



Curtin Singapore

MARCH 2026

RESEARCH PULSE

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1. Welcome to Research Pulse

In this issue, we will share the second call for the Internal Research Grant Scheme (IRGS) at Curtin Singapore, along with selected proposals.

The scheme is designed to strategically nurture, inspire, and strengthen a vibrant research culture across the University. It provides targeted, seed-level funding that enables researchers to explore bold ideas, initiate pilot studies or proof-of-concept projects, and generate the foundational evidence required for larger external grants.

Aligned with Curtin Singapore's research clusters, the scheme aims to enhance institutional research capacity by encouraging meaningful industry collaboration and fostering interdisciplinary innovation. It serves as a catalyst for creativity, excellence, and product development, empowering researchers to experiment confidently, produce impactful publications, and elevate Curtin Singapore's overall research performance.

Thank you for your support of Research Pulse.

Best wishes,
Curtin Singapore Research

2. Second Call to Internal Research Grant Scheme

a) Smart Tourism, Living Heritage – AI's Influence on Cultural Appreciation and Sustainability in Singapore's Culinary Landscape

Dr Zahirah Zainol, Senior Lecturer



Image source: ChatGPT, Image prompt: 'AI and Singapore hawker culture'

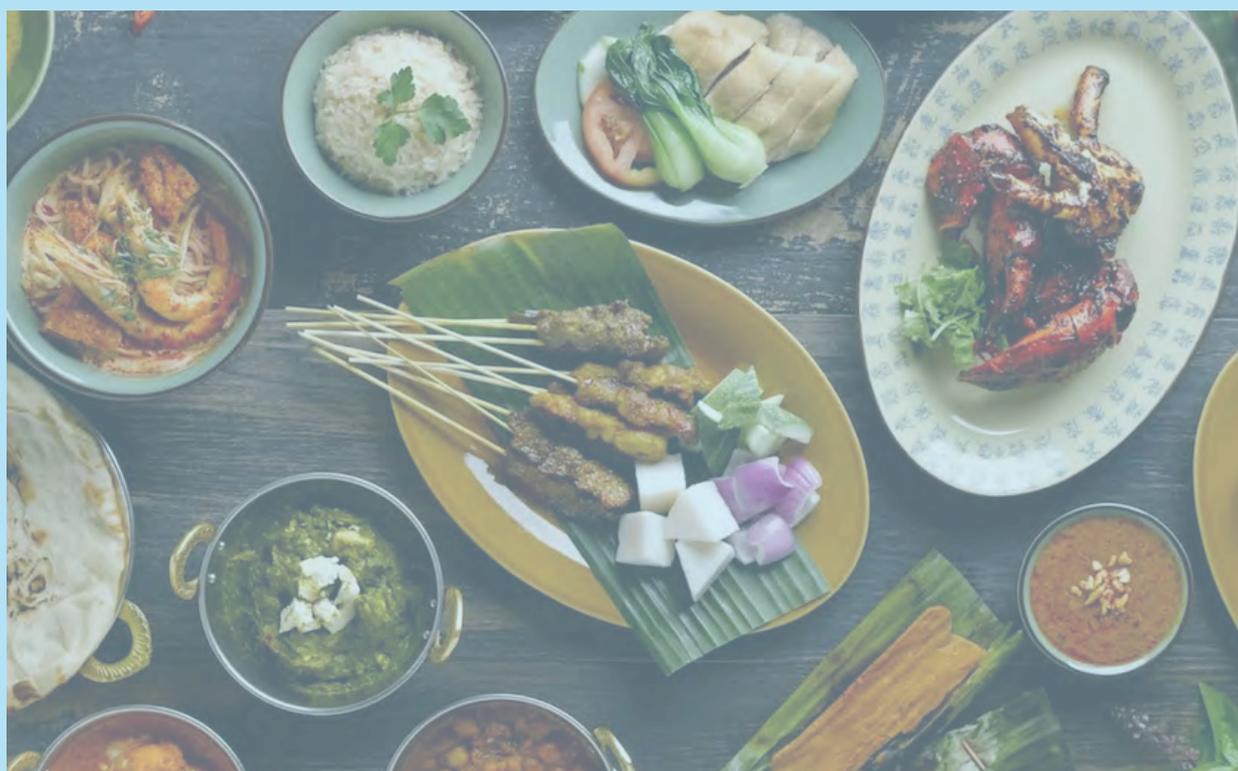
Singapore's vibrant food culture is more than a national pastime. It represents generations of living heritage shaped by Chinese, Malay, Indian, and Peranakan traditions. As AI-driven platforms become increasingly embedded in tourism experiences, they are reshaping how locals and visitors discover, interpret, and value culinary heritage. This Internal Research Grant Scheme project, led by Dr Zahirah Zainol, explores how AI influences cultural perception, authenticity, and sustainability within Singapore's evolving food tourism landscape.

