



EXTENDED ABSTRACT



InViCCAD 2025
1ST INTERNATIONAL VIRTUAL COMPETITION OF CREATIVE
ARTS & INNOVATIVE DESIGN IN TEACHING & LEARNING



Design Innovation Academic Show 2025



Organized by



Fakulti
Seni Lukis & Seni Reka
Cawangan Kedah



اوسها تقوى موليا

Collaboration with



#perubahanluarbiasa
#ADpilihanpertama



**EXTENDED
ABSTRACT**

**Design
Innovation
Academic
Show 2025**





DIAS 2025 (Design Innovation Academic Show) is all about "Transcending the Boundaries of Creativity: Innovation in Art & Design for 21st Century Education." This vibrant program shines a spotlight on how creativity and innovation are reshaping modern education.

It consists of three key components. First up is the Mindareka Design Show, an exhibition that showcases students' final year projects and creative designs, giving them a chance to connect with industry professionals and the wider community. Next, we have the Northern Innovation Academic Tour (NIAT), which takes participants on an academic adventure to select institutions and innovation centers in the northern region, aimed at promoting knowledge sharing and building strong academic and professional networks.

Finally, there's the 1st International Virtual Competition of Creative Arts & Innovative Design in Teaching & Learning (InViCCAID), a global competition that recognizes outstanding practices in teaching and learning by blending art, technology, and innovative design. But DIAS 2025 is more than just a talent showcase; it's a powerful platform for empowering both students and educators, while also strengthening collaborations between universities, creative industries, and global communities. With its inclusive and interdisciplinary approach, this initiative strives to spark relevant, competitive, and impactful ideas and innovations that truly benefit society and push the future of education forward.



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Design
Innovation
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Show 2025



Prof. Dr. Roshima Haji Said
Acting Rector
UiTM Kedah Branch

Rector's Message

I am delighted to extend my heartfelt congratulations to the College of Creative Arts, UiTM Kedah Branch, for bringing MINDAREKA 2024 - Unleashing Your Visual Creativity to fruition. The triumphs of past MINDAREKA editions undoubtedly fueled the organization of this year's event, making MINDAREKA 2024 a reality.

MINDAREKA 2024 - Unleashing Your Visual Creativity stands as a testament to the dedication of students at the College of Creative Arts, UiTM Kedah Branch, providing them with a platform to showcase their final art projects. Beyond serving as a space for the exploration of fresh, innovative, and entrepreneurial concepts, this exhibition is poised to connect aspiring talents with potential clients and employers.

I extend my sincere gratitude to all participants whose enthusiasm and support have contributed to the success of MINDAREKA 2024 - Unleashing Your Visual Creativity. Their unwavering belief and commitment have truly brought this event to life, marking it as a resounding triumph!





Head of Faculty Message

It is an honour to introduce DIAS 2025 – Design Innovation Academic Show, held under the theme “Transcending the Boundaries of Creativity: Innovation in Art & Design for 21st-Century Education.” This significant event reflects the faculty’s ongoing commitment to fostering a culture of innovation, critical thinking, and creative exploration among our students and academic community. As we navigate the complexities of the 21st century, it becomes increasingly clear that education must go beyond traditional boundaries to embrace multidisciplinary approaches that are both relevant and future-forward.

The three core components of DIAS 2025, Mindareka Design Show, Northern Innovation Academic Tour (NIAT), and the 1st International Virtual Competition of Creative Arts & Innovative Design in Teaching & Learning (InViCCAID) which is serve as vital platforms to highlight the convergence of design, technology, and pedagogy. These initiatives not only empower our students to showcase their talents and ideas, but also create opportunities for engagement with industry leaders, academic peers, and global collaborators. The Mindareka Design Show celebrates student creativity and innovation through compelling final year projects. NIAT fosters knowledge sharing and institutional partnerships through academic visits and exchanges, while InViCCAID offers international recognition for excellence in integrating art and design into teaching and learning.

I would like to express my deepest appreciation to the organising committee, faculty members, students, and strategic partners who have worked tirelessly to bring this programme to life. Your dedication and collaborative spirit have made DIAS 2025 a reality and a reflection of our shared vision for transformative education. It is my hope that this platform will continue to inspire meaningful dialogue, cultivate groundbreaking ideas, and spark a new wave of innovation that enriches both education and society.



Mohamat Najib Mat Noor
Head of Faculty
Faculty of Arts & Design
UiTM Kedah Branch





***Industrial
Design
(Diploma)***





A SUSTAINABLE TRANSPORT DESIGN(ELECTRIC AIRPORT BUGGY FOR VIP AT KLIA) (PERODUA VELTREZ)

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ABSTRACT

This project introduces the Perodua Electric Airport Buggy, a conceptual electric shuttle designed to elevate VIP passenger experiences at Kuala Lumpur International Airport (KLIA) while aligning with Perodua's sustainability goals. The buggy prioritises passenger privacy, comfort, and seamless accessibility, providing a premium and quiet transition between terminals in an emission-free environment. Powered by a modular battery system, the buggy ensures efficient energy use, low operational noise, and reduced maintenance requirements while supporting Perodua's commitment to eco-conscious mobility solutions. Designed with sleek, modern aesthetics and premium materials, the buggy complements KLIA's architectural identity while ensuring visibility and comfort for passengers. By integrating sustainable technology within a luxury transport context, the Perodua Electric Airport Buggy represents a forward-thinking step for Perodua, addressing evolving airport transportation needs while enhancing the brand's presence in premium service sectors.

