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CREAM CONSTRUCTION RESEARCH INSTITUTE OF MALAYSIA

CREAM

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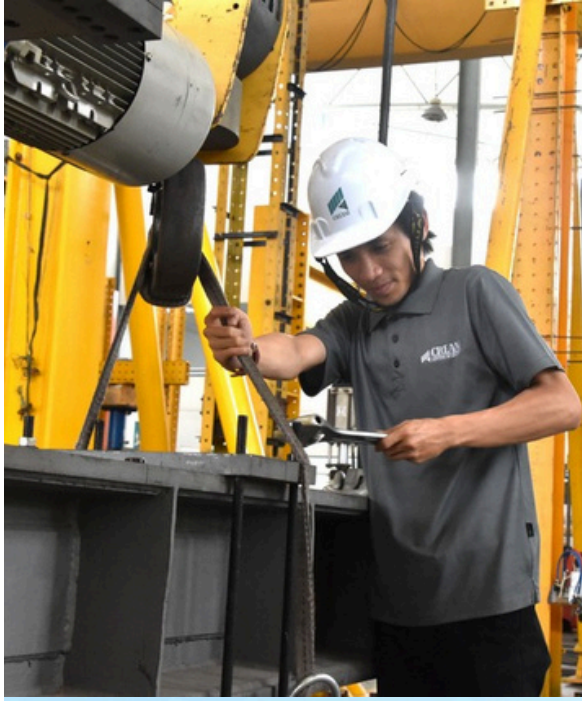
and many more.

editorial team

about us

Construction Research Institute of Malaysia (CREAM) was established on 26 March 2004 as a Company Limited by Guarantee (SBMJ) under the Act Company 1965. CREAM became fully operational on January 1, 2006. Establishment of CREAM is to be the research arm of the Construction Industry Development Board (CIDB) Malaysia to encourage, promote and implement activities research and development (R&D) related to the national construction industry with Section 4(c), CIDB Act 1994 (Act 520). With the ability of knowledge and existing expertise, CREAM actively cooperates with parties interested in producing research that will benefit the sector construction. At the same time, CREAM also supports the development of the industry construction in a better direction through the quality and integrity of building materials when also offers testing, evaluation and certification services to industry players. CREAM will continue to be proactive in being active and reinventing the way we in doing something, to keep giving the best to all parties and always responsive to our customers.

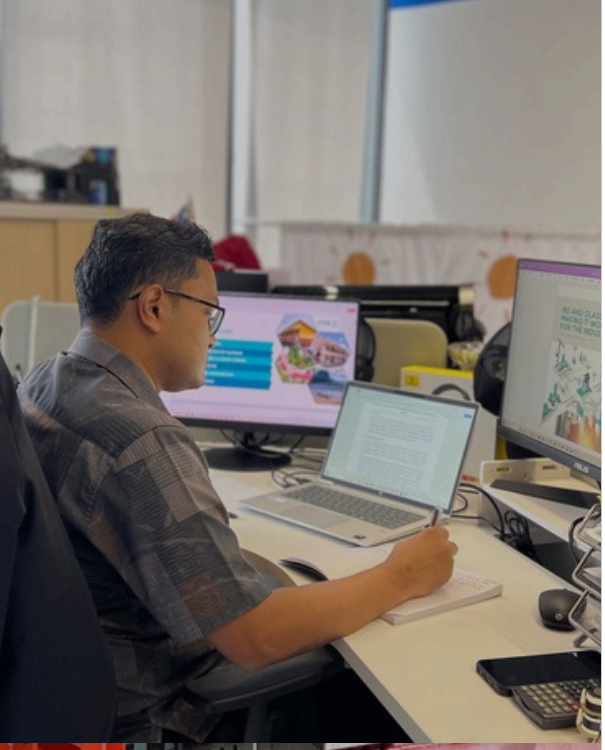


vision

To make CREAM globally recognized as the leading institute for Research and Development (R&D) that drives quality, innovation, technology and skills towards achieving sustainability in the construction industry.

mission

To meet the strategic needs of Research and Development in the Malaysian construction industry. CREAM is also committed to build partnerships with the industry's stakeholders and researchers while exploring and encouraging the development of a knowledge-based industries as well as ready to meet current demands and challenging changes.



