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「藍光流動的未來智能城市景觀」。由 ChatGPT 生成，OpenAI，2024 年 10 月 8 日。

" Futuristic cityscape with blue light lines." Generated by ChatGPT, OpenAI, 8 Oct 2024.

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RICS Royal Institution of Surveyors Malaysia

Chief Editor's **Message**

Tokoh-tokoh Juruukur Malaysia: 2001 - 2025

"Greetings from the Editorial Board, Royal Institution of Surveyors Malaysia (RISM).

Dear Esteemed Readers,

It gives me great pleasure to welcome you to this special edition of The Malaysian Surveyor, themed "Tokoh-tokoh Juruukur Malaysia: 2001–2025". This issue is a tribute to the exemplary individuals who have shaped the surveying profession in Malaysia over the past two decades. The Tokoh Surveyors Malaysia are more than just award recipients—they are torchbearers of excellence, integrity, and innovation, and we are honoured to feature their reflections and heartfelt messages in this edition.

Their journeys not only capture the spirit of professional dedication but also mirror the evolution of our industry and Institution. As they share their personal milestones and fond affiliations with RISM, their stories offer both inspiration and a roadmap for our future leaders.

In tandem with this commemorative theme, we also bring you a collection of compelling technical articles that address the future-facing role of surveyors. From real estate and land governance education at UTM, to the role of quantity surveyors in climate-conscious urban development, from innovative building surveying practices to GIS-driven land use analysis in Melaka—these insights reflect our profession's dynamism and relevance in a rapidly transforming world.

Our commitment to continuous learning and professional networking is reflected in the coverage of recent events: the ADR seminar, technical visits, CPD seminars, courtesy visits, and student-focused initiatives like the Young Achievers' Award and the International Surveying Conference for Undergraduates. On a lighter note, the RISM Jungle Trekking, inter-division bowling, and Raya Open House showcase the vibrant spirit of our community.

As we celebrate our past and stride forward into the future, let us be reminded that our strength lies not only in our technical expertise but also in our unity, adaptability, and shared values. To all contributors, readers, and members—thank you for being part of this enduring journey.

Thank you for your continued support and dedication to excellence in surveying.

Sr Ts. Khoo Sui Lai, CQS, FRISM, FRICS
Chief Editor

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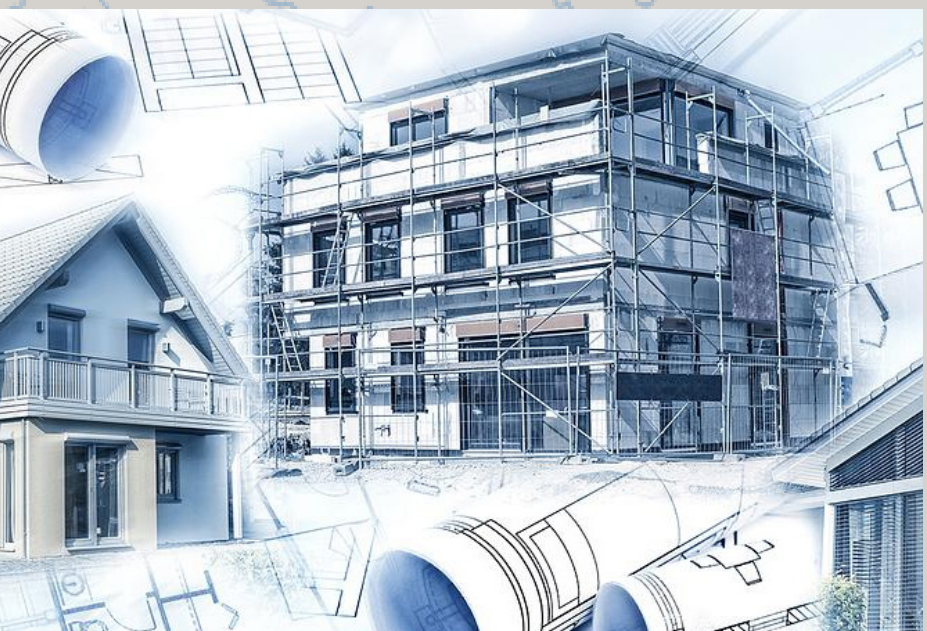

TECHNICAL ARTICLES

RISM NEWS

MEMBER UPDATES

TOKOH JURUUKUR INSIGHTS

LSr Dr. Khoo Boo Khean

I am Khoo Boo Khean, a licensed surveyor since 1965, founder of Jurukur Perunding in 1974, and instrumental in establishing Perjuta in 1979 and Asean Flag in 1995. I had the honor of serving as the President of RISM in 1982. My journey began as a kampong boy, trained as a land surveyor, with limited knowledge of economics. Yet, due to the urgency of the matters affecting our profession, particularly that of the Land Surveyor, I feel compelled to share my thoughts before it is too late. Today, I wish to address a crucial issue regarding our nation's economy.

I pose this question to my fellow surveyors: "Why has Malaysia not achieved the status of an Asian Tiger? Mengapa Malaysia tak jadi Taikor serudu Asian?" In my humble opinion, the answer lies in the stagnation of our citizens' incomes—including those of our dedicated support staff. As employers, we have often failed to enhance the incomes of our subordinates. Consequently, we, as licensed surveyors, find ourselves inadvertently complicit in a flawed system that undermines the government's efforts to uplift the lives of our citizens, resulting in a low national GDP. Our middle-income groups are underpaid, and the wealth generated by our economic activities seems to benefit those living elsewhere, who are already financially affluent.

Let me share the reflections of an elder who has devoted over 60 years to the welfare of our profession. It is imperative that we align our efforts before it is too late.

To reinforce my statement, let us consider some important facts. The land surveying service is essential to the land registration system, providing a foundation for stable economic growth in Malaysia. We are compensated for our services through gazetted fees determined by the LJT and sanctioned by the Parliament and the people of Malaysia.

Market forces should not dictate land surveying fees—much like land tax, road tax, and income tax, which are fixed by law. However, a concerning trend has emerged: we, the land surveyors, have begun to undercut one another unnecessarily, leading to inadequate compensation for our employees. This diminishes their purchasing power and ultimately hinders Malaysia's economic growth and our aspiration to achieve Vision 2020.

Allow me to illustrate this with some figures. The average price of a mid-range condominium in major cities like Kuala Lumpur and Penang is RM 800,000, while the strata survey fee for each parcel is merely RM 2,000, which is only 0.25% of the total price. Would a buyer genuinely be concerned about a mere quarter percent difference in price?

It is also noteworthy that developers deposit 100% of the survey fee with the LJT, and any "kickbacks" often go unaccounted for, depriving our workforce of the necessary income to elevate living standards across the board.

One vital consideration is that if we receive full fees for our services, with the 70 or 80 %of fees given under the counter we can support young, elderly, or retired government surveyors, making land surveying an attractive profession for bright school leavers. This would enhance the art and science of surveying for the betterment of our country and its people.

May I present a stark reality: we are all, without exception, committing economic suicide. We have allowed fees to be slashed by 60 or 70%. This has become a pandemic, and we require collective intervention from the LSB. I have ideas to reverse this troubling trend, but they must be presented to the LJT, the only authority that can accept or implement such proposals. My intent is purely to contribute positively to a profession I hold dear before I leave this world.

I am confident that none of us would want to see survey fees reduced to nothing, nor would we choose to receive diminished fees. So, let us unite and collectively approach the LJT and PERJUTA to guide us out of this devastating situation! It is imperative that we all agree, just as i did when establishing PERJUTA, which received 100% support from practicing Licensed Surveyors.

Rest assured, when we collectively agree not to cut fees, your clients will continue to use your service , as they are familiar with your expertise.

Thank you for your attention, and may we work together for a prosperous Malaysia. I hope this article meets your expectations and sincerely thank you for providing me a platform to voice my thoughts and concerns for the benefit of our country and its people.

By PPRISM,

LSr Khoo Boo Khean
Tokoh Juruukur Malaysia Year 2001

Dato' Prof. Sr Mani Usilappan

My passion is my profession. I was introduced to professional work, believe me when there were no calculators, no photo copiers and no computers. Today we are being overwhelmed with constructive and disruptive technologies. We had no local universities then, today we are fortunate have several tertiary educational institutions. The science of the profession has changed with the advent of IT and other technologies; speed and haste and ease of production has heaped advantages upon us, in the way we do our work, the way we manage and the way we live our life. The art in the profession is being affected by external factors. As professionals, fundamental to us is professional integrity, sincerity and dedication to our professed profession. I will urge all young surveyors in whatever the aspect of work you are involved to be completely consumed by passion. You have elected to be in this profession, be the best professional you can. We owe this to the profession, to the society and to the nation. Never shortchange on knowledge, integrity, clarity and thoroughness in the best practices. Remember what the learning institutions do is opening doors and windows to the world of knowledge and wisdom. Learn, study and harness the ocean of knowledge to benefit yourself, your clients, your society and this nation.

Dato' Prof. Sr Mani Usilappan
Tokoh Juruukur Malaysia Year 2006

Tan Sri Dato' Sr (Dr.) Abdul Rahim bin Rahman

Over the past six decades, I have witnessed how the property surveying profession in Malaysia has transformed. What began for me as a field centred on manual valuations and straightforward transactions has evolved into a dynamic industry shaped by digitalization, urbanization and global economic forces. From my early days in the 1960s to today's data-driven landscape, the profession has embraced technology, regulatory change and shifting client expectations. Modern property practitioners are expected to be not only technically proficient but also visionary, ethical and adaptable to rapid change.

For the future of the profession, my message to the young practitioners is: work hard and be progressive while continue to preserve with honesty and integrity. With a belief that anything worth doing is worth doing well, my hope for the industry is continued resilience and relevance with greater transparency and sustainability. Let us just value assets, but also uplift communities and enrich lives and continue to shape a better Malaysia for generations to come.

Tan Sri Dato' Sr (Dr.) Abdul Rahim Bin Rahman
Tokoh Juruukur Malaysia Year 2010

Datuk LSr Dr. Abdul Kadir Bin Taib

I started my career as a government land surveyor in April 1978 and retired in 2014. Then i continued my service in private sector as a licensed land surveyor until today. During that period of time i could see the tremendous development in surveying technologies and techniques ranging from conventional to modern smart surveying. As surveyor we have to embrace these advancements by learning and adapting new technologies to our work environment. Smart surveying leverages technology like IoT, AI, and advanced sensors to improve accuracy, efficiency, and data management in surveying and mapping. This includes using geospatial technologies like GPS, LIDAR, UAVs (drones) for data capture, point clouds for 3D models, Underground Utility Detectors, BIM, and digital platforms for data analysis and reporting. Thus all surveyors should stay up-to-date on the latest trends and developments in new technologies and techniques, in order to make us very important and relevant to the industry and our country.

Datuk LSr Dr. Abdul Kadir Bin Taib
Tokoh Juruukur Malaysia Year 2011

Sr Hj. Basar bin Juraimi

I look back on a career filled with change—and I look forward with even greater passion. When I began in the late 1970s, everything was done by hand: paper take-offs, manual calculations with long hours over drawing boards and typewriters. Today, digital drawings and measurement tools, cost management software, and data analytics have revolutionised how we deliver value—making processes faster, more accurate, and collaborative.

But technology is only part of the story. A quantity surveyor's role has expanded from cost control to strategic advisory —encompassing value and risk management, e-procurement, and environmental integration. Clients now expect us to understand not just numbers, but long-term impacts. We are no longer just number crunchers—we are guardians of value, sustainability, and ethics in the built environment.

What has never changed is the value of integrity, diligence, and mentorship. I have had the privilege of training many young surveyors—watching them grow, take on leadership roles, and contribute meaningfully to the industry fills me with immense pride. Their success is my greatest legacy.

What drives me is seeing the next generation take the reins, not just to follow tradition, but to transform it. After more than 50 years, I am more convinced than ever: Quantity Surveying is not just a career—it's a lifelong calling.

Sr Hj. Basar bin Juraimi
Tokoh Juruukur Malaysia Year 2014

Datuk LSr Ahmad Fauzi bin Nordin

Reflecting on my decades of involvement in the land surveying and geomatics profession, I feel a sense of accomplishment, fulfilment and gratitude. A technical pursuit earlier grounded in measurements has later progressed into a commitment of scheming procedures, standards, policies, mentoring and advancing the profession. Being entrusted with a leadership role in this field is both an honor and a significant challenge. It requires unwavering commitment to remain at the cutting edge of fast-moving technological advancements. Leadership here goes beyond technical expertise - it involves championing the profession and making its value clear to clients, stakeholders, policymakers, and the public.
Looking ahead, the future of surveying holds great promise, offering opportunities for innovation, collaboration and contribution to national development. Yet, alongside these advancements come new challenges and responsibilities. And, surveyors must embrace the changes, adapt to the new technologies as well as devote to continuous learning in order to play a vital role in contributing to the nation's growth. Additionally, they need to be committed, forward-thinking and lead with integrity and dedication to excellence. We need to keep pushing our industry forward. Our role is evolving - we're not just measuring the earth anymore; we're creating digital twins, enabling autonomous systems and providing the spatial backbone for smart cities and urban growth.

Datuk LSr Ahmad Fauzi bin Nordin
Tokoh Juruukur Malaysia Year 2019

Dato' LSr Hasan bin Jamil

The surveying profession has seen significant changes with the adoption of new techniques and technologies such as global navigation satellite system (GNSS), 3D laser scanning (LiDAR), drone-based aerial imagery, synthetic aperture radar (SAR) and others. These advancements coupled with data sharing and standards plus the integration of artificial intelligence (AI) has significantly boosted the efficiency, accuracy and cost-effectiveness of information use.

Surveyors must also leverage technology like building information modeling (BIM) to gather, analyse and manage data more efficiently in the construction industry and infrastructure projects. BIM has evolved from simple 3D models to 4D and 5D dimensions incorporating time and cost factors. More BIM dimensions can be integrated for sustainability, facility management, safety and lean construction.

Today, surveyors are not only responsible for data collection on, above and below the ground but are also responsible for interpreting this vast amount of data, creating clear visualisation and streamlining workflows to make complex data accessible thus ensuring sustainable urban growth, tackling environmental challenges and enabling ambitious engineering projects such as autonomous vehicle, low-altitude economy and others.

Young surveyors should also adapt to diversification but must be within the legal framework. This will open doors to new and exciting opportunities.

Dato' LSr Hasan bin Jamil
Tokoh Juruukur Malaysia Year 2021

EMPOWERING REAL ESTATE PROFESSIONALS THROUGH LAND GOVERNANCE EDUCATION: THE UTM EXPERIENCE

by

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Abstract

Land governance refers to the policies, processes, institutions and rules that determine how land is accessed, used, controlled and transferred. It involves both formal legal frameworks and informal or customary practices that shape how land is managed in a society. Land governance matters to real estate professionals because it provides legal clarity, protects ownership rights and supports stable property markets. This paper explores the role of land governance education among real estate professionals through the experience of Universiti Teknologi Malaysia (UTM)'s Land Administration and Development academic programme. Since its inception in 1996, the programme has produced over a thousand graduates, contributing substantially to the development of skilled professionals in key areas such as land administration and legislation waqf and land planning and development. Others contribute their expertise in real estate firms, surveying and mapping agencies and infrastructure development projects. This widespread footprint reflects the programme's role in producing versatile professionals who are critical to effective land governance and national development. The programme has also made substantial contributions to research and publications that strengthen land policy and governance through collaborative projects with government agencies, academic institutions and international partners. This UTM experience shows that integrating land governance education into the real estate curriculum can empower real estate professionals to tackle land issues and drive sustainable development in Malaysia.

1.0 Introduction

Education plays a vital role in shaping effective land governance systems, contributing to sustainable development, equity, and improved land management. It fosters the development of skills, knowledge, and values essential for managing land resources transparently and responsibly. Without proper education, land governance practices are likely to be inefficient, leading to land conflicts, inequitable land distribution, and environmental degradation. This paper explores the role of education in land governance, offering examples to demonstrate its importance in fostering good governance, building capacities, and enhancing policy implementation through the experience of Universiti Teknologi Malaysia (UTM)'s Land Administration and Development academic programme.

The real estate education sector in Malaysia has experienced over five decades of growth and transformation, marked by significant milestones and a strong connection to UK-based institutions. This journey began in 1967 with the introduction of the Valuation Programme at UiTM (Universiti Teknologi MARA), which laid the foundation for the formal academic study of real estate. This was followed by the launch of Malaysia's first degree-level programme in 1973-Bachelor of Surveying (Property Management) at Universiti Teknologi Malaysia (UTM).