AI recommendation systems, review platforms, and digital guides now play a major role in guiding where people eat and what they consider “authentic.” While such technologies can amplify lesser-known cuisines, support sustainability messaging, and archive hawker narratives, they may also oversimplify complex cultural stories by prioritising popularity and commercial visibility. This study investigates these dynamics through a mixed-method approach involving stakeholder interviews and experimental design.

Grounded in the Stimulus–Organism–Response framework, the project analyses how AI-mediated cues shape users’ cultural appreciation and decision-making. The team will examine how sustainability values are communicated through AI systems and how these tools may reinforce, or unintentionally distort, heritage representation. The research will culminate in a Culturally Responsive AI Framework that balances innovation with preservation, offering guidance for policymakers, tourism boards, technology developers, and cultural institutions.

Through this work, Dr Zahirah and her collaborators aim to position Singapore as a global leader in responsible, culturally sensitive AI-enabled tourism. The project’s findings will contribute to sustainable tourism policy, enhance digital heritage strategies, and support the safeguarding of Singapore’s rich and diverse culinary traditions.

Start date: 2 March – 21 December 2026



b) Understanding Participation of Male Seniors in Active Ageing Centres

Dr Angela Koh, Senior Lecturer

Curtin Singapore continues to champion impactful research that strengthens community wellbeing and supports national priorities. One of the latest Internal Research Grant Scheme projects, led by Lecturer Angela Koh, addresses a critical and emerging need in Singapore's rapidly ageing society. With Singapore on track to become a super-aged nation by 2026, Active Ageing Centres (AACs) play an increasingly vital role in keeping seniors physically active, mentally engaged, and socially connected.

While past studies have explored general participation patterns among older adults, there remains limited understanding of male seniors' involvement in AAC programmes—particularly across activity domains such as social engagement, physical health, cognitive stimulation, learning, and volunteerism. This exploratory study directly addresses that gap.

Partnering with SASCO Senior Citizens' Home, the research team will conduct qualitative, semi-structured interviews with male seniors and AAC staff, aiming to uncover their perceptions, motivations, expectations, and challenges. The findings will help explain why some male seniors participate less actively and what may encourage stronger engagement.

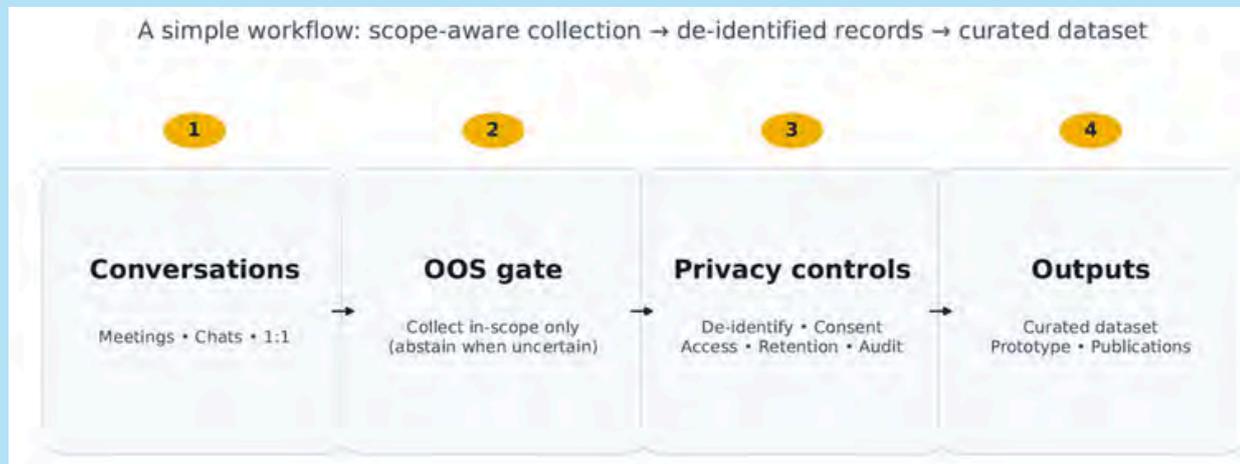
The study's outcomes are expected to inform programme design, community engagement strategies, and policy direction for AAC 2.0—Singapore's national initiative to integrate health, wellness, and social support into community-based senior hubs. Planned deliverables include a conference paper by 2026 and a peer-reviewed journal article by 2027.

