

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 (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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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.

MIIEX'24 ORGANISING COMMITTEE

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	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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ResQAlert

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Abstract

ResQAlert presents a life-saving innovation aimed at assisting the deaf community during emergencies by providing timely alerts through visual cues on their devices. In Malaysia, where there are 42,652 registered hearing-impaired individuals as of January 31, 2023, the necessity for specialized emergency alerts for the deaf becomes evident. The lack of such alerts and the perceived inaccessibility of traditional systems underscore the urgency for a solution like ResQAlert. ResQAlert fills a significant gap in conventional systems by offering clear and accessible alerts through visual signals, such as flashing lights, thereby enhancing safety and independence for individuals with hearing loss. Its novelty lies in its practicality, demonstrated through smartphone connectivity, remote monitoring, and customizable alarms. By providing a clear and accessible method to be informed of critical sounds and warnings, ResQAlert promotes inclusivity, independence, and safety during emergencies. This study highlights the importance of creative solutions tailored to specific community needs, contributing to a more secure and welcoming society. ResQAlert stands as a vital innovation for the deaf community, offering a solution that addresses their unique challenges and enhances their quality of life.

Keywords: ResQAlert, Deaf community, Emergency alert, Visual cues

1. INTRODUCTION

ResQAlert, is a life-saving innovation designed to assist the deaf community during emergencies. It helps deaf individuals receive timely alerts, ensuring they can respond swiftly to any crisis. However, due to the technical complexities involved, many perceive traditional emergency systems as inaccessible to the deaf, leaving them vulnerable in critical situations. There is also no legal obligation for businesses to provide specialized emergency alerts for the deaf. Yet, ResQAlert fills this gap by offering a vital solution tailored to their needs, such as notifying them of fire alarms or other emergencies through a notification that pops up on their devices when the visual alert system detects any unwanted situation. They may also utilize ResQAlert to assess their safety status, identify escape routes, and communicate with emergency responders.

2. OBJECTIVE

The primary objective of ResQAlert is to assist people with hearing loss in their daily activities with a clear and accessible way to be informed of critical sounds and warnings in their environment. This template provides a simplified and understandable process of using ResQAlert. The system employs visual signals, such as flashing lights, to alert users to events such as doorbells, telephones, alarms, fire breaks out and other important auditory cues. The system is intended to be simple and easy, allowing people with hearing loss to respond quickly and efficiently to these signals, increasing their safety and independence.

3. NOVELTY & INVENTIVENESS

With exceptional innovation and creativity, ResQAlert presents a fresh method to addressing the safety concerns of the deaf population during emergencies. Because it is specially designed to meet the needs of deaf people, it fills a huge gap in conventional emergency communication systems and guarantees their safety in dire circumstances. In contrast to traditional approaches that rely only on audio alerts, ResQAlert uses cutting-edge visual cues, such as flashing lights, to quickly alert users to critical events and dangers in their environment. This change improves accessibility while also giving deaf people the ability to react to crises with effectiveness. Additionally, ResQAlert places a high priority on inclusivity by providing a clear and easy-to-use interface that eliminates communication barriers and empowers deaf people to confidently and independently manage emergencies.

4. PRACTICALITY & USEFULNESS



ResQAlert is a system for the deaf that connects to a smartphone via Bluetooth and provides various practical benefits. It allows for easy control via smartphone, remote monitoring, and customised alarms. It also allows for easy integration with current technology. The user can keep updated in real-time about emergencies, alerts, and other notifications by having this system send notifications straight to their smartphone. This can improve accessibility. It also provides the ease of controlling settings and alarms from a visible device, encouraging deaf individuals' independence.

5. CONCLUSION

In conclusion, ResQAlert is an essential innovation for the deaf community, offering a lifesaver in an emergency due to its customisable alerts and user-friendly interface. Its innovative strategy, which makes use of smartphone connectivity and visual signals, guarantees accessibility and gives deaf people the ability to react quickly and efficiently to important situations. ResQAlert fills a gap in conventional emergency communication systems, promoting deaf people's independence and inclusivity while simultaneously improving safety. All things considered, ResQAlert is a prime example of how creative solutions can be used to meet the unique requirements of various communities, eventually promoting a more secure and welcoming society.

REFERENCES

VisualertTM All-in-One Alert System for Deaf. (n.d.). Retrieved April 29, 2024, from <https://assistivetechs.com/shop/visualert-all-in-one-alert/>

Jabatan Kebajikan Masyarakat. (n.d.). Wwww.jkm.gov.my. Retrieved March 01, 2023, from <https://www.jkm.gov.my/jkm/index.php?r=portal/contentmenu&id=WjdtTnluUS9OY0ZpMTRnVXNlZ1lSZz0>