Malaysia's real estate curriculum initially mirrored the UK's educational structure, reflecting a strong affinity with notable institutions like Southbank Polytechnic, College of Estate Management, Reading University, Heriot-Watt University, and Aberdeen University. The early curriculum focused heavily on areas such as land economy, planning, valuation, and land law, aligning closely with the needs of the country's property market and the professional accreditation standards at the time.

Over the years, the curriculum underwent multiple revisions, primarily to meet the requirements of Malaysia's Board of Valuers, Appraisers, Estate Agents, and Property Managers (BOVAEP) and the demands of the industry. These revisions were heavily practitioner-driven initially, with professionals in the field steering the direction of the curriculum. As the academic institutions continued to develop, value was added by academics who enhanced the curriculum while still maintaining a strong British influence. The introduction of Malaysian Qualifications Agency (MQA) and its predecessor National Accreditation Board (LAN) further pushed universities to meet increasingly stringent accreditation standards, leading to significant compliance improvements. Today, Malaysia's real estate programmes are shaped by both industry needs and academic innovation, ensuring that graduates are well-equipped to meet the expectations of stakeholders including the professional bodies and the broader property sector (Achu and Hamzah, 2022). Figure 1.0 and Figure 2.0 illustrate some of the key chronological events that have shaped the development of real estate education in Malaysia as we enter the AI era.

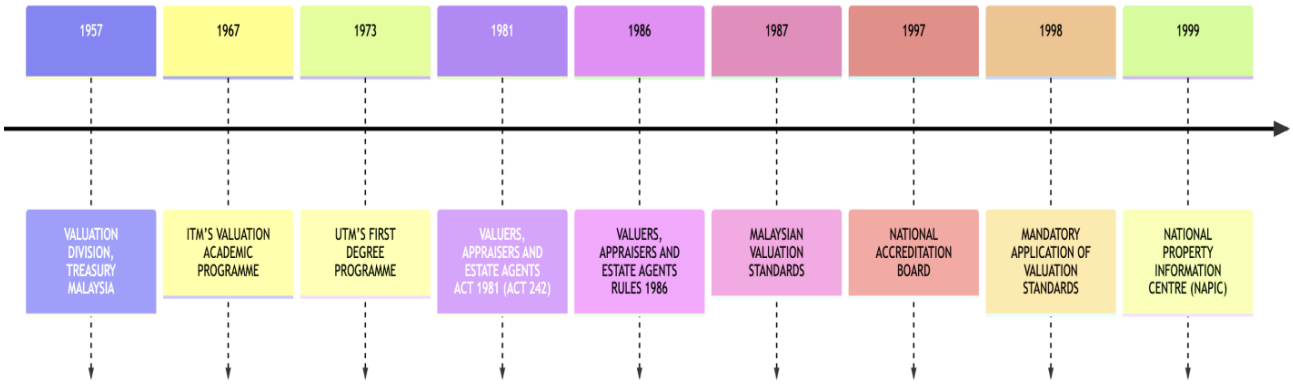

Figure 1.0: Key Chronological events impacted RE education in Malaysia - Pre-2000

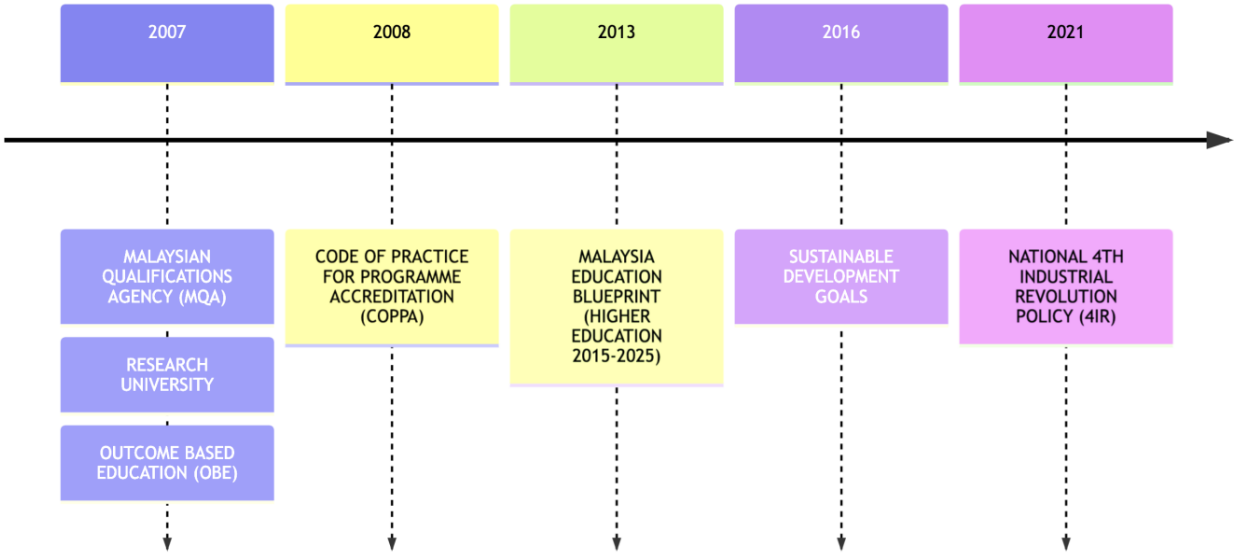

Figure 2.0: Key Chronological events impacted RE education in Malaysia - Post-2000

2.0 Land Governance and Its Importance in Real Estate Education

Land governance refers to the policies, procedures, and organizations involved in the management of land, property, and natural resources (FIG/WB 2010). It involves the regulations, procedures, and frameworks that govern how decisions regarding land use and control are made, how these decisions are implemented and enforced, and how conflicting interests related to land are addressed (Palmer, et al., 2009). Enemark (2022: 1) provides further explanation as follows:

"Land governance covers all activities associated with the management of land and natural resources that are required to fulfil political and social objectives and achieve sustainable development. This relates specifically to the legal and institutional frameworks for the land sector. The operational component of the land management concept is the range of land administration functions that include the areas of land tenure, land value, land use, and land development. These functions are essential to ensure control and management of the people to land relationship and the economic and social outcomes emerging from it."

The overall significance of understanding land governance is also relevant for real estate professionals in the following ways:

Building capacity and professional skills

One of the most critical roles of education in land governance is building the capacity of professionals working in land-related sectors. Land governance involves multiple fields, including surveying, law, urban planning, land management, and environmental sciences. Educational institutions are responsible for equipping individuals with the technical expertise required to carry out land-related activities, such as land registration, cadastre management, and dispute resolution. Current research on land governance education covers diverse subjects including land use planning, urban development, and gender concerns (Chigbu et al., 2024).

Policy Formulation and Implementation

Effective land administration systems require high-level political support and recognition (Enemark, 2010). In this, education also plays a significant role in the formulation and implementation of land policies (Burns and Dalrymple, 2008). Educated policymakers are better equipped to design land governance frameworks that are transparent, inclusive, and sustainable. Educational institutions contribute to this process by conducting research that informs policy decisions and by providing platforms for the exchange of ideas on land-related issues.

Promoting Transparency and Reducing Corruption

A well-educated workforce can promote transparency in land governance by ensuring that laws and regulations are followed, thus reducing the likelihood of corruption (Deininger et al., 2010). When public officials and land managers are educated about the ethical dimensions of land management, they are more likely to act in ways that serve the public interest.

Empowering Communities

Education plays a fundamental role in empowering communities, particularly in rural areas where land governance is often most fragile. When communities are educated about their land rights, they are better equipped to participate in decision-making processes and to demand accountability from local authorities. Moreover, education enhances their ability to use land sustainably, contributing to environmental preservation and food security.

Addressing Environmental Challenges

Environmental sustainability is a critical component of land governance. Education in environmental sciences and land-use planning equips individuals with the knowledge to balance land development with ecological preservation (Bell, 2007). Land degradation, deforestation, and unsustainable agricultural practices are often the result of a lack of knowledge about the long-term impacts of these actions.

3.0 Methodology

This paper adopts a descriptive case study approach to explore the development and integration of land governance education within the context of Universiti Teknologi Malaysia's Land Administration and Development degree programme. Hence, the study draws on teaching experience and secondary data sources including programme specification, course reports and complemented by relevant academic literature. It is important to note that the emphasis on a single programme or institutional case was not intended to yield broadly generalizable results, but to share a case that can serve as a reference point for practitioners and educators in related fields. Furthermore, the study is based on document-based analysis rather than empirical data or stakeholder interviews, which may constrain the breadth of perspectives captured.

4.0 UTM's Land Administration and Development (LAD) Programme

The Land Administration and Development (LAD) degree programme was established in 1996, marking a pivotal step in formalizing education in land management within Malaysia. The programme was designed to equip graduates with the knowledge and skills needed for effective and sustainable land administration and development, blending technical expertise with a commitment to transparency and efficiency.

The first cohort of graduates from the LAD programme consisted of students who entered directly with a diploma, completing their studies in 1998. By the year 2000, the first set of students completed the full 4-year syllabus, positioning the programme as a key player in producing skilled land administrators and developers. In 2011, the programme received formal recognition from the Board of Valuers, Appraisers, Estate Agents, and Property Managers (BOVAEP), cementing its status as a reputable qualification in the field of land administration and property development.

4.1 Programme Aim

The primary objective of the LAD programme is to nurture professionals who are not only efficient in their roles but also prioritize sustainability in land administration and development. Graduates are trained to embody values of transparency and commitment, ensuring that land resources are managed responsibly and effectively for future generations. To date, the programme has produced more than 1,000 graduates through both full-time and part-time study options. These graduates have gone on to contribute significantly to various sectors including land administration, waqf planning and property development.Pellentesque eget elit a felis molestie posuere.

4.2 Areas of Expertise

The LAD programme offers a diverse range of specialisations, which are essential in addressing the multifaceted challenges in land management today. These areas include:

1. *Land Administration*
2. *Land Law*
3. *Planning and Land Development*
4. *Surveying and Information Technology*
5. *Land Resource Management*

4.3 Courses and Subjects

The curriculum covers a broad spectrum of topics, ensuring that graduates possess a well-rounded understanding of both the theoretical and practical aspects of land administration and development. Some of the core and elective courses in the programme include:

1. *Malaysian Legal System*
2. *Real Estate Law*
3. *Property Taxation*
4. *Land Acquisition Practice*
5. *Land Development Practices*
6. *Urban Land Economics*
7. *Building Law and Regulation*
8. *Housing Development Law*
9. *Ethics and Professional Practice*
10. *Corporate Land Management*
11. *Rural and Regional Planning*
12. *Sustainable Property Development*
13. *Land Information Management*
14. *Environmental Management*
15. *Islamic Land Law*

These courses are designed to provide students with comprehensive insights into the complex dynamics of land use, development, and policy making while emphasizing sustainable practices. Building on the success of the Land Administration and Development (LAD) degree programme, it has progressively expanded to offer Master's and PhD levels, reinforcing its significance in the field of land management and governance education in Malaysia.

4.4 Expansion to Master's and PhD Levels

Recognizing the growing complexity of land administration and the need for higher-level expertise, the programme introduced its Master's and Doctorate (PhD) degrees. These advanced programs aim to deepen knowledge in specialized areas of land governance, sustainable development, and innovative land technologies, preparing graduates for leadership roles in academia, research, and professional practice.

Master's Level

At the Master's level, students build on the foundational knowledge acquired during their undergraduate studies, engaging in more in-depth research and advanced coursework. The Master's programme focuses on developing high-level analytical skills, with a strong emphasis on policy development, sustainable land use, and advanced land resource management.

The courses are designed to tackle emerging challenges such as urbanization, climate change, and environmental protection, aligning with global best practices and the evolving needs of the land development sector. Graduates of the Master's programme is well-equipped to take on managerial and specialist roles within governmental bodies, private sector firms, and international organizations dealing with land policy and development. For instance, the LAD taught-course programme has successfully trained officers from Johor State Secretariat Office, KeTSA (the former Ministry of Energy and Natural Resources) and Department of Land and Survey Sarawak.

PhD Level

The PhD programme offers an even deeper engagement with land-related research, enabling candidates to contribute original findings to the field. PhD candidates are encouraged to explore cutting-edge topics in land policy reforms, technology-driven land management solutions, and sustainability frameworks that are critical for addressing the challenges of modern land administration. PhD students engage in rigorous independent research, often collaborating with industry stakeholders, government agencies, and international land organizations. Their research contributes to the ongoing evolution of land management practices, ensuring that policies and procedures remain adaptive to the changing needs of society and the environment. A variety of research publications has also been made available to benefit various stakeholders in the industry.

Conclusion

Education is indispensable in land governance. It not only builds the technical capacities of professionals but also fosters transparent policy making, reduces corruption, empowers communities, and addresses environmental challenges. For land governance to be effective and sustainable, investment in educational programs, training, and public awareness is essential. UTM's LAD programme exemplifies its dedication to advancing knowledge in land governance. Undoubtedly, incorporating land governance education into the real estate curriculum represents a crucial advancement in fostering equitable, transparent, and sustainable land management practices that serve the entire real estate community The program's expansion to Master's and PhD levels, along with ongoing collaboration with industry partners, ensures it stays at the leading edge of land management and governance education in the country, if not globally.

To further strengthen this initiative, national education and land policies should formally integrate land governance modules at tertiary levels, ensuring standardized curricula aligned with global best practices. Collaboration between academia, government agencies and industry stakeholders should be institutionalised to promote curriculum relevance, internship and research opportunities in this regard. Furthermore, continuous professional development (CPD) incentives such as subsidised training programs, certification opportunities and career advancement pathways can motivate practicing professionals to upskill and remain current with policies, technologies and ethical standards in land management. These efforts not only broaden participation but also help build a more inclusive, competent and future-ready workforce in the land governance sector in Malaysia.

* This paper was presented at the 8th Sabah International Surveyors Congress, during the Property Surveying Parallel Session, on October 17, 2024.

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FROM COST CONTROL TO CLIMATE ACTION: THE FUTURE OF QUANTITY SURVEYOR IN SUSTAINABLE URBAN GROWTH (QS)

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Abstract

As the global construction industry pivots toward sustainability, the role of quantity surveyors (QS) is undergoing a transformative shift—from traditional cost control agents to strategic partners in climate action and sustainable urban development. This paper explores the evolving responsibilities of QS professionals in the context of sustainable urban growth, highlighting their critical influence on embedding environmental, social, and governance (ESG) considerations into project planning, design, and implementation. While historically focused on financial management, procurement, and contract administration, QS professionals are now expected to integrate life-cycle costing, carbon footprint analysis, and sustainable material evaluation into their core practices. Drawing on case studies and recent industry innovations, this study examines how digital tools such as Building Information Modelling (BIM), Green Building Index (GBI) metrics, and carbon assessment platforms empower QS to forecast long-term environmental impacts and advise on low-carbon solutions. The paper also addresses the growing demand for QS to support green policy compliance, sustainable procurement strategies, and post-occupancy performance evaluation in urban development projects. In aligning with global sustainability goals—such as the United Nations Sustainable Development Goals (SDGs) and national climate action plans—QS professionals play a vital role in fostering resilient, low-impact urban environments. However, this expanded scope requires upskilling, interdisciplinary collaboration, and stronger regulatory support. The findings underscore the need for professional bodies, academic institutions, and industry stakeholders to redefine QS competencies and develop strategic frameworks that position the profession at the forefront of sustainable development. Ultimately, this paper argues that quantity surveyors are uniquely positioned to bridge cost efficiency with climate responsibility, making them key enablers in shaping the cities of the future.

1.0 Introduction

Quantity Surveyor (QS) has traditionally been associated with cost management, contract administration, and financial feasibility in construction projects. However, as the global emphasis on sustainability intensifies, the role of the quantity surveyor is expanding beyond cost control to include climate-conscious decision-making. Sustainable urban growth is now at the forefront of national development, and quantity surveyors play a crucial role in ensuring that construction projects align with environmental, economic, and social sustainability goals. This article explores how QS professionals are evolving to meet these new challenges, integrating sustainability into cost planning, and leveraging digital technologies to future-proof Malaysia's urban landscape.