This project exemplifies Curtin Singapore's commitment to advancing research that directly benefits society, supports healthy ageing, and strengthens community resilience. We look forward to sharing more updates as the work progresses.

Start date: January 2026 – December 2027

c) Privacy-Preserving Chatbot for High-Quality Data Capture

Dr Xinyi Cai, Lecturer



Curtin Singapore continues to strengthen its applied AI research through innovative, industry-aligned projects. One highlight from the Internal Research Grant Scheme is the project led by Dr Xinyi Cai, focusing on the development of a privacy-preserving chatbot agent designed to capture structured, high-value information from real conversational settings.

In many organisations, critical operational insights are exchanged informally in meetings and chats but are rarely captured in a consistent or reusable form. This project addresses that gap by creating a chatbot agent capable of participating in meetings, group chats, and one-to-one conversations as a structured data collector, ensuring only relevant and non-sensitive content is captured. The system uses out-of-scope (OOS) detection to filter out confidential, irrelevant, or risky content, improving data quality while maintaining strict privacy safeguards.

The agent incorporates privacy-by-design principles, including de-identification, consent workflows, secure access controls, and audit trails. The curated datasets produced through this approach enable reliable analysis, domain modelling, and future predictive analytics without exposing stakeholders to data-handling risks. The project also explores the use of lightweight distilled models to support efficient deployment and low-latency performance in industry settings.



In collaboration with ARROCA LLP, this initiative strengthens Curtin Singapore's leadership in responsible AI, providing a scalable framework for conversational data capture that aligns with real-world operational and compliance constraints. Expected outcomes include a deployable software prototype, peer-reviewed publications, and at least one external grant application to extend the research impact.

This project reflects Curtin Singapore's commitment to developing AI solutions that are practical, ethical, and industry-ready—supporting innovation across the Future of Work research cluster and contributing to Singapore's digital transformation landscape.

Start date: 31 March 2026 – 30 March 2028

d) AI-Driven Cash Flow Intelligence and Behavioural Coaching

Dr Chris Dinh (Dinh Ngoc Tan), Senior Lecturer & Director of Regional Engagement

Curtin Singapore continues to advance impactful digital innovation through research that bridges technology, human behaviour, and real-world applications. One of the highlighted projects from the Internal Research Grant Scheme is the AI-Driven Cash Flow Intelligence Platform, led by Dr Chris Dinh.

The app addresses a pressing challenge faced by many individuals—understanding and managing personal cash flow in a fast-paced financial environment. Unlike conventional budgeting tools that focus on static expense tracking, the app introduces a more dynamic, behaviour-focused approach. The platform is designed to help users make proactive financial decisions.

The features of the project work together to answer three essential user questions: Where is my money going? Why is it happening? What should I do next?

Supported by an industry partnership with Deep Technology Cooperation Pty Ltd, the project benefits from technical expertise in software architecture, AI model development, cloud deployment, and prototype validation. This collaboration enhances the project's applied impact and future scalability.

Spanning from March to September 2026, the project will deliver a functional MVP and generate academic outputs in AI and FinTech analytics.

The platform exemplifies Curtin Singapore's commitment to research that empowers communities, supports digital transformation, and enhances quality of life through practical innovation.

Start date: 15 April 2026 – 15 October 2026

e) Towards a Waste Management Movement and Circular Economy Through Community-Centric Research

Dr Adrian Heng Tsai Tan, Lecturer in Supply Chain Management

Curtin Singapore continues to champion research that strengthens societal resilience and environmental stewardship. One of the highlighted projects from our Internal Research Grant Scheme is led by Dr Adrian Tan, who is exploring how community perceptions and lived experiences can drive a national movement in waste reduction and circular economy practices.