what we offer

- Research and Development
- Industry Consultancy and Engagement
- Lab Testing
- Product Certification
- Assessments – QLASSIC, SHASSIC, MyCREST and Sustainable Infrastar
- Certificate of Approval
- Inspection and Sampling
- Contractor's Quality Management System (CQMS)
- SustainBuild Mark Certification
- Forensic Investigation
- Technical Opinion
- Journal Publication

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2nd Digital Construction Summit 2025: Malaysia's Leap into Construction 4.0

The 2nd Digital Construction Summit 2025, held from 29 to 30 October at MITEC, Kuala Lumpur, brought together more than 480 participants from across Malaysia's construction landscape — policymakers, industry captains, technology innovators, academics, and emerging professionals. This year's summit, themed "AI in Construction: Transforming the Industry," reaffirmed the nation's accelerating commitment to digitalisation and advanced technologies within the built environment sector.

Officiated by YB Dato Sri Alexander Nanta Linggi, Minister of Works, the summit opened with several landmark announcements poised to redefine the digital construction agenda. Key highlights included the launch of the CIDB–MBAM Collaboration Programme on the Construction Digital Maturity Index (CDMI), a national benchmark designed to uplift contractors' digital readiness; the unveiling of the Malaysia Intelligent Transport Systems (ITS) Roadmap, setting the direction for future smart mobility initiatives; and the signing of a strategic Memorandum of Understanding (MoU) between CIDB Malaysia and Lembaga Perumahan & Hartanah Perak (LPHP).

Across the two-day summit, an impressive line-up of thought leaders and industry experts delivered compelling insights that underscored the sector's accelerating digital transformation. YBhg. Dato' Mohd Sakeri Abdul Kadir, Deputy Secretary General of the Ministry of Works, highlighted Malaysia's policy readiness to support the widespread adoption of digital construction, while Ir Shah Rizal Dahlan, Vice President of Group Project Delivery, Projects, Technology & Health, Safety, Security & Environment (PT&HSSE), PETRONAS, delivered the PETRONAS Leadership Address.

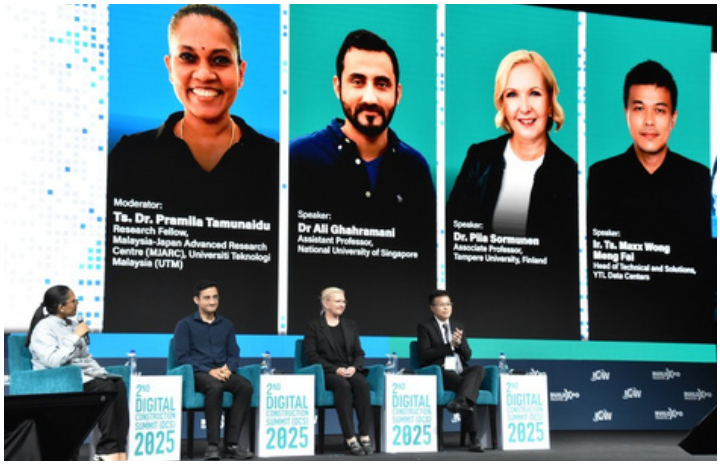
Adding further depth, Ir Dr Megat Zuhairy Megat Tajuddin, Chief Executive of NACSA, emphasised the critical importance of cybersecurity in safeguarding digital ecosystems, and Ir Prof Llewellyn Tang offered global perspectives on the rapidly evolving domains of BIM, digital twins, and data-driven construction.

The summit's five high-impact technical sessions — AI in Sustainable Construction, AI in Project Management, Digitalisation in Oil, Gas & Energy Services, Data-Driven Decision Making, and AI-Powered Design for Smart Cities — provided a deep dive into emerging technologies, real-world applications, and collaborative strategies

In closing, YB Dato Ir Haji Yusuf bin Haji Abd Wahab, Chairman of CIDB Malaysia, expressed confidence in the industry's readiness for transformation. The event culminated in the Digital Construction Competition 2025 Awards Ceremony, celebrating innovation and talent among young Malaysian students.