Sustainable urban growth is a critical priority for Malaysia as the nation seeks to balance rapid development with environmental stewardship. As the bridge between cost efficiency and sustainability, quantity surveyors have a unique opportunity to influence decision-making at every stage of a project. By incorporating green building principles, leveraging cutting-edge digital tools, and promoting long-term value creation, QS professionals are poised to reshape the future of Malaysia's built environment. This article explores how quantity surveying is shifting from cost control to climate action, ensuring that Malaysia's cities remain resilient, efficient, and sustainable in the decades to come. This article emphasising aims to examine the evolving role of quantity surveyors in supporting climate action and sustainable urban development in Malaysia. Where by, to investigate how the traditional functions of quantity surveying are expanding to include sustainability and climate-related responsibilities.

2.0 The Expanding Role of Quantity Surveyors in Sustainable Development

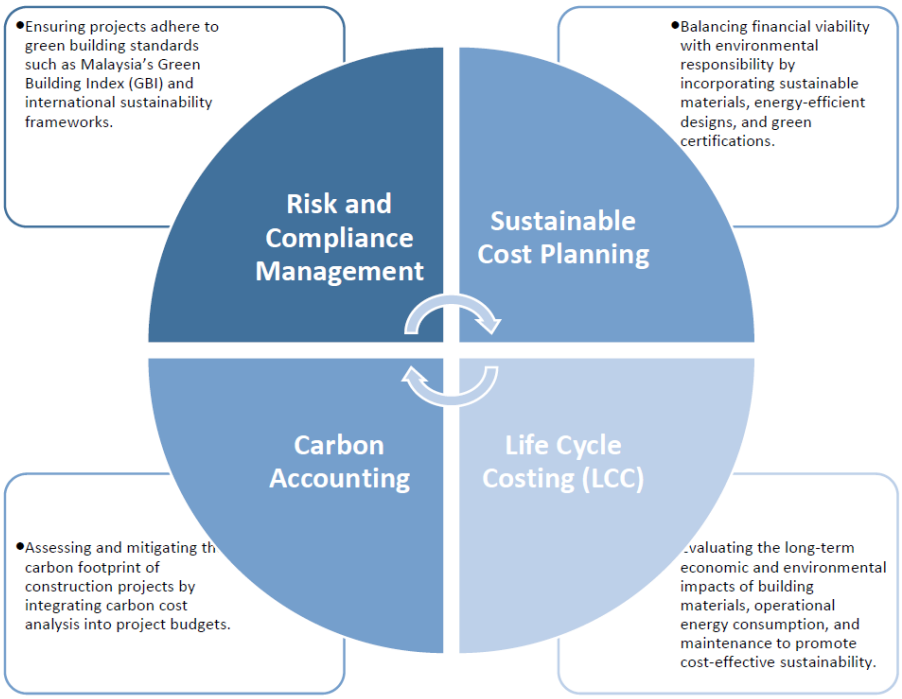
The construction industry is a significant contributor to carbon emissions and environmental degradation. Quantity surveyors, as key financial advisors in the industry, have the expertise to influence sustainable decision-making from the project's inception. Their role has expanded beyond conventional cost management to encompass sustainable practices that align with environmental and economic priorities.

One of the most crucial aspects of sustainability in construction is sustainable cost planning. Quantity surveyors are now responsible for striking a balance between financial viability and environmental responsibility. They achieve this by recommending the use of sustainable materials, integrating energy-efficient designs, and ensuring projects obtain green certifications such as the Green Building Index (GBI). By carefully evaluating the cost-benefit trade-offs of various sustainable options, QS professionals ensure that long-term economic savings outweigh the initial investment, making sustainability an attractive choice for developers.

Another essential function is Life Cycle Costing (LCC), which provides a comprehensive evaluation of the long-term economic and environmental impacts of construction materials and building operations. LCC enables quantity surveyors to assess the cost-effectiveness of sustainable features such as solar panels, rainwater harvesting systems, and energy-efficient HVAC systems. By considering factors such as operational energy consumption and maintenance costs over a building's lifetime, quantity surveyors help stakeholders make informed decisions that enhance sustainability while reducing overall expenditure.

Incorporating carbon accounting into cost management is another vital responsibility. The construction sector significantly contributes to carbon emissions through material extraction, transportation, and on-site activities. Quantity surveyors play a key role in assessing and mitigating the carbon footprint of projects by integrating carbon cost analysis into project budgets. By identifying carbon-intensive materials and recommending low-carbon alternatives, QS professionals contribute to the reduction of greenhouse gas emissions and promote climate resilience in urban development.

Furthermore, risk and compliance management has become increasingly important as governments enforce stricter environmental regulations. Quantity surveyors ensure that construction projects adhere to national and international sustainability frameworks, such as Malaysia's Green Building Index (GBI) and Leadership in Energy and Environmental Design (LEED). Compliance with these standards not only reduces environmental impact but also enhances project credibility and attracts environmentally-conscious investors. QS professionals are instrumental in monitoring and enforcing sustainability policies throughout the construction lifecycle, safeguarding projects against potential legal and financial risks.



3.0 Leveraging Digital Technology for Smart and Sustainable Urban Growth

The rapid evolution of digital technology is transforming the quantity surveying (QS) profession, equipping professionals with tools to make data-driven decisions that balance cost efficiency and sustainability. These technological advancements empower QS practitioners to optimize resource use, enhance project transparency, and streamline compliance with sustainability standards. Four key technologies—Building Information Modeling (BIM), Artificial Intelligence (AI) with Big Data, Blockchain, and Smart Contracts—are revolutionizing how QS professionals contribute to smart and sustainable urban growth.

3.1 Building Information Modelling (BIM):

BIM has become an essential tool in modern construction, enabling QS professionals to integrate cost estimation with environmental considerations. Unlike traditional methods, which often involve fragmented data, BIM provides a centralized digital model that includes real-time updates on costs, schedules, and material specifications. This allows QS professionals to simulate the environmental impact of various design choices, such as energy consumption, material usage, and carbon emissions. For example, by running environmental impact assessments within BIM, quantity surveyors can recommend design modifications that improve energy efficiency while remaining within budgetary constraints. Furthermore, BIM enhances collaboration among project stakeholders, ensuring that sustainability is prioritized throughout the project lifecycle.

3.2 Artificial Intelligence (AI) and Big Data:

The adoption of AI and Big Data analytics is transforming decision-making in the QS profession. AI algorithms can analyze vast datasets to predict project outcomes, such as energy performance, material durability, and lifecycle costs. These insights enable QS professionals to identify opportunities for resource optimization and waste reduction. For instance, AI-driven tools can recommend alternative materials with lower carbon footprints while maintaining structural integrity. Additionally, predictive analytics powered by Big Data helps anticipate potential sustainability risks, such as resource shortages or regulatory changes, allowing project teams to proactively address these challenges. This data-driven approach not only enhances project sustainability but also improves cost predictability and risk management.

3.3 Blockchain for Transparency:

Blockchain technology introduces an unprecedented level of transparency to the procurement process, ensuring that sustainability commitments are upheld. By creating a secure, immutable ledger, blockchain allows QS professionals to trace the origins of construction materials and verify compliance with environmental standards. For example, blockchain can certify that timber used in a project is sourced from sustainable forests or that concrete suppliers adhere to low-carbon production practices. This transparency builds trust among stakeholders and aligns with ethical supply chain principles. Furthermore, blockchain reduces administrative burdens by automating documentation processes, ensuring that sustainability-related certifications and approvals are easily accessible.

3.4 Smart Contracts:

Smart contracts, powered by blockchain, further enhance project efficiency by automating compliance with sustainability requirements. These self-executing contracts are programmed to enforce specific conditions, such as using certified green materials or achieving energy performance targets. Once the conditions are met, the smart contract automatically releases payments or approvals, reducing delays and paperwork. For QS professionals, this innovation ensures that sustainability goals are seamlessly integrated into project workflows, enabling faster decision-making and improved accountability. Smart contracts also reduce disputes by providing a transparent and verifiable record of all contractual obligations.

Building Information Modeling (BIM)	Enhancing cost estimation accuracy while incorporating environmental impact assessments within digital building models.
Artificial Intelligence (AI) and Big Data	Predicting project sustainability outcomes through advanced analytics and optimizing resource allocation.
Blockchain for Transparency	Ensuring sustainable procurement practices by tracking material sources and enforcing ethical supply chains.
Smart Contracts	Automating compliance with sustainability requirements, reducing paperwork, and increasing project efficiency.

4.0 Challenges and Opportunities in Future-Proofing Malaysia's Urban Landscape

While QS professionals are well-positioned to lead sustainable urban growth, they face several challenges that must be addressed to ensure progress:

Knowledge and Skills Gap	Industry Resistance to Change	Regulatory and Policy Constraints
The QS profession is undergoing a significant transformation as sustainability becomes a core focus. However, many professionals lack the necessary expertise in areas such as green building certifications, carbon accounting, and life cycle analysis. Bridging this gap requires a commitment to continuous professional development through specialized training programs, workshops, and certifications. By equipping QS professionals with the latest knowledge, the industry can ensure that sustainability principles are effectively integrated into project management and cost planning.	Despite the long-term benefits of sustainable practices, many developers and contractors remain hesitant to adopt them due to perceived higher initial costs. This resistance stems from a lack of awareness about the financial and environmental advantages of sustainable construction. QS professionals must advocate for sustainability by presenting compelling business cases that highlight the return on investment (ROI) of green building practices. By showcasing successful examples and leveraging data-driven insights, QS practitioners can shift industry attitudes and encourage widespread adoption.	Malaysia's regulatory framework for sustainable construction is still evolving, with inconsistent enforcement of green building standards and limited government incentives. QS professionals play a vital role in advocating for stronger policies and financial incentives that promote sustainability. By collaborating with policymakers, industry leaders, and professional bodies, QS practitioners can drive the development of a robust regulatory environment that supports green initiatives. Increased incentives, such as tax breaks for sustainable projects, could further encourage developers to prioritize eco-friendly practices.

Despite these challenges, opportunities abound for QS professionals who embrace sustainability. Malaysia's commitment to achieving carbon neutrality by 2050 presents a significant opportunity for QS practitioners to lead the transition toward greener cities. By integrating climate-conscious practices into their workflows and leveraging digital technologies, QS professionals can position themselves as essential contributors to sustainable urban development. Furthermore, the growing demand for green buildings and resilient infrastructure opens up new career pathways and market opportunities for QS professionals who prioritize sustainability. Conversely, opportunities abound, particularly with Malaysia's commitment to achieving carbon neutrality by 2050. QS professionals who embrace sustainability will not only remain relevant but will also become pivotal figures in shaping Malaysia's future cities.

Conclusion

Quantity surveying is undergoing a profound transformation, evolving from a primarily cost-centric role into a pivotal force driving sustainable urban development. In the face of mounting environmental challenges and increasing urbanization, QS professionals are uniquely positioned to bridge the gap between economic feasibility and environmental responsibility. By embedding sustainability into every aspect of their work—from cost planning and life cycle analysis to carbon accounting and compliance management—they are shaping the trajectory of the construction industry toward a greener future.
The adoption of digital technologies such as BIM, AI, blockchain, and smart contracts has further empowered QS professionals to deliver innovative solutions that enhance both efficiency and sustainability. These tools enable data-driven decision-making, optimize resource allocation, and ensure transparent and ethical project execution. However, the journey is not without its obstacles, as professionals must address knowledge gaps, industry resistance, and regulatory limitations.

Looking ahead, the role of quantity surveyors will be integral to Malaysia's vision of achieving carbon neutrality by 2050. By championing green practices, advocating for policy reforms, and continuously upgrading their skills, QS professionals will not only future-proof their careers but also play a decisive role in building resilient, sustainable, and economically viable urban landscapes. In this transformative era, quantity surveyors are not just contributors—they are leaders, driving climate action and sustainable growth for generations to come.

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EMBRACING INNOVATION FOR A SMARTER FUTURE OF BUILDING SURVEYING PRACTICE: A CONCEPTUAL FRAMEWORK

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Abstract

Building surveying in Malaysia is at a transformative stage, embracing innovative technologies while upholding conventional expertise. This paper discusses the evolution of building surveying within the Malaysian context. In addition, its emphasis on how digital technology-driven advancements such as Building Information Modelling (BIM), Global Positioning System (GPS), the Internet of Things (IoT), Augmented Reality (AR), and Artificial Intelligence (AI) are changing the profession practice. This advancement provides the potential for improving accuracy, efficiency, cost-cutting, and sustainable desire in built environments. As a realist, integration always comes with challenges. Practitioners often faced challenges in regulatory alignment, digital literacy gaps, and infrastructural interest. This paper aims to explore current scholarly works, industry transformations, and future prospects for smart implementation of the building surveying profession in Malaysia. It explores how local authorities and government agencies, and the private sector are reacting to this paradigm shift. Furthermore, it is also exploring the essential strategies that have been planned to sustain the profession's growth. The contextual study in this paper highlights an outline of key challenges and future competencies for embracing innovation in building surveying that balances conventional practices with advanced approaches. Overall, it argues that embracing innovation is not optional but mandatory for Malaysia to encounter universal values, protect public benefits, and support its smart futures ambitions.

***Keywords**: Building surveying, innovation, smart future, digital transformation*

1. INTRODUCTION

The building surveying profession is among the valuable professional practices within the built environment (RISM, 2025). Building surveying originated in the United Kingdom, where it was formalised under the Royal Institution of Chartered Surveyors (RICS) internationally (Hoxley, 2012; Hoxley & Wilkinson, 2006). The profession spread to Commonwealth countries, including Malaysia, through academic programmes and institutional partnerships (Ali & Woon, 2013). It comprehends a wide range of services connected to the design, construction, maintenance, and management of buildings (Banyard et al., 2003; Law, 2021). Therefore, a professional and registered building surveyor is a qualified person who has undergone rigorous training, examination, and practical experience.

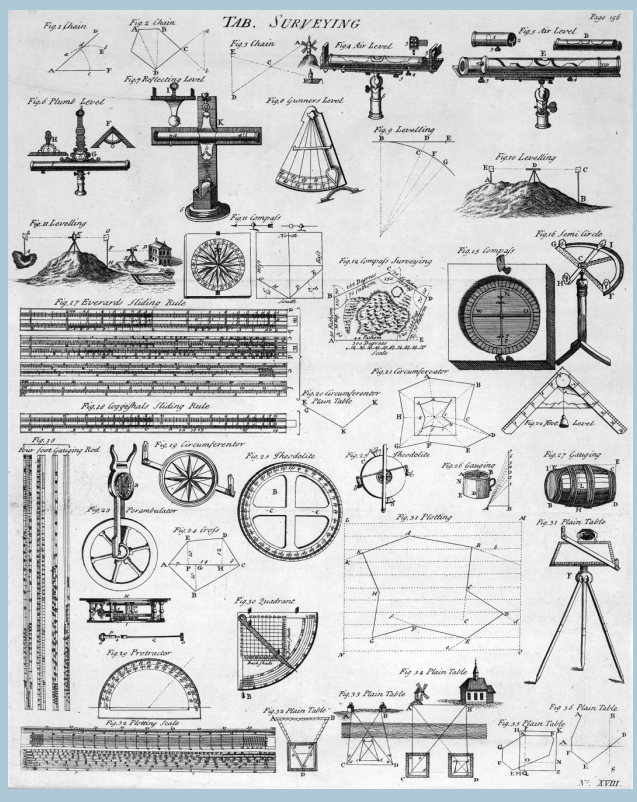
In Malaysia, they are typically recognised by professional bodies such as the Royal Institution of Surveyors Malaysia (RISM) (Ali & Woon, 2013; RISM, 2025). In addition, registered building surveyors were associated under the Malaysian Association of Registered Building Surveyors (MyRBS). The discipline is taught and offered in public higher learning institutions (Hoxley, 2011; Wilkinson & Hoxley, 2005), such as Universiti Teknologi MARA (UiTM), Universiti Malaya (UM) and Universiti Sains Malaysia (USM). The role of a building surveyor ranges far beyond simple inspections as the public generally understands (Isnin et al., 2016). They are involved in providing expert advice on property development, construction management, building law and regulations, maintenance strategies, and the restoration of heritage structures (Blankenbach, 2018; Hill, 2005; Mahmood & Abrishami, 2020).

Building surveyors act as key coordinators in the development process, working with architects, engineers, planners, contractors, and government authorities to ensure that all aspects of a specific project meet the legislative requirements, client expectations, and sustainability goals (Smith & Gorse, 2021). Accordingly, they have extensive potential for involvement in diverse sectors in local authorities, education, insurance, financial institutions, consultancy firms and research areas (RISM, 2025).

