

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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78000 Alor Gajah

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 (MIIEEX), 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.

MIIEEX 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 MIIEEX 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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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.

MIIEX'24 ORGANISING COMMITTEE

COMMITTEE	NAME
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	BUSHRA ABDUL HALIM
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	FAIQAH HAFIDZAH BINTI HALIM
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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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Savvy Coins: Personal Forced Savings Tracker Mobile Applications

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Abstract

"SavvyCoins" redefines personal finance by seamlessly integrating everyday spending with long-term investment goals. This innovative mobile application offers a novel approach to savings by capitalizing on microtransactions and leveraging the power of digital investment platforms. At its core, SavvyCoins operates on a simple yet powerful principle: rounding up everyday purchases to the nearest RM1 denomination and directing the spare change towards investments. When users make purchases using their linked bank accounts, the application automatically analyzes the transaction amounts. If the purchase amount is not already rounded up to the nearest RM1, SavvyCoins deducts the remaining cents and channels them into designated investment accounts. This approach fosters a culture of forced savings and investment, encouraging users to effortlessly accumulate wealth over time. By converting spare change into investments, SavvyCoins leverages even the smallest transactions to generate long-term financial growth. Users have the flexibility to customize their investment preferences, choosing from a range of options such as unit trust accounts, Islamic savings schemes like Tabung Haji, or private retirement schemes tailored to the Malaysian market.

Keywords: forced savings, forced investment, personal finance, mobile applications

1. INTRODUCTION

"SavvyCoins" emerges as a pioneering solution in the realm of personal finance, offering a revolutionary approach to saving and investing. By seamlessly integrating everyday spending with long-term investment goals, SavvyCoins empowers users to take control of their financial futures. This innovative mobile application capitalizes on microtransactions and digital investment platforms to transform spare change into opportunities for wealth accumulation. At its core, SavvyCoins aims to foster a culture of financial discipline and enable users to achieve their long-term financial objectives with ease. Furthermore, SavvyCoins promotes financial discipline by imposing restrictions on withdrawals from the invested amount. Users are unable to access their investment funds for a minimum period of three years, instilling a commitment to long-term wealth accumulation. The application also offers customizable settings, allowing users to adjust withdrawal restrictions based on their individual financial goals and preferences.

In essence, SavvyCoins empowers users to take control of their financial futures through a seamless integration of spending and investment. By harnessing the power of spare change and leveraging digital investment platforms, SavvyCoins enables users to cultivate a habit of savings and achieve their long-term financial objectives with ease.

2. OBJECTIVE

The primary objective of SavvyCoins is to revolutionize the way individuals approach saving and investing by leveraging the power of everyday transactions. By rounding up everyday purchases to the nearest RM1 denomination and directing the spare change towards investments, SavvyCoins encourages users to effortlessly accumulate wealth over time. Through this innovative approach, the application seeks to promote financial discipline, cultivate a habit of savings, and empower users to achieve their long-term financial goals. Additionally, SavvyCoins aims to provide users with a seamless and user-friendly platform for managing their investments, offering customizable options and tailored solutions to meet individual needs.

3. NOVELTY & INVENTIVENESS



SavvyCoins stands out for its novelty and inventiveness in redefining the concept of savings and investments. Unlike traditional savings methods, which often require conscious effort and discipline, SavvyCoins automates the saving process by capitalizing on microtransactions. By rounding up purchases and directing the spare change towards investments, the application harnesses the power of everyday spending to generate long-term financial growth. This innovative approach not only simplifies the saving process but also makes investing accessible to individuals of all backgrounds and income levels. Moreover, SavvyCoins' imposition of restrictions on withdrawals from the invested amount adds a layer of financial discipline, ensuring that users remain committed to their long-term financial objectives.

4. PRACTICALITY & USEFULNESS

SavvyCoins offers practicality and usefulness by providing users with a seamless and intuitive platform for managing their finances. The application's automatic rounding-up feature simplifies the saving process, eliminating the need for manual transfers or calculations. Users can effortlessly accumulate savings and invest them in a range of options, including unit trust accounts, Islamic savings schemes, and private retirement schemes, tailored to the Malaysian market. Additionally, SavvyCoins' customizable settings allow users to adjust withdrawal restrictions based on their individual financial goals and preferences, further enhancing its practicality and usefulness.

5. COMMERCIALIZATION POTENTIAL

The commercialization potential of SavvyCoins is vast, driven by its innovative approach to personal finance and wealth accumulation. With a growing emphasis on financial literacy and long-term planning, SavvyCoins fills a crucial niche in the market by offering a seamless and automated solution for saving and investing. The application's ability to leverage everyday transactions and microtransactions to generate long-term financial growth makes it particularly appealing to a wide range of users, including individuals seeking to build wealth, families planning for the future, and even businesses looking to offer employee benefits. Furthermore, SavvyCoins' customizable options and user-friendly interface position it as a versatile tool with broad market appeal. By capitalizing on strategic partnerships, targeted marketing efforts, and ongoing product development, SavvyCoins can unlock its full commercialization potential and establish itself as a leading player in the personal finance technology landscape.

6. CONCLUSION

In conclusion, SavvyCoins represents a significant advancement in personal finance technology, offering a transformative solution to the challenges of saving and investing. By seamlessly integrating everyday spending with long-term investment goals, SavvyCoins empowers users to take control of their financial futures and achieve their long-term objectives with ease. Through its innovative features, practical functionality, and user-centric design, SavvyCoins sets a new standard for financial management applications, paving the way for a more financially savvy and empowered society.

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