Supported by an esteemed network of sponsors — PETRONAS (Platinum); Mass Rapid Transit Corporation Sdn Bhd, Bentley Systems International Limited, Tenaga Nasional Berhad, Novade, Autodesk, and MRANTI Corporation Sdn Bhd (Gold); Sarawak Energy Berhad, Sime Darby Property Berhad, and Glodon Software Sdn Bhd (Silver); and Trans Resources Corporation Sdn Bhd, FBG Builder Sdn Bhd, Mah Sing Group Berhad, Aspen Vision Development Sdn Bhd, and Matrix Excelcon Sdn Bhd (Bronze) — this year's summit reinforced Malaysia's trajectory toward a smarter, safer, and more sustainable built environment.

With AI, data, and digital technologies steering the next wave of progress, the 2nd Digital Construction Summit 2025 marks a pivotal milestone in the nation's journey toward a fully realised Construction 4.0 ecosystem.



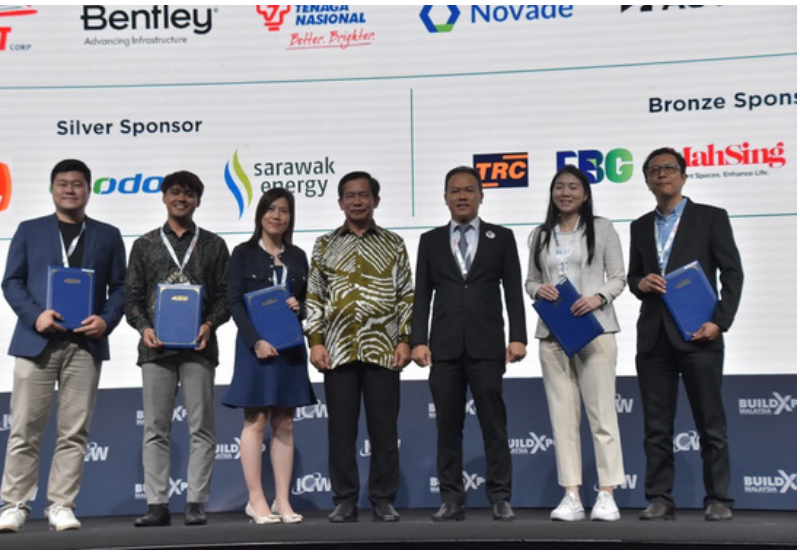
2nd Digital Construction Summit 2025

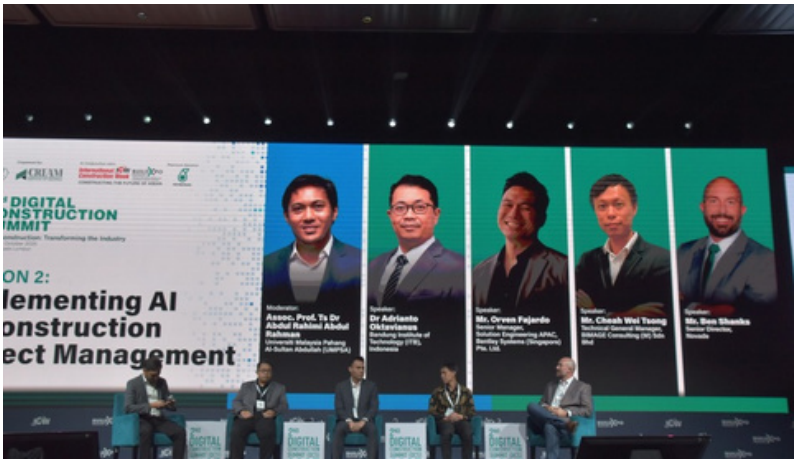




2nd Digital Construction Summit 2025





2nd Digital Construction Summit 2025

The Construction Industry Congress 2025 (CIC)- Engineering, Project, and Production Management (EPMM)- Joint Conference 2025

The 2nd Construction Industry Congress (CIC), featuring the 15th series of the Engineering, Project, and Production Management (EPPM), was successfully held at MITEC, Kuala Lumpur, from 28 to 30 October 2025. The event was hosted by CIDB and organised by CREAM and UMPSA (Universiti Malaysia Pahang Al-Sultan Abdullah) as part of the 2nd Digital Construction Summit (DCS) 2025, which ran in conjunction with International Construction Week (ICW) 2025.