Consequently, building surveyors contribute significantly to the integrity, safety and functionality of the built environment. Their know-how is essential in various areas such as building control administration, construction and development management, defect diagnosis, insurance assessment, and long-term maintenance planning. In essence, building surveying plays a critical role in protecting public interest, improving asset value, and promoting responsive development practices, making it a key profession in today's complex and rapidly changing landscape (Fregonese et al., 2013).

2. LITERATURE REVIEW

Over the decades, various socio-economic circumstances have reshaped the built environment. This features rapid urbanisation, population growth, climate change, and shifts in construction practices. Thus, these changes also required building surveyors to adapt their growing functions (Abdul-Aziz et al., 2020). Starting from conventional defect inspection and technical review to extensive dimensions identical to sustainability audits, innovative facility management, and forensic investigation (Hart, 1991). The early 1990s indicated an era of foundation and regulations, as Malaysia's built environment was focused on post-independence infrastructure development. Most surveyors relied on analogue tools, while digital tools were very minimal.



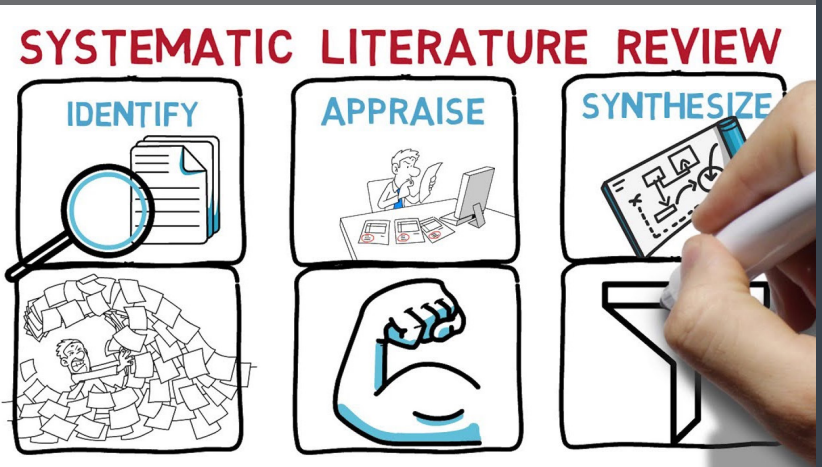
2.1 PARADIGM SHIFT TOWARD SMARTER FUTURE

As time passed by, the early 2000s were the mark of new technologies being adopted in the surveying profession. In the context of policy, the government is emphasising a knowledge-based approach and targeting high-income nations, highlighting the need for innovative approaches including surveying. Today, emphasising digitalisation was the main narrative by adopting technologies like Building Information Modelling (BIM), Global Positioning System (GPS), the Internet of Things (IoT), Augmented Reality (AR), and Artificial Intelligence (AI) and various automation systems (Ali et al., 2021; Cao et al., 2022; Dore & Murphy, 2012; Kim et al., 2020).

Furthermore, higher learning institutions that offer building surveying programmes are always updating their programme structures to suit the current innovative technological advancements, such as digital surveying tools. The professional bodies also actively organised conferences, seminars, training and professional development activities to embrace innovation in the built environment.

Regardless of innovative advancement, industry reports suggest that adoption of smart technologies is uneven within sectors. Although main developers and government-linked companies have adopted innovation, smaller consultants normally lack the resources and skills to execute such advanced systems. Governing gaps, insufficient execution mechanisms and a slow cultural shift towards digitalisation remain to hinder progress.

On the other hand, smart building or city initiatives provide an attractive basis for digital transformation in building surveying. Building surveyors now can play a key role in climate-responsive designs, post-disaster assessments, and energy efficiency audits which demand smart tools and data-centric decision-making (Ali et al., 2023; Ngah et al., 2023).



4. METHODOLOGY

This study embraces a Systematic Literature Review (SLR) method to develop a conceptual framework for embracing innovation in building surveying practice. The review process focuses on scholarly works published from 2020 to 2025 from trustworthy article database, including Google Scholar, Scopus, and Web of Science (WoS). The search strategy employed relevant keyword such as “building surveying”, “digitalisation”, “BIM”, “IoT”, “AI in built environment”, and smart technology”. After screening contents for relevance, a full-text review was conducted to extract data relating to innovation, smart futures, key challenges, and future competencies. A thematic synthesis was then performed to identify repetitive concepts and formulate the key dimensions of the proposed conceptual framework.

5. FINDINGS

5.1 Future Competencies

The integration of innovation and smart technologies in building surveying practices is needed to boost effectiveness, accuracy, and sustainability (Bayyati, 2017; Husain et al., 2020). However, several key challenges hinder the widespread adoption of innovation could be theoretically studied in other to make sure that the profession is ready to adapt.

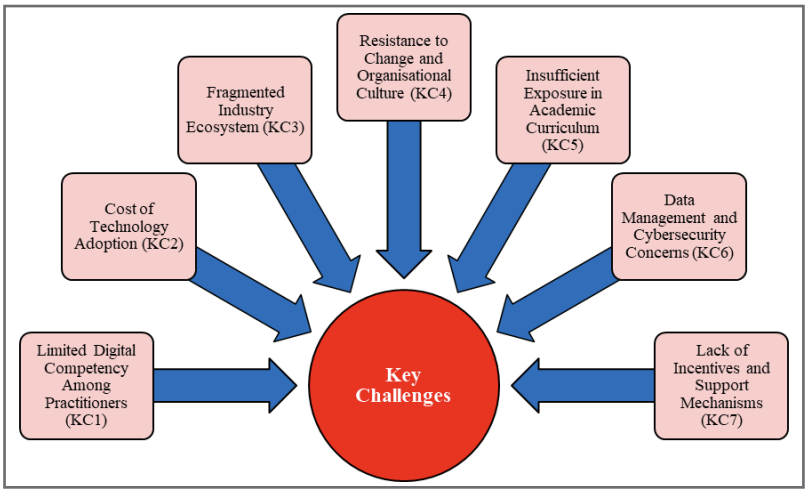


Figure 1: *Key challenges adoption of innovation*

Table 1: *Key challenges adoption of innovation*

Key Challenges	Descriptions
Limited Digital Competency Among Practitioners (KC1)	Many practitioners, including building surveyor graduates, lack adequate training in emerging technologies such as comprehensive skills in Building Information Modelling (BIM), drone mapping, and thermal imaging (Cao et al., 2023; Choi et al., 2024; Parracho et al., 2023; Sutherland et al., 2023). The absence and limitation of structured digital upskilling programmes limit the profession's ability to move efficiently into a digitalisation approach (Morandini et al., 2023; Padmaja & Mukul, 2021).
Cost of Technology Adoption (KC2)	In certainty, the high initial investment required for digital tools (e.g., BIM software licences, LiDAR equipment, drones) poses a financial barrier (Alenezi, 2023; Gkrimpizi et al., 2023; Li et al., 2023; Mihić et al., 2023). This happens particularly for small consultants and service providers (Stornelli et al., 2021).
Fragmented Industry Ecosystem (KC3)	Building surveying often overlaps with other professional disciplines in the built environment and engineering. The absence of an integrated digital ecosystem and shared platforms limits collaborative innovation and data interoperability among stakeholders (Li et al., 2022; Tripathi et al., 2024; Wang et al., 2024; Wirtz & Müller, 2023).
Resistance to Change and Organisational Culture (KC4)	Some professionals are unwilling to change established systems due to scepticisms throughout modern technologies or fear of job displacement (Adepoju et al., 2024; Yeong, 2025; Pemer & Werr, 2023; Tran et al., 2024). In traditional or conventional firms, leadership may not have the strategic vision to drive innovation or allocate resources for smart and intelligent revolution(Aldoseri et al., 2024; Haleem et al., 2024).
Insufficient Exposure in Academic Curriculum (KC5)	While some universities have introduced BIM and digital surveying tools in their curriculum, the level of integration and practical exposure remains insufficient (Besné et al., 2021; Casasayas et al., 2021; Ebekozien & Aigbavboa, 2024). Graduates may enter the workforce with limited hands-on experience in using smart tools, creating a gap between industry needs and academic output.
Data Management and Cybersecurity Concerns (KC6)	With the shift toward cloud-based systems and digital data collection, concerns over data ownership, privacy, cybersecurity, and compliance with standards emerge (Ahmad et al., 2021; Naik, 2023; Somani & Rena, 2025). Surveyors may be not ready to manage these risks due to lack of policy guidelines or technical knowledge.
Lack of Incentives and Support Mechanisms (KC7)	Innovation often requires sustained support through grants, tax incentives, or public-private partnerships (Dechezleprêtre et al., 2023; Ning et al., 2023; Rosário et al., 2024). In the context of Malaysia, existing schemes may be underutilised due to limited awareness or complex application processes, discouraging firms from exploring smart solutions.

5.2 FUTURE COMPETENCIES

In order to remain relevant and future-ready, building surveyors must acquire and strengthen specific competencies (Husain et al., 2017; Zaheer et al., 2021). This must be aligned with emerging technologies and industry transformation (Ali et al., 2021). The following core competencies are critical for enabling innovation in modern building surveying practice.

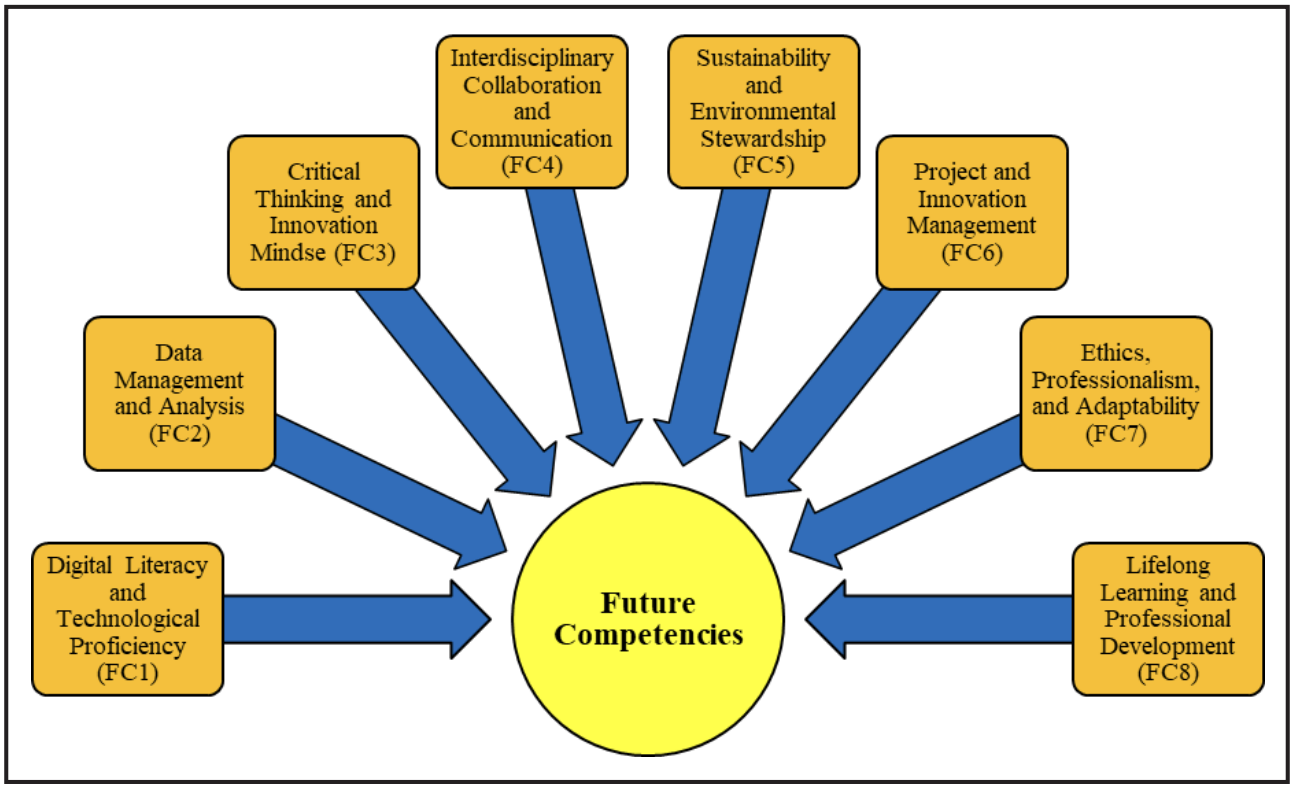


Figure 2: *Future competencies for adoption of innovation*

Table 2: *Future competencies for adoption of innovation*

Future Competencies	Descriptions
Digital Literacy and Technological Proficiency (FC1)	In the smart built environment, building surveyors must excel in digital literacy and technology. Proficiency in these tools requires both technical expertise and the ability to integrate data into workflows (Balogun, 2024; Oke et al., 2023; Omrany et al., 2025). Continuous learning ensures surveyors remain competitive, contributing to data-driven decisions and innovation for sustainable, efficient built environments.
Data Management and Analysis (FC2)	In the digital era, building surveyors must excel in managing and analysing building-related data. Key competencies include applying big data analytics for predictive maintenance, fault detection, and life-cycle cost analysis to optimise asset management (Menon & Tuladhar, 2024; Wakiru et al., 2022). Additionally, surveyors must adopt cybersecurity practices and develop analytical skills to extract strategic insights, positioning them as key contributors to the digital transformation of the built environment.
Critical Thinking and Innovation Mindset (FC3)	To thrive in a rapidly evolving industry, building surveyors must foster an innovation mindset and critical thinking. For instance, integrating digital twin technology for real-time building monitoring can enhance performance and response times. An innovative approach encourages the adoption of emerging technologies and proactive problem-solving (Ahsan, 2024; Krskova & Breyer, 2023; Kulturel-Konak et al., 2024; Patel et al., 2024). This adaptability is essential for staying competitive in a field driven by digital transformation, sustainability goals, and evolving regulations.
Interdisciplinary Collaboration and Communication (FC4)	In smart, integrated environments, building surveyors must work within multidisciplinary teams, collaborating with architects, engineers, IT professionals, and clients. Effective communication and collaboration skills are essential, as surveyors must interpret technical jargon and translate it into actionable insights for diverse stakeholders (Muthumanickam et al., 2023; Oliveira et al., 2022; Olsen & Namara, 2021).
Sustainability and Environmental Stewardship (FC5)	Building surveyors play a crucial role in promoting sustainability within the built environment. They must be well-versed in green building rating systems like LEED, GreenRE, and GBI, focusing on energy efficiency and environmental responsibility. Competence in conducting energy audits, performance diagnostics, and carbon footprint assessments is essential for compliance and continuous improvement (Baral, 2024; Herce et al., 2021; John et al., 2025; Spudys et al., 2025). Building surveyors should also advocate for life-cycle sustainability assessments, considering the long-term impacts of building operations, maintenance, and decommissioning.
Project and Innovation Management (FC6)	To lead digital transformation in building surveying, professionals must develop strong project and innovation management skills. This includes managing projects using agile methodologies focusing on iterative progress and stakeholder engagement (Eboh, 2024; Famoti et al., n.d.; Nguyen et al., 2024). Building surveyors need to scope and plan technology adoption initiatives and ensure successful execution.
Ethics, Professionalism, and Adaptability (FC7)	Surveyors must uphold ethical standards and professional responsibility amidst rapid technological change (Wright et al., 2025). Additionally, they need to meet shifting client expectations by embracing digital platforms, mobile accessibility, and real-time reporting (Ogundipe et al., 2024). By maintaining ethical integrity and demonstrating adaptability, surveyors can navigate these challenges, earning trust and ensuring resilience in an ever-changing built environment (Modiba & Harinarain, 2024).
Lifelong Learning and Professional Development (FC8)	Building surveyors must embrace lifelong learning to adapt to any technological and industrial changes. Acquiring Continuing Professional Development (CPD) through accredited training, seminars, and certifications is essential (Bradley & Chohan, 2024; Folorunso et al., 2024). Additionally, upskilling in emerging technologies such as AI, IoT, robotics, and blockchain for smart future is significant (Chen et al., 2021; Morandini et al., 2023; Padmaja & Mukul, 2021). Hence, participation in research groups, innovation networks, and cross-industry forums ensures building surveyors stay informed of global trends and best practices (Nan & Huang, 2024). By adopting a growth mindset and actively pursuing learning opportunities, surveyors can lead the industry toward a smarter, more sustainable future, staying agile and competitive in an evolving built environment (Omotayo et al., 2024).

