

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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GrocerGuide: Compare, Choose, Save!

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Abstract

A smartphone software called BeliBajet.my compares products and prices from several supermarkets on one platform, making grocery shopping easier for customers. The issue that has to be addressed is the lack of a single place to compare supermarket prices, which results in tiresome and inefficient trips to the market. By giving customers instant access to price, promotion, and product availability data from many stores, BeliBajet.my seeks to speed up this procedure. The goals are to give customers a more user-friendly purchasing experience and to give stores insight into the market. BeliBajet.my gathers information to provide customers with an advanced knowledge of the grocery market, allowing smart decisions for potential financial savings. It also gives stores useful information about customer preferences, which helps them to better target their promotions and prices. A user-friendly design, smart pricing comparison methods, and personalized features like shopping lists and recommendations are among the main innovations. The program encourages reasonable pricing policies, disclosure of prices, along with efficient resource management. BeliBajet.my offers advantages to public as well as business opportunities through collaborations, sponsorships, and premium memberships. To sum it up, BeliBajet.my offers a creative solution to the problems linked to grocery shopping and has the potential to transform the buying method while enhancing both customers and stores.

Keywords: Grocery shopping, Price comparison, Mobile application, Consumer convenience

1. INTRODUCTION

Grocery shopping is still an essential part of living in modern society, but it frequently requires balancing offers, prices, and product availability among multiple stores. The difficulty of comparison shopping is made harder by the lack of a central hub which speeds up the procedure, resulting in costly and ineffective market inspections. BeliBajet.my provides customers with an advanced smartphone app that makes it easy to compare items and prices across multiple supermarkets. With simplicity of a single application, BeliBajet.my intends to transform the grocery shopping experience by giving customers fast access to extensive product and prices. Having access to current information on the greatest offers from various stores allows consumers to make secure and accurate purchases. As well, BeliBajet.my gives supermarkets insightful information on consumer behavior and market trends, and the application makes it easier to take a more calculated approach to pricing and promotions. In summary, BeliBajet.my welcomes in an age of convenience by reducing the gap between consumers and retailers and serves as an influence for positive change.

2. OBJECTIVE

The purpose of this BeliBajet.my is to minimize the inconvenience and inaccuracies that come with doing grocery shopping in the conventional manner by giving customers an easy-to-use platform to compare items and prices from multiple supermarkets. The program aims to enable customers to make well-informed judgments about what to buy that are compatible with their tastes and financial limitations by coordinating this information. Furthermore, BeliBajet.my seeks to give supermarkets insightful information about consumer behavior and market trends so they may properly adjust their pricing and promotional tactics. By achieving these goals, BeliBajet.my hopes to improve consumers' overall shopping experiences while promoting increased effectiveness and competitiveness in the retail marketplace.

3. NOVELTY & INVENTIVENESS

BeliBajet.my is known for its creative solution and new feature introductions aimed at resolving the age-old problem of supermarket buying. BeliBajet.my, compared to other comparison tools, offers consumers a smooth and user-friendly interface together with advanced techniques for real-time pricing analysis and product matching. Customizable shopping lists and personalized recommendations are just two examples of its innovative approach to customer interaction, which improves the whole shopping experience.

Supermarkets are also able to obtain deeper understanding into consumer behavior and market trends which opens up opportunities for more focused pricing and marketing initiatives. In terms of innovation, BeliBajet.my establishes a new benchmark for supermarket purchasing applications.

4. PRACTICALITY & USEFULNESS

BeliBajet.my is an important resource for both customers and retailers alike because it provides novelty together with practicality and usefulness. Its usefulness is on its ability to improve the difficult task of grocery shopping, savings consumers a great deal of time through integrating data from several stores onto a single, easy-to-use application. BeliBajet.my enables consumers to make accurate purchasing decisions with easily by giving customers quick access to wide product and pricing data. This can lead to possible cost savings and improved shopping experiences. Moreover, its use extends beyond the specific needs of customers as a whole to include broader benefits to society including encouraging affordability of prices, retail market competition, and better resource management.

5. CONCLUSION

In conclusion, BeliBajet.my offers an innovative approach to resolving the issues arising from grocery buying in the age of technology. With its advanced capabilities, clear design, and usefulness, the mobile application aims to completely transform grocery shopping for customers and give retailers insightful data. BeliBajet.my enhances the buying experience and generates savings and growth prospects for the retail sector by empowering customers with information, enabling transparency, and improving efficiency. With a focus on innovation, BeliBajet.my introduces a new age of worth, simplicity, and engagement in the grocery shopping industry.

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