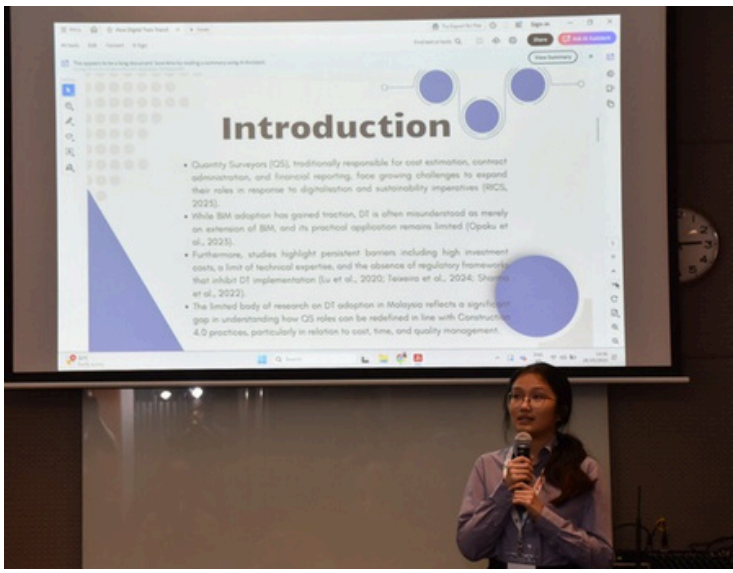
The congress served as a platform for the presentation and discussion of cutting-edge research in the construction and project management fields.

The programme featured paper presentations and technical discussions focused on key themes including, Smart Innovation, Systems, and Technologies; Digital Transformation in Construction; Sustainable and Green Practices; Environmental, Social, and Governance (ESG) Integration; and Data-Informed Decision Making.

Highlights

Researchers, academicians, and industry practitioners shared findings from recent studies, pilot projects, and case analyses, fostering knowledge exchange and promoting evidence-based practices.

The congress emphasised the role of research and data-driven decision-making in improving project efficiency, sustainability, and innovation in the Malaysian construction industry.



A Historic Day – Launch of the SustainBuild Mark

29 October 2025 will be remembered as a historic day for Malaysia's construction industry, as the SustainBuild Mark (SB Mark) was officially launched at MITEC, Kuala Lumpur by **Deputy Minister of Works, YB Datuk Seri Dr. Ahmad bin Maslan.**

This landmark initiative marks a major step forward in promoting sustainable, energy-efficient, and environmentally responsible construction practices across the nation.

At the launch, six pioneering applicants were successfully certified with the SustainBuild Mark, symbolising the first group of projects and products to achieve this recognition:

- **Melewar Steel Tube Sdn Bhd – steel product**
- **ZetaTech Sdn Bhd – paint product**
- **Buildcon Concrete Sdn Bhd – concrete product**
- **APMC Kanthan Sdn Bhd – cement product**
- **Ricwil (Malaysia) Sdn Bhd – insulation material**
- **Quickmix Solution Sdn Bhd – drymix product**

The introduction of the SustainBuild Mark reflects a growing commitment in the industry to integrate sustainability in terms of Environmental, Social and Governance (ESG) aspect, and best practices into construction projects. By providing formal recognition, the initiative encourages suppliers and manufacturers to adopt greener methods, optimise resource use, and deliver products that contribute positively to the ESG elements.

This historic day will be remembered as the moment when the SustainBuild Mark officially set the standard for green construction in Malaysia, paving the way for a more sustainable, responsible, and forward-looking industry.

Building a Resilient Future: CREAM Leads Strategic Discussion with Global Experts

The Construction Research Institute of Malaysia (CREAM) successfully hosted an insightful Presidential Dialogue titled **"Resilient Construction: Forging Ahead in Uncertain Times"** on 30 October 2025, at the CIDB Auditorium, Level 27, The Met Corporate Towers, Kuala Lumpur, from 10.00 a.m. to 12.00 p.m.

