easier for them to do any investment by using Inventnic apps. This app includes a variety of measures such as incorporating voice-activated instructions, providing audio descriptions, NFC payments by tapping credit card on the phone, and notification price alert. Banking systems that prioritize accessibility and inclusivity can help people with disabilities manage their finances more effectively, gain access to credit and savings, and participate in investment by encouraging greater financial autonomy and social inclusion.

2. OBJECTIVE

The purpose for our product is to make sure that the visually impaired people can use the application to increase their profit through the side job which is investing instead of just working in a daily life. We know that with this application, it can make the visually impaired people feel that they are being appreciated since not only just normal people invest, but they also can take part in investing and generating wealth quickly for their future. Besides, the visually impaired people no need to go to the bank just to make an investment and get help from the bank since this application has a complete voiceover from the AI to explain it to them.

3. NOVELTY & INVENTIVENESS

Our idea to develop the investment application which is InventNic for specified groups of people, such as persons with visual impaired, is something new that has not yet been done for these types of people in the market. None of the banks has done this type of application yet that specialised for people with visual impairment such as Bank Rakyat, CIMB and Alliance bank. Some of the people with this impairment do not have a chance to make an investment as they did not get exposure on how to invest stock the same as other normal people. Investment in stock is not something that can be easily done without any guidance. As a solution, we want to solve this problem by creating this application that can assist in simplifying their lives using investment applications that include voice command features. The features will incorporate voice-activated instructions to make trades such as buying and selling stocks, check account balances and do other typical investment activities. There will be no concern for the users of the application to do transactions during investing without worrying that they might not understand the command. As

a result, the InventNic (investment application) is an excellent solution for persons who have visual impairments.

4. PRACTICALITY & USEFULNESS

InventNic is very workable for visually impaired persons in order to interact with organizations that specialize in assistive technology to guarantee smooth integration and usability for visually impaired individuals. For instance, using speech command by connecting with speech recognition technology, users may operate the programme and conduct operations using voice commands. This function enables visually impaired people to carry out transactions, check their account balances and access information hands-free to buy and sell the shares. It will also give instructions step by step while providing the latest information about the stock correctly to the buyers. Besides, by prioritizing strong security measures, it helps to protect users' financial data and transactions like multi-factor authorization to prevent any misinformation. This verification feature in the app will assist the buyers to double check purchase details before paying the amount to prevent them from purchasing the wrong stock. The investment application can be super helpful because it allows individuals with visual impairment to make investments independently. They can make investments like how normal people do with special features in this application. Lastly, they can take control of their investment activities and make investment decisions that align with their financial goals.

5. CONCLUSION

This Inventnic app innovates specifically for people with visual impairment and offers a chance to fund that increase accessibility and enhance the quality of life for those who are interested in investment. Investments in user experience, innovation, and accessibility standards can have a good social impact in addition to financial gains. Also, it shows that visual impairment people also can increase their income through investment like normal people did, show proof that disable people can helps in increasing economy of the country and reduce tax investing for disable user. To fully realize the benefits of this technology, banks must prioritize user-centric design, implement strong security measures and provide comprehensive training to both employees and customers. By doing so, banks can truly transform the banking landscape, making financial services more inclusive and accessible to visual impaired people