Singapore faces mounting pressure to transition toward circularity as the Semakau Landfill approaches capacity. Waste accumulation along coastal and inland areas—including well-visited public spaces—underscores the need for solutions that extend beyond infrastructure. This project recognises that technical strategies alone are insufficient, and that sustainable change requires public engagement, behavioural shifts, and meaningful collaboration across communities.



Working alongside Stridy, a not-for-profit organization for waste management, Adrian's research aims towards a waste management movement through an exploration of societal perceptions and call to action for circularity in Singapore. Through waste mapping, the research will inform educational content creation, community engagement, as well as co-develop with stakeholders, actionable strategies that promote collective responsibility for waste management in Singapore. Its outcomes will inform policy discussions, strengthen circular economy literacy, and inspire long-term citizen involvement.

This initiative exemplifies Curtin Singapore's commitment to research-driven social impact—empowering communities and shaping a more sustainable future for Singapore and the region.

Start date: 9 March 2026 – 31 December 2026

3. Article: The Paradox of Free Speech: Should There Be Limits?

Dr Hazik Mohamed, Sessional Lecturer

Freedom of speech is widely acknowledged as a fundamental principle of democratic societies, celebrated for enabling individuals to confront authority, share ideas, and promote advancement. However, the parameters of free expression are frequently disputed in practice. What one society considers a constructive dialogue, another may view as detrimental, destabilizing, or even perilous. This paradox of free speech is particularly pronounced when contrasting nations with divergent political, cultural, and legal systems, such as Australia and Singapore. Both countries prioritize social order and collective welfare, yet their methods of regulating speech vary considerably, prompting critical inquiries regarding the necessity or harm of restrictions on expression.

Philosophical Foundations of Free Speech

Philosophers like John Stuart Mill (1859/1978) maintained that the pursuit of truth and the advancement of society depended on the right to free speech. Limits were only justified by Mill's "harm principle" in cases where speech directly hurts other people. This idea significantly aligns with Australia's liberal democratic traditions, influencing the country's law regarding implied freedoms. But in Singapore, the moral calculus is shifted by the Asian focus on collective social harmony and group responsibility. The harm principle is applied more widely, limiting statements that could jeopardize religious tolerance, racial harmony, or deference to authority. Therefore, although having similar conceptual foundations, the two countries' cultural orientations establish distinct boundaries for acceptable speech.



Australia's Liberal-Leaning Yet Constrained Model

Australia does not have an explicit constitutional right to free speech. Instead, the High Court has read an implied freedom of political communication into the Constitution (*Australian Capital Television Pty Ltd v Commonwealth*, 1992). This allows for significant restrictions on speech, provided they are proportionate. For example, defamation law in Australia is notably strict, prioritizing reputation over expression, making it easier for public figures to sue critics compared to other democracies (Butler & Rodrick, 2015). This freedom is not absolute; rather, it is balanced against competing interests such as defamation law, anti-discrimination statutes, and national security. For instance, racial vilification laws under the Racial Discrimination Act 1975 (Cth) prohibit public acts likely to offend, insult, or humiliate someone based on race. Debates surrounding Section 18C of the Act have sparked significant public controversy, with critics claiming it stifles legitimate debate while supporters argue it protects vulnerable communities.

Australia enjoys a relatively pluralistic media environment, with strong traditions of investigative journalism and satire. However, concentrated media ownership (notably by News Corp) shapes public discourse, raising questions about diversity of voices (McKnight, 2013). Cancel culture debates also resonate in Australia, particularly in academic and artistic circles, where controversies over offensive remarks often lead to boycotts or dismissals.

Australia's multicultural society has grappled with racism and hate speech, particularly towards Indigenous peoples, migrants, and religious minorities. Section 18C of the Racial Discrimination Act 1975 prohibits speech that offends, insults, humiliates, or intimidates on the basis of race. This provision has been controversial, with critics arguing it stifles robust debate (Gelber, 2016). However, supporters maintain it is vital for protecting vulnerable groups from systemic discrimination.

Australia has adopted a more cautious regulatory approach to misinformation. It has relied largely on co-regulation with platforms, voluntary codes of practice, and fact-checking initiatives. However, debates intensified during the COVID-19 pandemic and with the rise of foreign interference in elections. Proposals to strengthen regulation are often weighed against fears of state overreach (Flew, 2021).

The balance reflects Australia's attempt to reconcile free expression with multicultural harmony, though debates often flare up during election campaigns and media scandals.