The session brought together developers, contractors, government agencies, engineers, consultants, private sector representatives, and academics to explore strategies for strengthening resilience within the construction sector amid evolving economic, environmental, and societal challenges.

Distinguished speakers included Prof. James O.B. Rotimi, President of the Engineering Project and Production Management (EPPM) and Professor at Massey University, New Zealand, renowned for his work in disaster resilience and project governance; and Prof. Dong Ping, President of the International Council for Research and Innovation in Building and Construction (CIB) and Professor at Tsinghua University, China, known for his leadership in sustainable urban development and smart infrastructure.

The dialogue was expertly moderated by Mr. Oliver from the Master Builders Association Malaysia (MBAM), with participation from the Construction Industry Development Board (CIDB).

The dialogue explored engineering resilience in construction, drawing valuable lessons from the CanConstructNZ Programme and examining its relevance to Malaysia's industry—particularly in the areas of safety, innovation, and cross-sector collaboration.

Prof. Rotimi shared transformative insights into how the CanConstructNZ Programme fosters resilience through collaboration, capacity building, and innovative practices. He emphasized the need to align technical excellence with human and organizational resilience to navigate the "perfect storm" of contemporary global challenges.

Prof. Dong Ping highlighted lessons from China, emphasizing safety management, communication, and worker welfare as critical priorities. He noted that Malaysia's multicultural labour environment presents unique opportunities and challenges, stressing the importance of effective communication, competent training, and strong leadership to enhance site safety and operational efficiency.

Both speakers underscored the importance of continuous innovation, supportive policies, and deeper collaboration across academia, industry, and government to reinforce national construction resilience.

The session concluded with an engaging Q&A segment, enabling participants to exchange ideas and strategies toward building a stronger, future-ready construction ecosystem in Malaysia.

The Presidential Dialogue proved to be a highly valuable platform, offering practical insights, global perspectives, and strategic direction. It reinforces CREAM's commitment to knowledge-sharing and industry advancement, positioning Malaysia as a proactive and forward-looking player in the global construction arena.

Digitisation of Malaysia's Construction Industry: Harnessing IBS and C4.0 for a Smarter and Sustainable Future


by Nurulhuda Mat Kilau & Maria Zura Mohd. Zain

The construction industry is undergoing a major transformation, driven by the need for greater efficiency, cost reduction, sustainability, and improved project management. Traditional construction methods, which rely heavily on manual labour and on-site assembly, often lead to delays, excessive material waste, and cost overruns. To overcome these challenges, the industry is embracing digital solutions and advanced technologies, ensuring a more efficient and data-driven approach.

In Malaysia, the integration of the Industrialised Building System (IBS) with Construction 4.0 (C4.0) technologies is accelerating this transformation. IBS enhances construction efficiency through prefabrication, automation, and data analytics, leading to better resource management, reduced on-site labour dependency, and improved safety. By embedding digitalisation into the industry, projects become more predictable, cost-effective, and sustainable.

The IBS Scoring System (CIS 18:2023) serves as a guideline to ensure compliance with Malaysia's evolving construction standards. By adopting Building Information Modelling (BIM), the Internet of Things (IoT), Artificial Intelligence (AI), and robotics, construction projects can enhance efficiency while aligning with global best practices. The synergy between IBS and C4.0 not only boosts compliance but also strengthens competitiveness within the industry.
This article examines the role of C4.0 in advancing IBS implementation, explores the challenges of digitalisation, and outlines strategies to strengthen Malaysia's construction sector for a smarter and more sustainable future.

Current IBS Policy in Malaysia

The Malaysian government has been a key driver in promoting the adoption of IBS, making it mandatory for government construction projects since 2008, with a minimum IBS score of 70 required for projects valued at RM10 million and above. The 2020 Treasury Circular PK 1.10 further reinforced this requirement, ensuring that government projects adhere to structured and efficient construction practices. This strong government support provides a reassuring direction for the industry's future.

For private sector projects, the government introduced an IBS mandate in 2018, requiring a minimum IBS score of 50 for private buildings valued at RM50 million or more. This policy was further strengthened in June 2023, when the Majlis Negara bagi Kerajaan Tempatan (MNKT) increased the requirement to a minimum IBS score of 70, encouraging the wider adoption of digital and modular construction across the private sector.