Figure 3 below establishes the conceptual framework of embracing innovation for smarter future in building surveying practices. This framework consists of two main constructs: key challenges and future competencies. This framework provides a strategic structure to understand the key challenges and competencies required within the profession. This framework can further be analysed in specific case study to explore the real case of innovation adoption for smart future, especially for building surveying professionals.

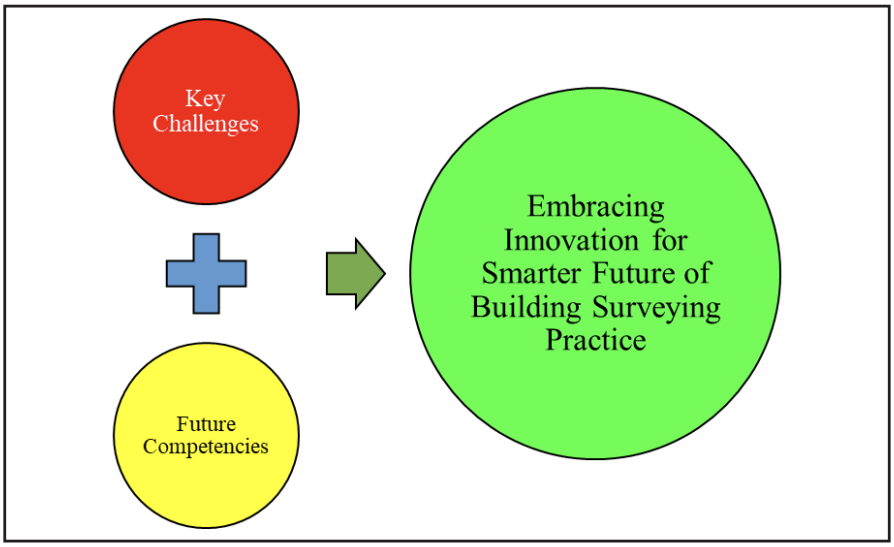


Figure 3: *Proposed conceptual framework embracing innovation for smarter future of building surveying practice*

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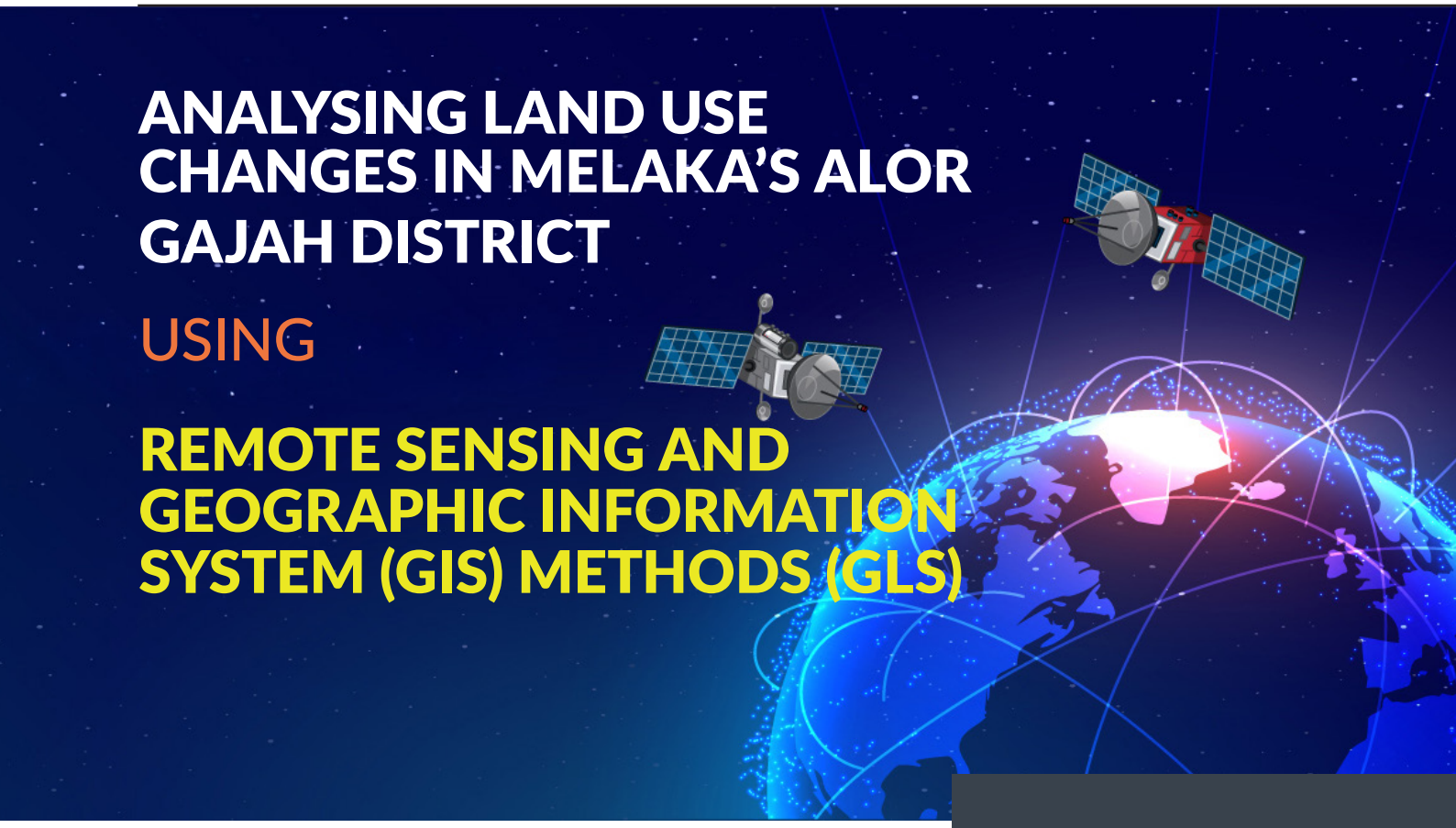
ANALYSING LAND USE CHANGES IN MELAKA'S ALOR GAJAH DISTRICT USING REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEM (GIS) METHODS (GLS)



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Abstract:

Land use change and land cover are among the driving forces of global environmental change, which are often a topic of intense discussion and reflect the patterns of development taking place in a particular area. This study was conducted to detect the land use changes in Alor Gajah, Melaka by using Geographical Information System (GIS) and remote sensing approach. In this research, land use time series comparison of 2015 and 2021 is used to detect changes. The data used in this research were both Landsat 8/9 OLI-TIRS (Operational Land Imager) and the (Thermal Infrared Sensor). The Landsat satellite image is then converted from TIFF file to img. format without losing any information of the original data in Erdas Imagine software. The Landsat satellite image were classified using supervised classification method into several categories such as forest, built-up areas, agriculture, water bodies, open space vegetation and cloud. In the process of the research work using GIS, an increased was recorded in the vegetation area which rose from 8762.789ha to 17436.292ha and built-up area increased from 7222.126ha to 8130.610ha. Meanwhile, the number of decreasing areas is forest which decreased from 10671.88ha to 8389.29ha, agriculture decreased from 33678.20ha to 29203.24ha, water bodies decreased from 328.07ha to 294.71ha and open space decreased from 2529.99ha to 1909.65ha. The study arrived at the conclusion that there has been a significant land use change due to increase in population and development interest in built-up areas which resulted in increased of amount of agricultural land being converted to built-up areas over the period of 6 years. The results of this study can be used in land evaluation, environmental studies and integrated management planning for rational utilization of natural resources.

Keywords: *Land use changes, GIS, remote sensing, Landsat, Alor Gajah*

Introduction

Land use and land cover are the outcomes influenced by human activities and the impacts of global climate change on the Earth's surface. The processes of deforestation, afforestation, and forest regrowth contribute to the release and sequestration of carbon, consequently influencing atmospheric CO2 concentrations and amplifying the greenhouse effect. (Asner et al. 2005). Regular monitoring and assessment of land use and land cover change is therefore critical for understanding the extent and impact of such anthropogenic and natural changes on the Earth at local, regional, or global scales (Potapov et al. 2008).

Most parts of countries in the world are currently experiencing wide-ranging changes in land use and land cover (LULC) (Mas et al. 2005). These LULC changes have mostly been associated with the interaction between humans and the environment (Alawamy et al. 2020). Remote Sensing have the ability to detect change on the earth's surface through space-borne sensors where the repetitive coverage of satellite images and the improvement of image quality can provide valuable assistance in the identification of changes (Jensen et. al. 1983; Ramachandra et al. 2004). Temporal and spatial resolutions allow scientists to monitor and detect changes over a broad scale and help planners to obtain or maintain information on various phenomena, such as shifting agricultural patterns, crop stress, disaster monitoring, land use and land cover changes (Rogan et. al. 2004).

The United Nations (2014) reported that more than 50% of the world's population will be living in urban areas, and it is projected to increase to 65% by 2050. Urban growth and urbanization are common trends occurring worldwide which caused by population concentration in urban areas resulting in land transformation (Shao et al. 2021; Mosammam et al. 2017; Xu et al. 2019). Developing countries are among those experiencing rapid urban growth, which has significant negative impacts on the environment (Appiah et al. 2017; Li et al. 2018), particularly on the surrounding natural environment. The application of GIS and remote sensing successfully proved that the urban growth significantly influences the distribution and land use changes particularly in the suburbs of Seremban region (Seman & Aiyub 2023).

Land use changes occur due to the evolving needs of the population to engage in specific activities driven by physical, economic, and social factors. Therefore, land use issues are important to study. A profound understanding of gradual or drastic environmental changes will provide valuable insights into the interaction between natural processes and human activities (Bakr et al. 2010).

1. Study Area

Alor Gajah is a town and district seat of Alor Gajah District in the Malaysian state of Melaka. It is governed by Alor Gajah Municipal Council, which was formerly known as Alor Gajah District Council from 1 July 1978 until 1 May 2003. Alor Gajah is a countryside town that is located 24 km away from Bandaraya Bersejarah Melaka (2°23′00″N 102°13′00″E). This place bestowed the wow factor that every visitor seeks in their vacation which then became a hotspot for safari tours, theme parks and water parks.

The climate in this district is an equatorial climate. The average temperature is 27.22 °C (81.0 °F). May is the hottest month in this area with temperatures reaching 27.9 °C (82.2 °F) while December is being categorized as the coldest month with a temperature of 26.5 °C (79.7 °F). The average precipitation in Alor Gajah is 2050.6 millimetres per year. November is the month with the highest precipitation with 229.9 millimetres while the lowest month is February with 89.3 millimetres.
Based on the 2020 Malaysian census, the total population in Alor Gajah District is 249,356 people with a population density of 370 people per square kilometre which is categorized as a dense population distribution. The majority of residents in this district are Bumiputera, making up more than 79% of the population while the second largest race is Chinese followed by Indians. A total of seven percent of the population are non-citizens.

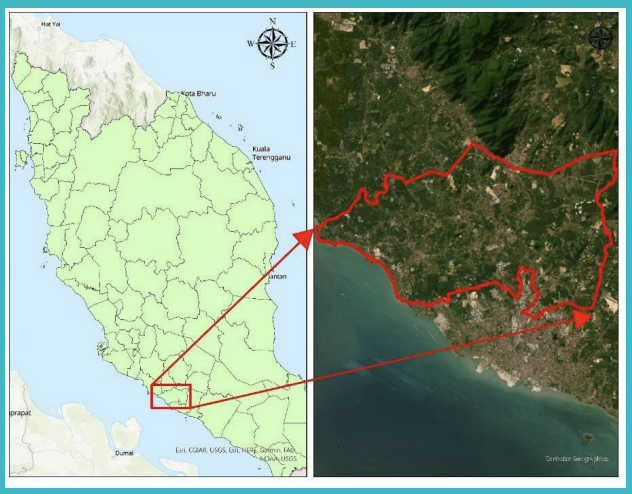

Figure 1: *Study Area of Alor Gajah, Melaka*

2. Research Methodology

In order to achieve the objectives of this research, several steps will be taken. Multivariate sources of data will be used in order to understand the characteristic of the land and then analyses it. The remote sensing approach was used in this study to detect land use changes that occurred in 2015 and 2021. For the purpose of processing the satellite image, Erdas Imagine version 14.0 and ArcGIS Pro version 3.0 has been used to perform the geometric correction. Figure 2 shows the flow chart of the research method carried out until the production of the thematic map.

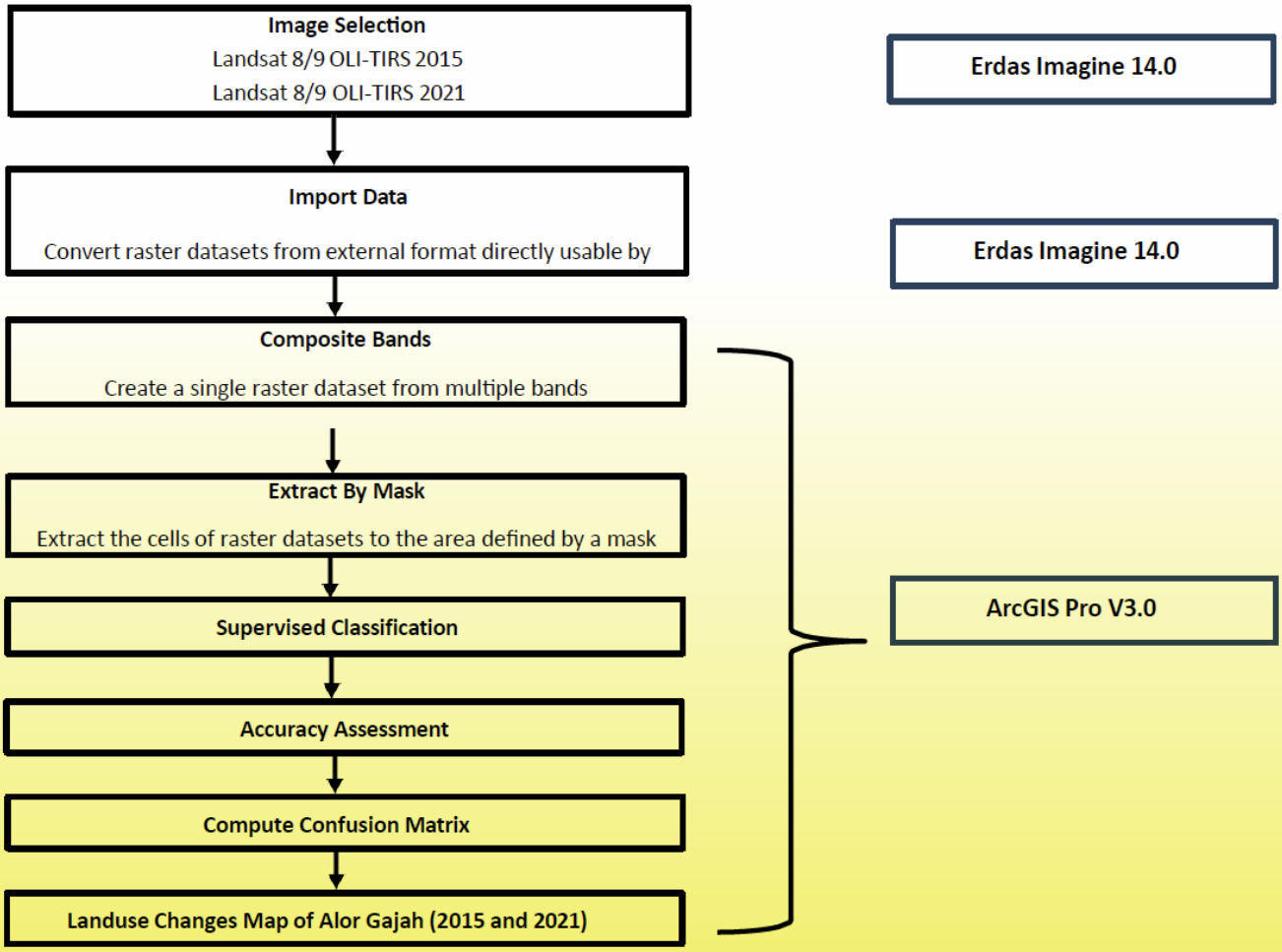

Figure 2: *Satellite image processing and land use analysis flowchart*

Satellite Image Data

This study examines land use changes occurring between 2015 and 2021 by satellite imagery downloaded from United State Geological Survey website (https://earthexplorer.usgs.gov/). The primary data sources for the land cover classification were both Landsat 8/9 OLI-TIRS for 2015 and 2021 period which is observed on 16th February 2015 and 09th December 2012 accordingly. The satellite image was chosen because the observed image displayed is the best and there is less cloud cover, especially within the study area compared to the other dates.