More recently, concerns about misinformation and online harms have placed further strain on the balance. The eSafety Commissioner has been granted wide powers to regulate harmful online content, raising questions about whether administrative agencies, rather than courts, should be empowered to decide the boundaries of expression. These developments illustrate how Australia attempts to reconcile a commitment to democratic freedoms with protections against societal harm.

Singapore's Communitarian Approach

Singapore's trajectory differs significantly. Emerging from colonial rule and separation from Malaysia in 1965, Singapore prioritized nation-building and social cohesion over individual liberties. Its Constitution guarantees freedom of speech (Article 14), but explicitly allows Parliament to restrict it for security, public order, morality, and inter-communal harmony.

The philosophical foundation here is communitarian rather than liberal: individual rights are balanced against collective stability, a necessity in a multi-ethnic, multi-religious society (Rodan, 2018).

The Constitution guarantees freedom of speech under Article 14 but subjects it to broad restrictions, including public order, morality, and security. Laws such as the Sedition Act, the Protection from Online Falsehoods and Manipulation Act (POFMA), and the Maintenance of Religious Harmony Act exemplify Singapore's preventive and interventionist stance. Singapore adopts a stricter stance on hate speech, which is tightly policed, with laws against racial or religious insults applied consistently. The Sedition Act has been used to prosecute online comments disparaging ethnic or religious groups. Authorities argue this preemptive approach is necessary in a society where one inflammatory remark can ignite tensions across communities (Barr & Skrbiš, 2008). Unlike Australia, where courts weigh free speech against harm, Singapore frames the issue primarily as one of existential national stability. These laws allow authorities to act pre-emptively against speech deemed capable of inciting unrest, spreading falsehoods, or straining inter-religious relations.

Singapore has taken an assertive path with POFMA (2019), granting ministers the power to order corrections or removals of online content deemed false. While the government insists POFMA targets falsehoods, not opinions, critics warn it consolidates executive control over public discourse. Nonetheless, Singapore positions its approach as forward-looking, arguing that digital misinformation poses immediate risks to trust, stability, and health.

Critics argue that Singapore's model suppresses dissent and narrows the space for opposition politics. However, defenders point to the nation's history of racial riots in the 1960s and its small, vulnerable status as justification for prioritising harmony over unbridled expression. In practice, Singaporeans enjoy a relatively open online environment for personal expression but remain cautious when discussing race, religion, or politics in ways that could attract legal consequences.

The Comparative Paradox

When contrasting the two situations, the free speech dilemma becomes evident. Australia promotes maximum freedom of expression but restricts it when hate speech, false information, or defamation pose threats because of its strong democratic institutions and adversarial political culture. In contrast, Singapore views speech as a tool that needs to be carefully controlled in order to preserve social peace and avert chaos. Both strategies represent distinct goals influenced by history, culture, and governmental systems; neither is completely free nor completely limited. Each model has advantages and disadvantages. With a comparatively lax system, Australia runs the risk of division and the development of divisive ideas. Under a restrictive system, Singapore runs the risk of stifling dissent and limiting the range of acceptable debate.

It is interesting to note that criticism of both systems comes from opposing sides. While critics in Singapore want more tolerance for opposition parties and dissenting voices, those in Australia warn of the encroaching repression through administrative regulation and legal action. Thus, the paradox of free speech takes on distinct forms in Australia and Singapore. In Australia, the problem is underregulation, whereas in Singapore, it is overregulation. These conflicts highlight how widespread the contradiction is—societies must continually balance liberty and restriction.



Broader Implications

The debate in both nations has broader global significance. As digital platforms amplify speech across borders, Australia's emphasis on liberal democratic protections and Singapore's prioritisation of harmony may offer contrasting models for other states grappling with online hate speech, fake news, and extremist content. The challenge lies in crafting systems that preserve democratic deliberation while safeguarding communities from real harm.

Conclusion

There is no standard solution to the free speech conundrum on where limits should be set, if at all. Rather, it needs to be interpreted within institutional and cultural frameworks. Despite their close proximity, Australia and Singapore take different tacks: one is based on liberal democratic principles with limitations, while the other is based on communitarian values with concessions. Both models serve as a reminder that political necessity, cultural values, and historical experience always act as mediators and that freedom of expression is never total. The eternal dilemma is not whether speech should be restricted, but rather how to do it in a way that is nevertheless acceptable, reasonable, and sensitive to societal demands.