These policies ensure that IBS adoption is prioritised across all construction projects, driving a more systematic and technologically advanced industry.

Malaysia Digital Economy Blueprint (MyDIGITAL)

The Malaysia Digital Economy Blueprint (MyDIGITAL) is a strategic initiative designed to propel Malaysia into a digitally-driven, high-income economy. MyDIGITAL plays a crucial role in fostering digital adoption across various sectors, including construction, through several key strategies:

Encouraging a Digital-First Approach

MyDIGITAL promotes the adoption of digital solutions in project execution, facilitating streamlined processes.

Integrating Emerging Technologies

The blueprint advocates for the integration of cutting-edge digital technologies to enhance operational efficiency and productivity.

Developing s Skilled Workforce

MyDIGITAL is focused on cultivating a workforce equipped with future-ready digital capabilities to navigate the evolving landscape of construction.

By aligning MyDIGITAL with C4.0 and IBS initiatives, Malaysia positions itself at the forefront of industry innovation.

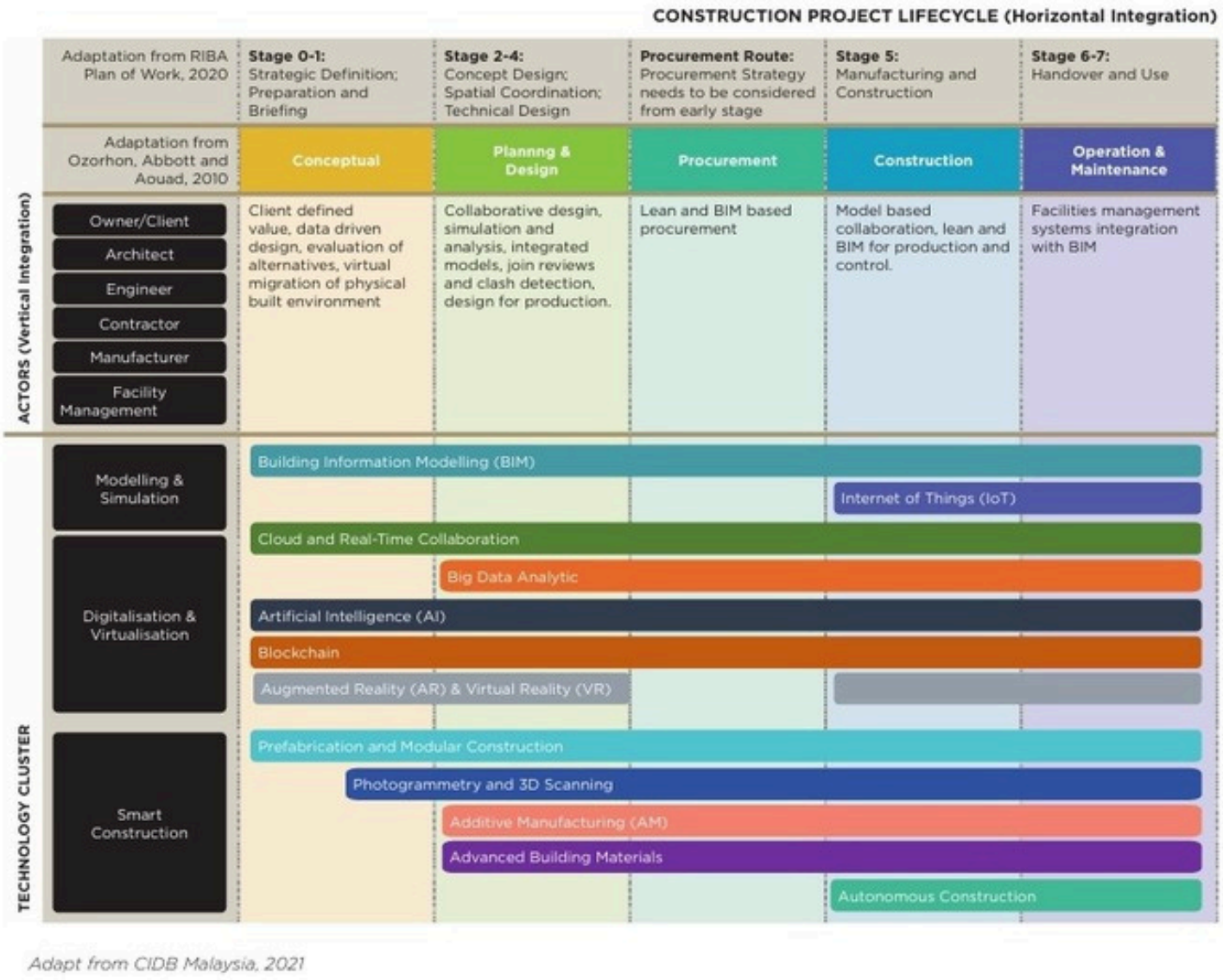
Establishing a robust digital ecosystem under the MyDIGITAL framework supports the construction sector in enhancing productivity, minimising waste, and improving global competitiveness.