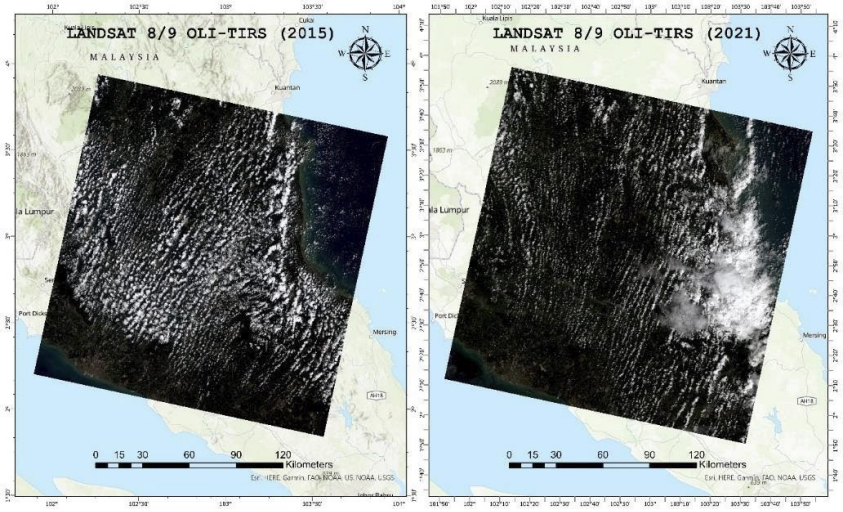

Figure 3: *Landsat 8/9 OLI-TIRS satellite images for 2015 (left) and 2021 (right)*

Image Pre-processing

Satellite data downloaded from the USGS website needs to go through several pre-processing processes such as geometric correction to correct distortion if it exists and the conversion of pixel values from digital values to surface reflectance values. The composite bands and extract by mask tools are applied after the pre-processing steps taken.

The images downloaded from USGS cover a wide area that covers the sea area, the entire state of Pahang, Melaka and several areas of the states of Johor and Negeri Sembilan. The process of Extract By Mask is used to produce images that cover the environment of the study area. Using the "Extract by Mask" tool indicate the input raster, the raster or entity later that used to define the areas to extract (Input raster or feature mask data) and the name and location of the output raster.

This image clipping process is done to reduce the data size and simplify the image processing. Figure 4 shows images for the year of 2015 and 2021 that have been clipped.

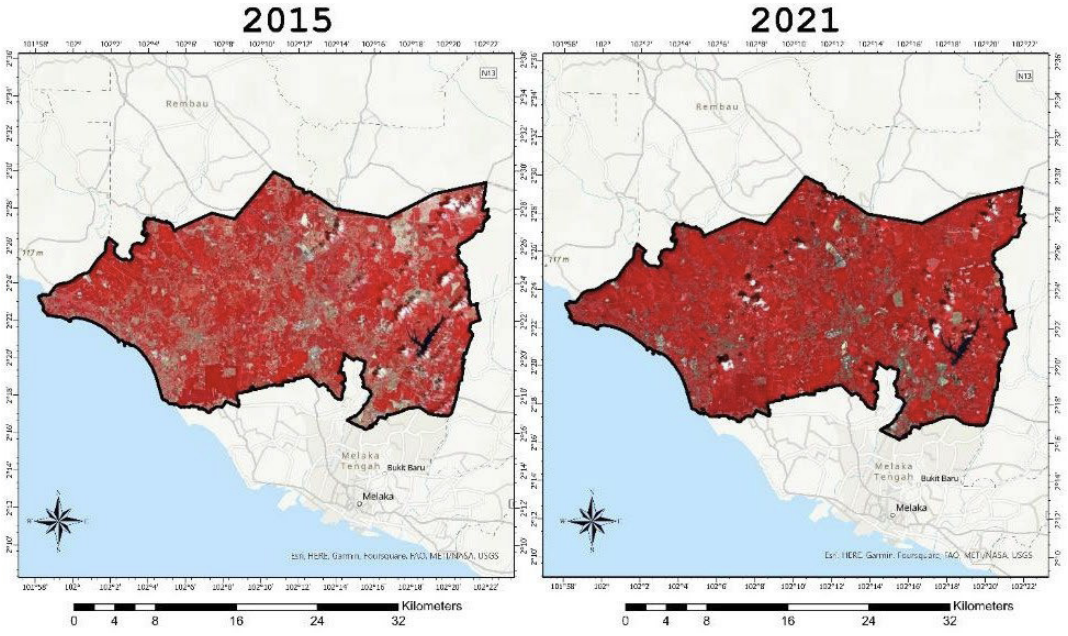

Figure 4: *False colour composite as display for Landsat 8/9 OLI-TIRS satellite images with combination bands of 5,4,3 RGB for 2015 (left) and 2021 (right)*

Image Classification

There are several approaches that can be used to classify remote sensing data which is supervised classification and unsupervised classification. The image classification process carried out in this study uses a supervised classification method into several categories such as forest, built-up areas, agriculture, water bodies, open space and vegetation.

The selection of suitable band combinations for satellite images is important to help the interpretation process of land use and land cover. This study uses a composite of false colour images where a band combination of infrared applied to distinguish between different types of vegetation and water bodies. False colour composite as displayed in Figure 4 shows Landsat 8/9 OLI-TIRS satellite images with combination bands of 5,4,3 RGB for 2015 (left) and 2021 (right).

In a supervised classification, the identity and location of some of the land-cover types (e.g., urban, agriculture, or wetland) are known a priori through a combination of fieldwork, interpretation of aerial photography, map analysis, and personal experience. The analyst attempts to locate specific sites in the remotely sensed data that represent homogeneous examples of these known land-cover types. These areas are commonly referred to as training sites because the spectral characteristics of these known areas are used to train the classification algorithm for eventual land-cover mapping of the remainder of the image. Multivariate statistical parameters (means, standard deviations, covariance matrices, correlation matrices, etc.) are calculated for each training site. Every pixel both within and outside the training sites is then evaluated and assigned to the class of which it has the highest likelihood of being a member.

An analyst may select training sites within the image that are representative of the land-cover or land-use classes of interest after the classification scheme is adopted. The training data should be of value if the environment from which they were obtained is relatively homogeneous.

Maximum Likelihood Classification Algorithm

The maximum likelihood decision rule was found to be the best and the most accurate and most widely used method amongst the others (Bolstad and Lillesand 1991). In the first stage of maximum likelihood method based on training samples of classes, variance mean and covariance for used bands is calculated. In the second stage, the probability of belonging pixels to each class is calculated and based on the highest probability scale, classifying and assigning pixels to different classes is done. In this method pixels are assigned to classes that are the most similar after evaluating the possibilities in each class and if probability values were introduced below the threshold values, are introduced as unclassified pixels (Ghare chelo 2010). In this method normal distribution condition is particularly important (Alavipanah 2005).

The aforementioned classifiers were based primarily on identifying decision boundaries in feature space based on training class multispectral distance measurements. The maximum likelihood decision rule is based on probability. The maximum likelihood decision rule is still one of the most widely used supervised classification algorithms.

Accuracy Assessment of Classified Image

Accuracy assessment is an important part of any classification project. It compares the classified image to another data source that is considered to be accurate or ground truth data. Ground truth data can be collected in the field; however, this is time consuming and expensive. Ground truth data can also be derived from interpreting high- resolution imagery, existing classified imagery, GIS data layers. In this research, the accuracy assessment uses a reference dataset to determine the accuracy of the classified result. The most common way to assess the accuracy of a classified image is to create a set of random points from the ground truth data and compare that to the classified data in a confusion matrix. Table 1 and 2 shows the accuracy assessment of Landsat 8/9 image year 2015 and 2021 accordingly.

Table 1. *Accuracy Assessment of Landsat 8/9 Image year 2015*

Classification	Forest	Built-up Areas	Agriculture	Water Bodies	Open Space	Vegetation	Cloud	**Total**
Forest	35	0	9	1	0	4	0	**49**
Built-up Areas	0	25	1	1	2	3	0	**32**
Agriculture	1	0	144	0	0	4	0	**149**
Water Bodies	0	0	0	10	0	0	0	**10**
Open Space	0	0	1	0	10	0	0	**11**
Vegetation	0	1	7	0	0	32	0	**40**
Cloud	0	3	0	1	0	1	12	**17**
Total	**36**	**29**	**162**	**13**	**12**	**44**	**12**	**308**

Table 2. *Accuracy Assessment of Landsat 8/9 Image year 2021*

Classification	Forest	Built-up Areas	Agriculture	Water Bodies	Open Space	Vegetation	Cloud	**Total**
Forest	21	0	14	0	0	3	0	**38**
Built-up Areas	0	33	1	0	2	1	0	**37**
Agriculture	0	0	128	0	0	1	0	**129**
Water Bodies	0	0	0	10	0	0	0	**10**
Open Space	0	0	0	0	10	0	0	**10**
Vegetation	0	3	13	0	0	62	0	**78**
Cloud	0	2	1	0	0	0	7	**10**
Total	**21**	**38**	**157**	**10**	**12**	**67**	**7**	**312**

3. Results and Discussion

Confusion matrix statistics

According to Table 3, the results obtained from the comparison of random point sampling for Landsat images in 2015 are as many as 35 out of 36 random points for forest areas, 25 out of 29 random points for built-up areas, 144 out of 162 random points for agriculture, 10 out of 13 points random for water bodies, 10 out of 12 random points for open land, 32 out of 44 for vegetation and 12 out of 12 random points for clouds. This circumstance shows that the landuse classification that has been done on the Landsat image coincides with the landuse shown on the reference image. The overall result shown that 268 out of 308 sampling points for the classification image of 2015 are accurate with the comparison that has been made with the reference image.

Table 3. *Land use changes matrix in 2015 and 2021 (hectares)*

Class Value	Forest	Built-up Areas	Agriculture	Water Bodies	Open Space	Vegeta-tion	Cloud	Total	User Accuracy	Kappa
Forest	35	0	9	1	0	4	0	49	71.43%	0
Built-up Areas	0	25	1	1	2	3	0	32	78.13%	0
Agriculture	1	0	144	0	0	4	0	149	96.64%	0
Water Bodies	0	0	0	10	0	0	0	10	100.00%	0
Open Space	0	0	1	0	10	0	0	11	90.91%	0
Vegetation	0	1	7	0	0	32	0	40	80.00%	0
Cloud	0	3	0	1	0	1	12	17	70.59%	0
Total	36	29	162	13	12	44	12	308	0.00%	0
User Accuracy	97.22%	86.21%	88.89%	76.92%	83.33%	72.73%	100.00%	0%	87.01%	0
Kappa	0	0	0	0	0	0	0	0	0	81.28%

$$\text{Overall Accuracy} = \frac{\text{Total Number of Correctly Classified Pixels x 100\%}}{\text{Total Number of Reference Pixels}}$$

$$= \frac{(35 + 25 + 144 + 10 + 10 + 32 + 12) \times 100\%}{308}$$

$$= (268 / 308) \times 100$$

$$= 87.013\ \%$$

The kappa coefficient of agreement was introduced to the remote sensing community in the early 1980s as an index to express the accuracy of an image classification used to produce a thematic map (Congalton et al., 1983; Rosenfield and Fitzpatrick-Lins, 1986). The results of the calculations that have been obtained indicate the reliability index of the kappa coefficient as a whole is 81.28%. This also indicate that the reliability of the land use that has been interpreted and classified is high using the remote sensing approach.

Land use in Alor Gajah

There are seven categories which have been classified using a supervised classification method such as forest, built-up areas, agriculture, water bodies, open space, vegetation and cloud. The thematic land use map that has been produced for 2015 and 2021 is shown in Figure 6. Meanwhile Table 4 shows the statistics of the landuse area of the study area after the classification process for the years 2015 and 2021.

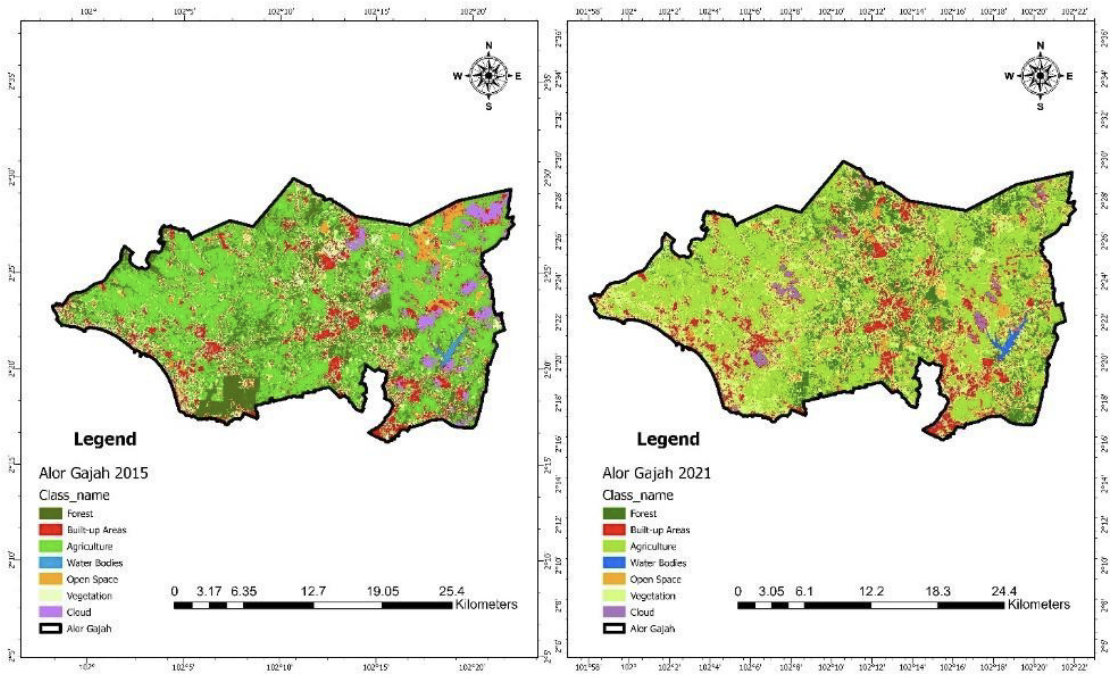

Figure 6: *Alor Gajah land use thematic map in 2015 (left) and 2021 (right) after the supervised classification*

Table 4. *Alor Gajah landuse area statistics for 2015 and 2021*

Class Value	2015		2021		Area Changes	
	Areas (Hectares)	(%)	Areas (Hectares)	(%)	Areas (Hectares)	(%)
Forest	10671.88	15.92%	8389.29	12.51%	-2282.59	-3.41%
Built-up Areas	7222.12	10.77%	8130.61	12.12%	908.48	1.35%
Agriculture	33678.20	50.24%	29203.24	43.55%	-4474.95	-6.69%
Water Bodies	328.07	0.48%	294.71	0.43%	-33.35	-0.05%
Open Space	2529.99	3.77%	1909.65	2.84%	-620.33	0.92%
Vegetation	8762.78	13.07%	17436.29	26.00%	8673.50	12.92%
Cloud	3834.64	5.72%	1692.84	2.52%	-2141.80	-3.19%

Based on Table 4, agricultural land use is the most dominant in 2015 with an area of 33678.20 hectares or 50.24% of the land use in Alor Gajah district. The area changes occurred in 2021 for agricultural land use when it decreased by 6.69% with an area of 29203.24 hectares. Built-up areas have increased by 1.35% (908.48 hectares) in a period of 7 years. Built-up areas in 2015 covered 10.77% of the area of the entire area and increased to 12.12% in 2021. The increase in the area of built-up area indicates the rapid development in the study area.

Next, the forest cover area experienced a slight decrease in change over a period of 7 years which was 3.41%. The forest landuse decreased from 10671.88 hectares for the year 2015 to 8389.29 hectares for the year 2021. As for the water body area, the decrease in area in the 7-year period occurred from 328.07 hectares (0.48%) in 2015 to 294.71 hectares (0.43%) in the year 2021. For open land landuse has experienced a decrease from 2529.99 hectares (3.77%) in 2015 to 1909.65 hectares (2.84%) in 2021. Vegetation landuse has experienced the most significant increase of 12.92% (8673.50 hectares). The landuse area of vegetation in 2015 was as much as 8762.78 hectares (13.07%) to 17436.29 hectares (26%) in 2021.