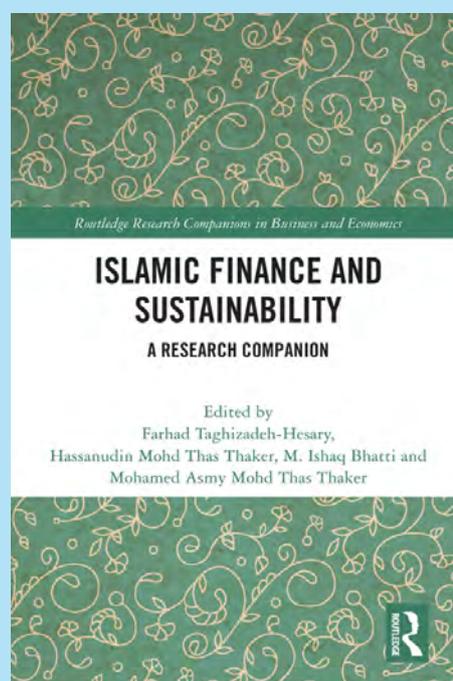
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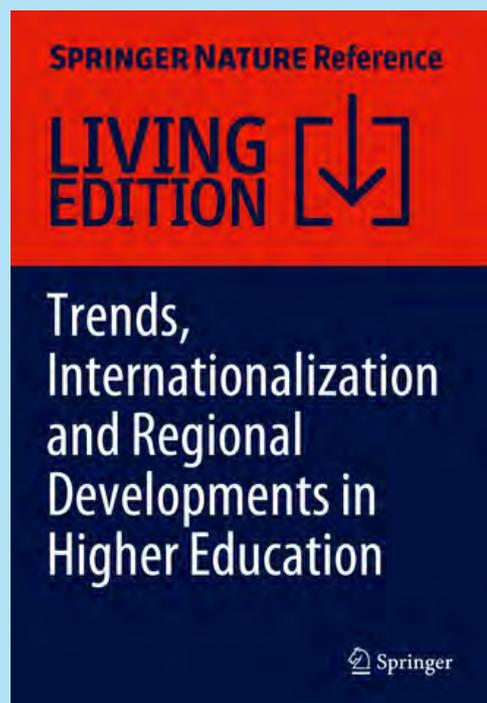
4. Edited Book Published by Professor Arun Patil and Professor Alex Stojcevski

Title of the Book: Trends, Internationalization and Regional Developments in Higher Education

"Trends, Internationalization and Regional Developments in Higher Education" is a part of the series titled "University Development and Administration". The overall goal of this book is to provide a global perspective on current trends, internationalisation and regional developments in higher education. Readers will benefit from this book in that they will gain an understanding of the important elements of existing trends in higher education, various regional developments and most importantly internationalisation which has changed the whole paradigm of global higher education.

This book provides a comprehensive resource for new and experienced professionals, as well as their educators, as they come to grips with new internationalisation trends and practices in increasingly trans-national, trans-cultural contexts. This book provides a comprehensive resource for new and experienced professionals, as well as their educators, as they come to grips with new internationalisation trends and practices in increasingly trans-national, trans-cultural contexts.

Link: <https://link.springer.com/referencework/10.1007/978-981-96-0473-9>



5. Cooperative Research Centres Project (CRC-P) Grant Secured — \$3 Million Awarded

Professor Alex Stojcevski, Pro Vice-Chancellor and President

We are pleased to announce that our team has successfully secured a Cooperative Research Centres Project (CRC-P) Grant with a total grant value of \$3 million, contributing to an overall project value of \$8.97 million.

The CRC-P program supports collaborative, industry-focused research initiatives that bring together industry and academic partners to translate innovative ideas into real-world impact and commercial outcomes.

This significant achievement reflects the strength of our partnerships and the exceptional teamwork across all contributors. We extend our appreciation to everyone involved—especially Dr. MD Redowan Mahmud—for their commitment and outstanding efforts in shaping and driving this project.

We would also like to acknowledge the leadership and support of Professor Alex Stojcevski, Pro Vice-Chancellor & President, whose guidance continues to strengthen Curtin Singapore's research culture and our collaborative success.

We look forward to working closely with our partners as we advance this project and deliver meaningful outcomes through this important collaboration.