C4.0 : Revolitionising The Industry

C4.0 is more than just an industry shift; it represents a profound transformation in how construction projects are designed, executed, and maintained. This new era of construction integrates automation, digitalisation, and real-time data analysis, enabling more efficient, cost-effective, and sustainable practices.

By incorporating cutting-edge technologies, the industry is making strides toward increased productivity, reduced risks, and improved safety standards.

It encompasses twelve key technologies, categorised into three main clusters, as shown in Figure 1:



Sources: Construction 4.0: A Guide for Digital Transformation

Figure 1. Twelve Key Technologies of C4.0 Organised into Three Clusters Throughout the Construction Supply Chain

Modelling and Simulation

Advanced digital tools such as BIM and Digital Twins provide precise project simulations, allowing stakeholders to visualise every stage of construction before physical work begins. These technologies enable accurate planning, coordination, and monitoring, helping to mitigate design errors and reduce costly rework. Digital Twins, in particular, offer real-time data synchronisation between the physical and digital worlds, enhancing predictive maintenance and lifecycle management.

Digitalisation and Virtualisation

The adoption of IoT, AI, blockchain, and cloud computing is revolutionising project execution. IoT-enabled sensors provide real-time monitoring of construction activities, while AI-driven analytics assist in decision-making by identifying patterns and predicting project outcomes. Blockchain technology ensures transparency in contracts and transactions, reducing disputes and enhancing trust among stakeholders. Cloud computing facilitates seamless collaboration by enabling remote access to project data, fostering a more connected and responsive construction environment.

Smart Construction

Innovations such as prefabrication, automation, 3D printing, and advanced materials are redefining how buildings are constructed. Prefabrication techniques enable the off-site manufacturing of components, leading to faster on-site assembly and improved quality control. 3D printing is pushing the boundaries of creativity, allowing for customised structures while minimising material wastage. Robotics and automated machinery are significantly reducing human intervention in high-risk tasks, enhancing workplace safety and efficiency. Additionally, the use of advanced sustainable materials is helping to reduce environmental impact, aligning construction with green building initiatives.

The integration of IBS with C4.0 further accelerates modernisation efforts in Malaysia's construction sector. The IBS Scoring System (CIS 18:2023) is playing a crucial role in encouraging the adoption of these digital technologies by providing measurable benchmarks for compliance and efficiency.

By embracing C4.0, Malaysia is positioning itself as a leader in smart and sustainable construction, ready to meet the demands of the future built environment.

C4.0 And IBS : Enhancing Implementation

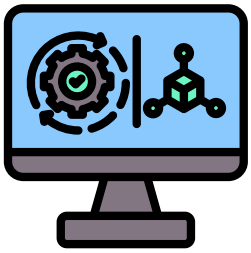
The shift towards digital construction is redefining how IBS is implemented across the industry. The IBS Scoring System (CIS 18:2023) has been established to evaluate construction projects based on their structural systems, wall systems, and adoption of productivity-enhancing solutions (Figure 2). As the demand for higher efficiency and better project outcomes increases, the integration of C4.0 technologies has become a fundamental factor in enhancing IBS scores and streamlining construction processes.