Change detection in Alor Gajah

Table 5 shows the matrix of land use changes in the study area that took place between 2015 and 2021. Agricultural land use changes have experienced a decrease of 4472.78 hectares from 2015 to 2021. The land use that contributed to the decrease in agricultural area is built-up area (578.74 hectares), forest cover area (3957.69), open land (885.31 hectares), vegetation area (2067.16 hectares) and water bodies (0.04 hectares). The changes from built-up area (2015) to agricultural land use (2021) is likely to result from classification errors especially in areas where palm oil area have been cut down and cleared for development purpose or replanting due to the spectral characteristics of open land reflections that match the spectral characteristics of built-up area.

According to the spatial-temporal analysis in the GIS software, the changes in built-up area increased by 909.43 hectares from 2015 to 2021 but at the same time the built-up area increased at the total of 8122.39 hectares. The majority of the increase in built-up area is contributed by agricultural land use (1193.63 hectares), forest cover area (421.68 hectares), open land (348.48 hectares), vegetation area (1154.55 hectares) and water bodies (64.17 hectares). Forest land use coverage also experienced a reduction of 2283.94 hectares. Forest land use is declining due to development and commercial oil palm cultivation in the Alor Gajah district.

Table 5. *Land use changes matrix in 2015 and 2021 (hectares)*

		2015							
		Agriculture	Built-up Areas	Cloud	Forest	Open Space	Vegeta-tion	Water Bodies	Total (2015)
2021	Agriculture	20468.95	578.74	1237.93	3957.69	885.31	2067.16	0.04	29195.83
	Built-up Areas	1193.63	4351.86	588.01	421.68	348.48	1154.55	64.17	8122.39
	Cloud	678.17	318.39	201.34	159.41	58.43	228.48	18.89	1663.11
	Forest	3707.47	147.11	514.81	3147.66	441.51	426.06	0.00	8384.62
	Open Space	785.01	196.76	109.58	319.96	234.39	261.37	0.73	1907.79
	Vegetation	6833.19	1580.79	1176.36	2661.06	560.53	4615.50	0.23	17427.65
	Water Bodies	2.19	39.30	4.14	1.10	0.09	5.20	242.17	294.20
	Total (2021)	33668.61	7212.96	3832.17	10668.56	2528.72	8758.33	326.24	66995.59

The open land area has undergone changes in land use, specifically 885.31 hectares converted to agricultural land, followed by built-up land (348.48 hectares), forest land (441.51 hectares), vegetation land (560.53 hectares), and water bodies (0.09 hectares). The existing open land area in Alor Gajah has been designated for development purposes and is temporary in nature.

The water body area, consisting of ponds or lakes, has experienced a conversion to agriculture in the year 2021, amounting to 0.04 hectares. Furthermore, the water body area has also undergone changes to built-up land (64.17 hectares), open land area (0.73 hectares), and vegetation land (0.23 hectares).

In this study, there has been an increase in the conversion of vegetation land by 8,669.32 hectares from 2015 to 2021. The majority of this increase in vegetation land area is contributed by agricultural land (6,833.19 hectares), built-up land (1,580.79 hectares), forest land (2,661.06 hectares), open land (560.53 hectares), and water bodies (0.23 hectares).

The analysis results also show some changes in land use categories that are somewhat irrelevant, such as the conversion from agricultural land to forest, built-up land to forest or vegetation. Such changes occur due to interpretation or classification errors, where one land cover is confused with a different land cover. This can easily happen in cases where land use appears similar to vegetation cover, making it difficult to differentiate certain plants from others, or where open land is classified as built-up land. This is primarily due to limitations in the number of available wavelength bands in Landsat satellite images, which restricts the distinguishable surface reflection characteristics.

4. Conclusion

The study's findings revealed that in 2015, agricultural land use dominated the area, comprising 33,678.20 hectares (50.24%) of the total land use. Nevertheless, vegetation land use experienced significant changes compared to other types of land use. Concurrently, the land use area also faced degradation due to the expansion of building development, leading to an increase in built-up area land use in the Alor Gajah district. The changes that occur in the Alor Gajah district are related to various factors such as the expansion of industrial areas, development, and the cultivation of oil palm, leading to significant land use changes in Alor Gajah.

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ADR SEMINAR – SHAPING THE FUTURE PATHWAY FOR ADR

Date : *26 November 2024 (Tuesday)*
Venue : *Ascott Gurney Penang, George Town, Penang*
Theme : *Alternative Dispute Resolution: Shaping the Future Pathway for ADR*
Organised by : *RISM Northern Branch & RISM ADR Committee*

The ADR Seminar 2024 brought together legal, construction, and surveying professionals to explore the evolving landscape of Alternative Dispute Resolution (ADR). This year's seminar emphasized collaborative solutions in dispute management, with insightful sessions and networking opportunities throughout the day.

Key Highlights:
Keynote Speaker: YA Dato' Anand Ponnudurai, High Court Judge (Penang)
Panellists & Speakers: Distinguished professionals including Sr Ong Hock Tek, Jamie John Duncan, Dato' Mary Lim Thiam Suan, and many more. The seminar drew wide participation from professionals, students, and stakeholders across various disciplines, reflecting strong industry interest in effective dispute resolution strategies.

Opening speech by RISM President

Keynote Speech by Yang Arif Dato' Anand Ponnudurai

Key Panel Session Moderated by Dato' Mary Lim Thiam Suan.

Technical Visit to CHINA

Delegation Explores China's Advancements in Cost Engineering and Construction

RISM technical delegation completed a productive visit to Beijing and Shanghai, China, from 14 to 21 January 2025 to strengthen ties and gain insights into China's surveying and construction sectors. Key highlights included visits to the China Cost Engineering Association (CCEA) and the China Academy of Building Research (CABR). At CCEA, the team learned about China's cost engineering practices and consultancy frameworks. At CABR, the country's largest building research institute, they explored cutting-edge technologies and construction standards. The visit provided valuable knowledge exchange, networking opportunities, and potential avenues for future collaboration in research, training, and industry development.

Courtesy Visit from MAHB to RISM and Discussion on BCA

Date : **5 February 2025**
Venue : **RISM Boardroom Level 2**

The courtesy visit from Malaysia Airports Holdings Berhad (MAHB) aimed to establish a professional collaboration between RISM and MAHB, focusing on discussions related to Building Condition Assessment (BCA) Facility Condition Assessment (FCA) & CPBS 101. The meeting provided a platform for knowledge sharing and exploring potential joint initiatives.

Attendees:

RISM Representatives:

1. Dr. Syamilah Yacob
2. Esther Teo
3. Hanie Salleh

MAHB Representatives:

1. Azzaidi Aluwi
2. Mohd Zahir Hashim
3. Khairul Faizal
4. Mohd Ibrahim Jaal
5. Nurul Natasha Kamaruddin
6. Muhammad Qusyairi Roslan
7. Mohammad Zamir Zainol Abidin
8. Muhammad Haziq Abd Razak

Potential Collaboration between RISM and MAHB

1. Exploring opportunities for RISM to support MAHB in enhancing BCA standards.
2. Proposal for capacity-building programs, training, and knowledge-sharing sessions.
3. Potential involvement of RISM experts in future assessments or consultancy roles.
4. Opportunities for RISM BS Division to provide training and expert guidance.
5. Future workshops and knowledge-sharing initiatives.
6. Sharing of assessment methodologies and improvements.
7. Future workshops and knowledge-sharing initiatives.

The meeting was highly productive, fostering meaningful discussions on BCA best practices and potential collaboration. Both RISM and MAHB expressed keen interest in working together to enhance the quality and efficiency of BCA in airport facility management. The next steps will involve more detailed discussions and formalizing partnership initiatives

Continuing Professional Development (CPD) Seminar

16–17 FEBRUARY 2025 | HOTEL PERDANA, KOTA BHARU, KELANTAN

The Royal Institution of Surveyors Malaysia (RISM) East Coast Branch successfully organised the Continuing Professional Development (CPD) Seminar on 16 and 17 February 2025 at Hotel Perdana, Kota Bharu, Kelantan. This seminar was held in collaboration with Polytechnic Kota Bharu and was officiated by the President of RISM, LSr Dr Ahmad Sanusi bin Che Cob.

The seminar, titled "Sustainability of Surveys in National Development", aimed to empower surveyors in alignment with current development trends. The event provided a valuable platform for knowledge sharing, professional networking, and discussions on sustainable practices and the evolving role of surveyors in national development.

RISM JUNGLE TREKKING TO BATU BERTENGGEK WATERFALL

Date: 22 February 2025, Saturday
Venue: Batu Bertenggek, Kerling, Selangor

The event was successfully held on February 22, 2025, with a total of 42 participants. The hike commenced at 8:00 AM, reaching the waterfall by 8:45 AM. Participants enjoyed the scenic surroundings, captured memorable photos, and took part in team bonding activities. The favourable weather added to the overall pleasant experience. The event was well-received, promoting a healthy and active lifestyle. Its success highlights our dedication to organizing meaningful activities that foster team spirit and well-being.

RISM INTER-DIVISION BOWLING TOURNAMENT 2025

The RISM Bowling Tournament 2025 was successfully held on 23rd February 2025 with aim to foster stronger engagement among members and create a fun, informal environment for interaction across all RISM divisions.

Date : 23 February 2025
Venue : Wangsa Bowl, Wangsa Walk Mall, Kuala Lumpur
Organised by : RISM Sports & Social Committee

The tournament witnessed enthusiastic participation, with teams competing in a lively and spirited atmosphere. More than just a competition, the event served as a platform to encourage teamwork and strengthen the sense of community within the institution. The overwhelming positive feedback from participants reflects their appreciation for such initiatives, with many calling for more social activities in the future.

RISM RAMADHAN FOOD BASKET

Distribution Ceremony ***: 28th March 2025***

Venue ***: RISM HQ, Petaling Jaya, Selangor***

Distribution by RISM President.

In conjunction with Global Surveyors' Day and the holy month of Ramadan, the RISM Ramadhan Food Basket initiative was launched as a meaningful way to celebrate the contributions of surveyors while embracing the values of compassion and community support.

The food baskets, filled with essential items, were distributed to ease the financial burden of recipients during the festive season. The effort was especially directed at supporting students from participating universities, specifically who are zakat recipients and communities in need. This initiative reflects RISM's commitment to community service and ensuring assistance reaches those who truly need it during the holy month of Ramadan. This is a time of reflection, charity, and unity, and through collective efforts, we can make a meaningful impact in the lives.

RISM RAYA OPEN HOUSE

and

PRESENTATION OF EXAM CERTIFICATES CEREMONY

The RISM Raya Open House was successfully held on 9th April 2025, in conjunction with the Presentation of Examination Certificates Ceremony. This meaningful event brought together members of the RISM Council, professional members, and invited guests in a festive and celebratory atmosphere. It also served as a recognition platform for candidates who had recently passed the RISM Professional Examination, with the formal presentation of certificates marking their achievements. The occasion fostered camaraderie among members, strengthened professional ties, and celebrated both cultural traditions and academic success within the Institution.

CSR PROJECT:
THE NEXUS UTILIZATION OF SOLAR LIGHTING TECHNOLOGY IN ENHANCING SAFETY LEVEL FOR ORANG ASLI COMMUNITY IN PERAK

The CSR Project - The Nexus: Utilization of Solar Lighting Technology to Enhance Safety Levels for the Orang Asli Community in Perak was successfully held on April 12, 2025, at Sekolah Kebang-saan Pos Bersih in Slim River, Perak.

Special thanks to Universiti Teknologi MARA (UiTM) Perak Branch as the main organizer, and all members of the organizing committee, the GreSAFE team, partners from the Building Surveying Program, sponsoring partners, the BISA Student Association as well as other strategic partners who contributed to the success of the University Social Responsibility (USR) Solar Panel Installation Program at Sekolah Kebangsaan Pos Bersih, Slim River, held on 12 April 2025. Special thanks are also extended to the Headmaster of SK Pos Bersih, the teachers, and the Year 5 and Year 6 students for their excellent cooperation throughout the program.

We greatly value the openness, enthusiasm, and active participation of the school community, which served as a source of motivation for all of us. This collaborative initiative not only promotes energy sustainability and enhances environmental safety in schools but also fosters early awareness among the younger generation about the importance of environmental preservation and green technology.

NREC 32nd National Real Estate Convention

Date: 17th April 2025 (Thursday)
Venue: Wyndham Gand Bangsar, Kuala Lumpur
Mode: Hybrid

The 32nd National Real Estate Convention (NREC) 2025 served as the flagship annual event organised by the Property Surveying Division of the Royal Institution of Surveyors Malaysia (RISM), held on 17th April 2025 at Wyndham Grand Bangsar, Kuala Lumpur. Officiated by The Mayor of Kuala Lumpur, YBhg. Dato' Seri TPr. (Dr.) Maimunah Mohd Sharif, the convention themed "Brick, Blueprint & Beyond: Fostering Innovation for A Sustainable Future" brought together a diverse group of industry leaders, policymakers, investors, academicians, and real estate professionals to engage in critical discussions shaping the future of Malaysia's real estate landscape. As part of the 32nd NREC 2025, five sessions were conducted throughout the day, each focusing on a strategic theme relevant to Malaysia's evolving real estate landscape.

SARAWAK SURVEYORS' CONGRESS

Surveyors' Congress 2025: Shaping Sarawak Towards a Digital Era

The RISM Sarawak Branch successfully hosted its Surveyors' Congress 2025: Shaping Sarawak Towards a Digital Era from 16–17 April 2025 at the Imperial Hotel Kuching, attracting 140 participants from consultancy and construction firms, government agencies, and educational institutions.

The event featured both plenary and parallel sessions led by industry experts, covering topics such as digital transformation, sustainable development, AI in disaster management, and legal insights into construction contracts.

A highlight of the congress was the keynote presentation by Sarawak Economic Unit Director, Datu Lester Matthew, which was featured in The Borneo Post and Sin Chew Daily newspapers on 17 April 2025. In his keynote address, he called on industry players to fully embrace innovation, foster collaboration and continuously upgrade their skills to stay ahead of emerging trends.

RISM Young Achievers' Award (YAA) 2025

Date : 18–20 April 2025
Venue : De Rhu Beach Resort, Kuantan, Pahang
Theme : Empowering Tomorrow: Cultivating Future Leaders for Sustainable Development Goals."

This year's competition, themed around sustainable development, attracted 56 teams from 30 schools across Malaysia, making it one of the most competitive editions yet. The program not only introduced students and their teacher advisors to the surveying profession, but also provided a platform to develop essential soft skills such as teamwork, communication, creativity, and time management. In the long run, we hope that YAA will provide opportunities for the development of talents and leaders among the youth, with the prospect of becoming our future surveyors in the built environment sector of the economy.

The Preliminary Round was successfully conducted on 18 March 2025. A total of 56 teams registered, as follows:

- Northern Branch: 11 Teams
- East Coast Branch: 13 Teams
- Johor Branch: 6 Teams
- Sabah Branch: 1 Team
- Sarawak Branch: 0
- RISM Headquarters: 25 Teams

Based on the evaluation session held on 23 March 2025, 14 teams have been selected to the National Finals:

- Kolej Yayasan Saad
- MRSM Terendak
- SBP Integrasi Gopeng
- Sekolah Menengah Kebangsaan Seksyen 9 Shah Alam
- Sekolah Menengah Kebangsaan Mutiara Rini
- Sekolah Menengah Kebangsaan Sains Batu Pahat
- MRSM Batu Pahat
- Sekolah Menengah Kebangsaan Ibrahim
- Sekolah Menengah Kebangsaan Perempuan China
- MRSM Kepala Batas
- MRSM Pasir Tumboh
- Sekolah Menengah Teknik Terengganu
- Sekolah Menengah Sains Kuala Terengganu
- Sekolah Menengah All Saints

About The Assignment:

A TED Talk titled "The Role and Contribution of Surveyors in Achieving Sustainable Development Goals

The objectives:

1. Awareness: To enhance the understanding of the 17 Sustainable Development Goals set by the UN in 2015, which aim to address global challenges such as poverty, inequality, climate change, environmental degradation, peace, and justice for future leaders.
2. Skill Development: To equip students with the necessary skills to become effective leaders who can implement and advocate for sustainable practices.
3. Networking: To create a platform for young leaders from various schools to connect, share ideas, and collaborate on sustainable initiatives.
4. Advocacy: To encourage young leaders to engage in advocacy efforts related to the SDGs within their communities and beyond.

Congratulations to all 2025 Winners!