Keywords: Perodua Airport Buggy, Electric Shuttle, Sustainable Design, VIP Transport, KLIA

INTRODUCTION

As airports globally strive to enhance passenger experiences while meeting sustainability targets, there is a need for premium, eco-friendly transport solutions



within airport environments. The Perodua Electric Airport Buggy is designed in response to this demand, focusing on providing VIP passengers at KLIA with a seamless, comfortable, and quiet transfer between terminals while reducing the carbon footprint associated with airport operations. This project marks Perodua's entry into the electric mobility sector for airport environments, expanding the brand's design capabilities beyond conventional automotive design. The concept integrates a battery-electric system, ergonomic seating arrangements, and luxury finishes, ensuring that the transport experience aligns with the exclusivity expected by VIP passengers while adhering to Perodua's commitment to sustainability and modern design.

MATERIALS AND METHODS

To develop the Perodua Electric Airport Buggy, extensive digital research was conducted using design references, case studies on airport mobility systems, and sustainable vehicle technologies. Benchmarking was performed against international airport buggy designs to identify ergonomic standards, safety features, and optimal dimensions for manoeuvrability within terminal environments. Research included battery technologies, lightweight chassis materials, and premium interior finishes suitable for high-frequency use within indoor spaces. The design process included multiple sketching iterations and digital 3D modelling to refine form, passenger flow, and visual identity while maintaining Perodua's brand language. Aesthetic inspiration was drawn from the aerodynamic lines of Perodua's vehicle design DNA, while functional considerations ensured accessibility for passengers with mobility needs. Sustainable materials and modular component considerations were applied to facilitate efficient maintenance and end-of-life recyclability.

RESULTS AND DISCUSSION / FINDINGS

The final design of the Perodua Electric Airport Buggy embodies modern luxury, functional efficiency, and sustainability. The buggy features a streamlined body with smooth contours, enabling easy navigation within terminal pathways while projecting an exclusive aesthetic suited for VIP services. The color palette includes pearl white and metallic grey tones to maintain a premium appearance while enhancing visibility



in large terminal halls. Internally, the buggy includes ergonomic VIP seating with premium fabric or leather finishes, ambient lighting, and USB charging ports to ensure a comfortable and connected passenger experience. The vehicle accommodates up to six VIP passengers while maintaining sufficient space for luggage. Safety features include low-floor access, anti-slip flooring, emergency stop functions, and clear LED indicator lighting for operation within high-footfall areas. The modular battery system allows efficient overnight charging and supports continuous operational shifts with minimal downtime. Through these features, the Perodua Electric Airport Buggy delivers a refined transport experience for KLIA, ensuring Perodua's positioning within sustainable and premium mobility sectors while aligning with Malaysia's low-carbon aspirations.

CONCLUSION AND RECOMMENDATION

The Perodua Electric Airport Buggy serves as a strategic project showcasing Perodua's potential to evolve beyond land-based mass-market vehicles into premium electric mobility solutions for niche markets such as VIP airport services. The buggy successfully merges luxury, functional design, and sustainable technology while reflecting Perodua's design language and commitment to environmental stewardship. The project recommends further development focusing on battery optimization, integration of IoT monitoring systems for fleet management, and user testing within KLIA environments to refine ergonomic and operational performance. This concept lays the groundwork for Perodua's expansion into specialized electric mobility solutions, aligning brand identity with future-ready, sustainable transport innovations within Malaysia's rapidly developing transport infrastructure.

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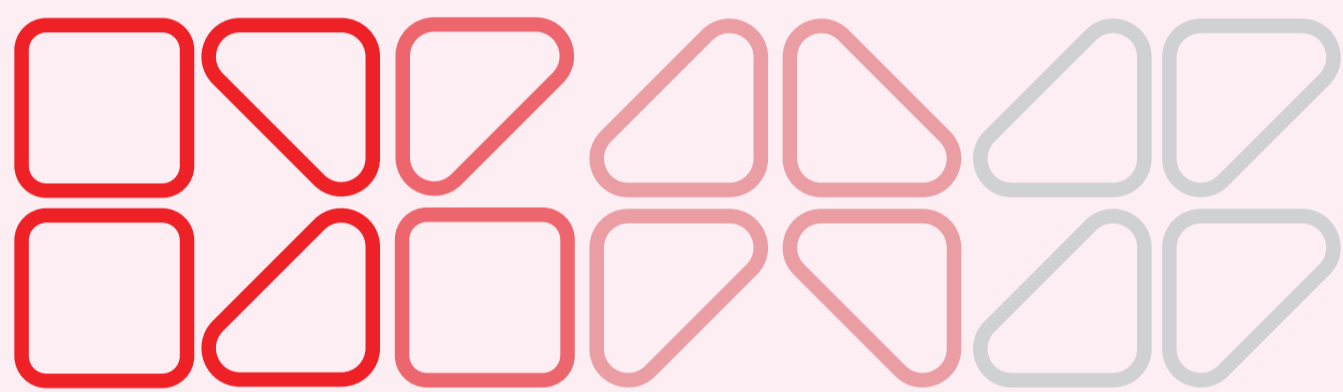


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