Champion : Sekolah Menengah Kebangsaan Mutiara Rini
1st Runner-Up : Sekolah Berasrama Penuh Integrasi Gopeng
2nd Runner-Up : Kolej Yayasan Saad

Best Presenter Awards:

1. Emily Lim Mei Xiu (SMK Mutiara Rini)
2. Jeevitaa A/P Muniandy (SMK Mutiara Rini)
3. Nik Afiq Raiyan Bin Nik Ahmad Farouqi (Kolej Yayasan Saad)

We hope that YAA continues to serve as a vital initiative in nurturing future talents and leaders in the built environment sector, aligning with RISM's commitment to shaping the next generation of professionals.

ISCU

17th RISM International Surveying Conference for Undergraduates 2025

Date : *16–17 May 2025*
Hosting University : *Universiti Teknologi MARA (UiTM), Seri Iskandar, Perak*

The 17th RISM International Surveying Conference for Undergraduates 2025, proudly organised by the Royal Institution of Surveyors Malaysia (RISM) and hosted by Universiti Teknologi MARA (UiTM), Seri Iskandar, was successfully held on 16th and 17th May 2025.

This year's theme focused on the impact of Construction Revolution 4.0 (CR4.0) and its role in transforming Malaysia's built environment. The conference featured industry experts from the four main surveying disciplines; Building Surveying, Geomatics and Land Surveying, Property Surveying, and Quantity Surveying to share their invaluable knowledge and expertise in hybrid with 180 participants including the students, 28 academicians and 4 RISM secretariat.

Total of papers and posters submission and presented:
Paper Presentation: 80
Poster Presentation: 78
Participants: 22
Total: 180

16 Participating Universities:

- **Universiti Teknologi MARA (Cawangan Seri Iskandar)**
- **Universiti Teknologi MARA (Cawangan Shah Alam)**
- **Universiti Tun Hussein Onn Malaysia**
- **Universiti Malaya**
- **Universiti Teknologi Malaysia**
- **Universiti Sains Malaysia**
- **Heriot-Watt University Malaysia**
- **Inti International University**
- **University Technology Sarawak**
- **UCSI University**
- **Tunku Abdul Rahman University of Management and Technology**
- **Universiti Tunku Abdul Rahman**
- **International Islamic University Malaysia**
- **Taylor's University**
- **University of Reading Malaysia**
- **Universiti Malaysia Sarawak**

The organizing chairman would like to thanks all Committee Members, Vetting Panels, Jury, Speakers and Hosting University for their contribution to this event.

RISM Congratulates all the winners, and a big well done to all participants!

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Lo Yong Khoon

Nur Asfa Najmi Binti Zakaria

Nur Fatnin Zakirah Binti Mohd Zamani

Nuraisha Fina Binti Alfian

Nurul Najwa Aswani Binti Aziz

Paulina Kho Huey Ling

Peggy Hii Ching Yee

Siti Nur Addawiyah Binti Mohd Habib Bullah

Takuya Ivan

Zafirah Binti Mohd Noor

Adelaine Miya Anak Kilee

Aniis Farhanah Binti Zulkhari

Karen Kimberly Nicholas Majimbun

Kiing Yii Xing

Melanie Baling Talek

Nur Hidayah Binti Pauzi

Nurin Syafiqah Binti Shamsul Ariffin

Nursukasih Binti Saimi

Patricia Dinang Anak Patrick

Nur Maisarah Binti Mohd Salehhuddin

Oh Mei Jin

Nuraina Myza Binti Mohd Sofian

Nurul Natasya Binti C Mapur

Hansen Yii Yang Jie

Amy Shakila Binti Adnan

Nur Alia Munirah Binti Muhammad Rizuan

Irdina Najla Binti Hasbi

Shun Chi Kam

Ahmad Faizal Bin Abd Aziz

Amir Imran Bin Ismail

Yap Wei Chien

Nabila Shahira Binti Azrie

Datu Farshad Bin Datu Abdul Rashid

Dayang Nur Emilia

Richard Joel Anak Lanchang

Samuel Sumok Anak Albert Gundie

Sarvain Balagogolan

Cheang Kuang Soon
China Railway Electrification Engineering Group (M) Sdn Bhd

Noraidah Binti Ibrahim
Pengurusan Aset Air Berhad

PS DIVISION

April to Aug 2024

Fellow

Ng Weng Yew Metro Rec Sdn Bhd

Ahmad Faisal Bin Ahmad Shayuti
KLCC (Holdings) Sdn. Bhd.

Loo Choo Wei PA International Property Consultants Sdn Bhd

Member

Fadzilah Binti Ahmad
DBKL

Haw Yin Han
Henry Butcher Malaysia (Muar) Sdn Bhd

Lee Loong Yee
Zerin Properties Corporate Values

Lee Sot Chen
SCL Real Estate Service

Lim Soon Mun @ Albert
Sime Darby Property Berhad

Masraimi Bin Mahyiddin
TD Aziz Sdn Bhd

Muhammad Syakir Bin Mohd Wazir
ARTFIELD PROPERTIES

Syed Azzim Bin Sheik Ali
ExaStrata Solutions Sdn Bhd

Tham Kuen Wei

Terence Rajiv A/L Francis
Khong & Jaafar Sdn Bhd

Al Fazli Bin Mohd Salleh
WTW Property Services (Sabah) Sdn Bhd

Jennifer Wong Shau Yun
Laurelcap (Sabah) Sdn Bhd

Ahmad Tajjudin Rozman
International College Imperia

Fariq Anwar Bin Abd Rahman
Jabatan Penilaian Dan Perkhidmatan Harta Seberang Perai

Kalthum Binti Mohd Ghazalli
JB Jurunilai Bersekutu Sdn Bhd

Mohammad Hafiz Abdul Hamid
Raine & Horne

Wong Siew Lan
Jasaland Property Consultants (KL) Sdn Bhd

Graduate

Low Siu Kuan
Knight Frank

Nurzawani Binti Abdul Latiff
Cbre Wtw Valuation & Advisory Sdn Bhd

Alvin Tan Chee Yau
BT Properties

Ameera Juliyana Binti Jalal
Cheston International

Kee Yoke Yew
Solid Real Estate Consultants

Mohamad Farudin Bin Abd Rahman
Jabatan penilaian dan perkhidmatan Harta Seremban

Mursyidah Binti Ramli
Ecoworld Creating Tomorrow & Beyond

Nor Fasehah Binti Ibrahim
Invenio Potential

Nurul Amira Binti Ibrahim
UEM Group

Ratna A/P Ragawan
Khong & Jaafar Sdn Bhd

Rumaisa Binti Zulkifli
Cbre Wtw Valuation & Advisory Sdn Bhd

Probationer

Chong Ji Sheng
PMC Facilities & Real Estate Sdn Bhd

Nur Hafizah Mohd Sidek
Invenio Potential

Sum Wai Ming
FBS Realty

Khor Yun Keat
Anchor Empire Properties

Galvin Lee Kuan Sian IQI Realty Sdn Bhd

Fadzreen Shahira Binti Rusli
IQI Realty Sdn Bhd

Loi Li Ping
FBS Realty

Chan Iou Cheng
Ong Housing Agencies

Lim Chia Wea
Simon Realty

Mohd Nizam Bin Awang
Pelaburan Hartanah Berhad

Lau Yong Sern
Jabil Sdn Bhd

Lee Zhe En
DI Mahkamah Tinggi Malaya di Kuala Lumpur

Lee Jian Jun
IQI Realty Sdn Bhd

Mohd Zulfadly Bin Abd Majid
MMC Corporation Berhad

Wong Hoe Luen
TSW Labs Sdn Bhd

Esther Liew Ai Peng

Foong Wing Keong

Loo Chang Soon
Professional Engineer with Practising Certificate

Ong Yee Thing
Kiat Hin Electrical

Alwi Bin Abdul Aziz
Kondoservis Management Sdn Bhd

Lim Li Wen

Kevin Ton Khing Bing
Azmi & Co (Sarawak) Sdn Bhd

Chan Hong Guan
IPG Century Sdn Bhd

Henry Chen Poh Luong
Public Bank

Lim Zhe Kang
IQI Realty Sdn Bhd

Wong E Zung
Capital Berhad

Lee Yee Yee
East Design Architect Sdn Bhd

Lo Kah Wah
IPG Realy Sdn Bhd

Mohamad Arif Bin Md Nor
Koperasi Muslimin Malaysia Berhad

Thang Kah Mun
Eco World Development Group Berhad

Yeap Kok Peng

Goh Tian Hock
Probationary Estate Agent

Wei Leong Chin

Jesslyn Choo Huey Ling
Hartamas Real Estate (Malaysia) Sdn Bhd

Nora Liew Pyit Sha
Interland Pr0perties Sdn Bhd

Chong Chun Jie
HI Realtors Sdn Bhd

Lim Chiun Wei
Foreward Realty Sdn Bhd

Clare Ng Siew Hong
KTS L&S Services Sdn Bhd

Mohammad Firdaus Bin Iskandar
Firdaus & Associates Holdings Sdn Bhd

Yap Chee Yong
Ecoworld Creating Tomorrow & Beyond

Siti Nurul Ain Binti Noor Habre

Khoo Mun Hui
Real Estate Negotiator

Alvin Isaac

Tan Wai Hong
IPG Realty Sdn Bhd

Tiew Kah Hi
IPG Realty Sdn Bhd

Tan Soo Ping
IPG Realty Sdn Bhd

Goh Yen Peng
PropNex Realty Sdn Bhd

Chua Pei Ern
PMG Management Sdn Bhd

Leong An Ni
IPG Realty Sdn Bhd

Izaan Johaan Bin Sallih

Yong Dee Peng
SHM Development Sdn Bhd

Muhammad Azamuddin Bin Lokmanal Hakim
Dsa Global Empire

Chong Kok Ton
IQI Realty Sdn Bhd

Sia Zheng Han
Guyub (M) Sdn. Bhd.

Lim Aun Ying
IQI Realty Sdn Bhd

Student

Aliah Maisarah Binti Jalani

Aidan Chong

Wan Nur Afiqah Binti Wan Mohd Fauzi

Kau Qi Xuan

Yoon Kang Ying

BS DIVISION

April to Aug 2024

Fellow

Lim Swee Meng
Insight Building Services and Consultancy

Graduate

Mohd Haikal Bin Ismail
Selaman Sdn Bhd

Muhammad Aashif Bin Kamarudin
Woh hup Malaysia Sdn.Bhd.

Muhammad Aiman Rasul Bin Mohd Norazdee
Henry Butcher Malaysia (Mont Kiara) Sdn Bhd

Muhammad Najmi Bin Zulkifli
Perbadanan PR1MA Malaysia

Nur Firzanah 'Alyea Bt Norazam
Sunissa Sdn Bhd

Siti Nur Fai'zun Binti Husain
ViTrox Technologies Sdn. Bhd.

Fernandez Cornelius William
WTW Property Services (Sabah) Sdn Bhd

Khairul Bariah Binti Harun
Global Facilities Management

Lim Keat Hee
Public Bank

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P-CON Building Surveyors Sdn Bhd

Muhammad Ikmal Ariff Bin Azmee
SCM International Property Management Sdn Bhd

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Zecon Medicare Sdn Bhd

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Dongnam Sdn. Bhd.

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KLCC Projeks Sdn Bhd

Nurul Amirah Binti Khairuddin

Batrisyia Rowena Binti Ahmad Bakri
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Che Muslim Md Nor
Mercury Plus Enterprise

Muhammad Nur Ariff Bin Zamhari
MNAZ Home Inspection

Muhamad Nur Syafiq Bin Mokhtar
Environmental Science (M) Sdn. Bhd.

Salasiah Binti Putit

Azlan Bin Abdul Aziz
Jabatan Kerja Raya Negeri Perak

Frederick Nulai Anak Ganing
K&P COVE Consultancy Sdn Bhd

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Gamudaland

Farah Nieza Natasha Binti Zainal Adnan
CAFAM Sdn Bhd

Nurina Afiqah Binti Mohd Noor
Belati Engineering Sdn. Bhd.

Aminatul Natasha Binti Abdul Razak

Mohd Norazman Bin Abdul Kholid

Muhammad Syafiq Fahmi
BS Expert Sdn Bhd

Mohd Farezee Bin Abd Razak
DBKL

Faryzuan Bin Ahmad
Posh & Core Property Management

Mohd Faisol Bin Abu Bakar
CBRE WTW Property Services Sdn Bhd

Aznor Eisya Diana Binti Abdullah

Muhamad Faizam Bin Masri Badan
Pengurusan Bersama I-Soho I-City

Mohd Azizul Hakim Md Zailan
Majlis Bandaraya Subang Jaya

Nur Yuhanis Binti Kamarulzaman
Arissa Engineering Sdn Bhd

Nurul Farahanna Binti Aziz
Malaysian Communications and Multimedia Commission

Ting Siew Jing
George Town World Heritage Incorporated

Aimi Syamimi Binti Azman
Medivest Sdn Bhd

Mohd Hazril Bin Mohd Napi
CIDB

Nur Anith Nadirah Aina Binti Ibrahim
HYtechEmpire Consultant Sdn.Bhd.

Nur Syazwani Binti Azman
PKN Building Solutions Sdn Bhd

Ahmad Akmal Bin Ahmad Dahlan
Majlis Bandaraya Subang Jaya

Azharizal Bin Ab Rahman
Majlis Perbandaran Kuala Selangor

Faiz Muhaimi B. Ramli
Ampero (M) Sdn. Bhd.

Khairul Azrin Bin Jalaludin
Skyworld Development Berhad

Mohammad Zul Amka Bin Zamri
TEMOKIN Development Sdn Bhd

Muhamad Izzat Bin Rosli
KCJ Engineering Sdn Bhd

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IM Global Property Consultants Sdn Bhd

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Ruma Inspection Services

Nur Izzah Binti Azizan
Henry Butcher Malaysia

Nur Syahidaton Umairah Binti Ton Zalani
Ove Arup & Partners Ireland Ltd t/a Arup

Nurul Afiqah Binti Mohammad Batni
WCT Construction Sdn. Bhd.

Ruzilawati Binti Moh Hussin
Jabatan Kerja Raya

Sharmila Binti Ahmad
Platinum Victory Holdings Sdn. Bhd.

Syamerin Bin Rukinin
Ehsan Property Inspection Enterprise

Probationer

Andrew Ng Zhi Chong
CBRE WTW Real Estate Sdn Bhd

Mohd Sazalie Bin Ramlee
AECOM Perunding Sdn Bhd

Akram Syahmi Bin Azmi
Politeknik Mara

Azman Bin Mat Yasin
Spirit AeroSystems Malaysia Sdn Bhd

Student

Wong Wee Yuan

Muhammad Furqaan Bin Mohd Rashid

Neoh Jia Qin

Chew Li Jie

Chang Kah Thean

Gan Chee Yeow

Ong Jung Yu

Aliah Irdiena Binti Abdul Halim

Tan Hou An

Muhammad Faiz Fakhruddin Bin Shihabuddin

Eddy Sia Yong Jie

Wong Siow Earn

Putri Anis Nadiya Binti Muzir

Gan Chin Yu

Kanagaraj A/L Radzakrisnan

Lee Ming Chun

Muhammad Farhan Iman Bin Asri

Muhammad Farid Aidil Bin Suzuki @ Aslam

Muhammad Naufal Bin Suhaimi

Syaza Syaimaa Syazwani Binti Zaidi

Avy Rosabel Misek Yakim

Hong Fatt Chung

Muhammad Nasruddin Bin Mohd Hayat

Noor Natasha Binti Shahri

Nurul Amirah Binti Alim

Niu Yuanzun

Mohamad Izzul Ismat Bin Amran

Nurul Balqis Natasha Binti Mohd Zaini

Amirul Hakim Bin Amirudin

Nor Rohman Bin Mohtar

Goh Tse Dorn

Haziq Fahmi Bin Farid

Juhaohan

Muhamad Shahril Bin Mohamad Azani

CONDOLENCE **MESSAGE**

The Editorial Board mourns the demise of the following member: -

On behalf of the Editorial Board of the Royal Institution of Surveyors Malaysia (RISM), we extend our deepest condolences on the passing of Sr Mohamad Shazali Sulaiman, our board member for the 2024/2025 session, on 31st May 2025. His unwavering dedication and contributions, from his student days to his professional service, have left a meaningful legacy within RIS. He will be dearly missed by all who knew him. May Allah SWT grant him mercy, forgive his shortcomings, and place him among the righteous.

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