By leveraging digital tools, companies can optimise planning, improve accuracy, and enhance collaboration, leading to projects that are delivered on time and within budget. The seamless incorporation of modelling and simulation, digitalisation, and smart construction into IBS ensures a stronger, more effective construction approach that benefits all stakeholders involved.

The following sections outline how C4.0 technologies enhance IBS scores across different subcategories:

Simulation and Modelling

BIM is a fundamental requirement for digital IBS implementation. Points are awarded based on the maturity level of BIM, encouraging greater collaboration and automation in project coordination.



The level of BIM adoption dictates the number of points awarded in the scoring system. At Level 1, projects that employ 2D drawings and 3D modelling receive 2 points, as they provide basic digital representations but lack full integration.

However, at Level 2 and beyond, where multiple project teams collaborate using 3D BIM models, projects can gain up to 6 points. Higher BIM maturity facilitates clash detection, improved coordination, constructability reviews, and real-time IBS compliance tracking, significantly enhancing the accuracy and efficiency of IBS project integration.

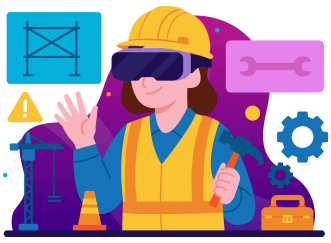
Digitalisation and Virtualisation

Digitalisation and virtualisation technologies also support the implementation of IBS by improving project management, coordination, and efficiency. Digital collaboration tools such as cloud-based platforms, AI, and the IoT enable real-time data sharing and predictive analytics, thus enhancing construction efficiency.

By employing big data analytics and AI-driven decision-making, construction firms can optimise resource allocation and ensure compliance with IBS scoring criteria. Projects incorporating any of these technologies are eligible for an additional point each under CIS 18:2023.

Smart Construction

Another critical aspect of C4.0 that enhances IBS scoring is smart construction technologies. These encompass 3D printing, additive manufacturing, photogrammetry, and autonomous construction. Projects integrating 3D scanning and photogrammetry improve accuracy in IBS component placement, while autonomous robotics and AI-driven construction enhance assembly precision.



Projects incorporating these technologies qualify for an additional point each under CIS 18:2023. Furthermore, by utilising advanced building materials, the project can earn an extra two points under CIS 18:2023.

Meanwhile, in the realm of prefabricated and modular construction, utilising prefabricated volumetric modules (PVM), prefabricated staircases, and prefabricated mechanical, electrical, and plumbing (MEP) systems results in higher IBS compliance by reducing on-site construction time and enhancing structural standardisation.

The scoring system rewards projects that increase the proportion of these prefabricated elements. For PVM, the project is eligible for maximum points, while prefabricated staircases and prefabricated MEP systems each qualify for up to 4 points.

NO.	DESCRIPTION	USAGE (IN PERCENTAGE)		
		Unit/ Adopt	50% ≤ x <75%	75% ≤ x ≤ 100%
1	**Utilisation of Standardised Components**			**Max 16 points**
	a) Beam	Nos	2	4
	b) Column	Nos	2	4
	c) Wall	m	2	4
	d) Slab	m^2	2	4
	e) Door	Nos	2	4
	f) Window	Nos	2	4
2	**Repetition of the Structural Layouts**			**Max 6 points**
	a) For a building of three (3) storeys and above			
	i. Repetition of floor-to-floor height	Nos	2	3
	ii. Vertical/ horizontal repetition of structural layout	Nos	2	3
	b) For a building of one (1) or two (2) storeys			
	i. Horizontal repetition of structural layout	Nos	3	6
3	**Productivity Enhancing Solutions and Technology Adoption**			**Max 14 points**
	a) Simulation and Modelling			
	i. Building Information Modelling (BIM)	Level 1	2	
		Level 2 and above	6	
	b) Digitalisation and Virtualisation			
	i. Augmented Reality & Virtualisation	Adopt	1	
	ii. Artificial Intelligence	Adopt	1	
	iii. Big Data and Predictive Analytics	Adopt	1	
	iv. Blockchain	Adopt	1	
	v. Cloud and Realtime Collaboration	Adopt	1	
	vi. Internet of Things	Adopt	1	
	c) Smart Construction			
	i. 3D Printing & Additive Manufacturing	Adopt	1	
	ii. 3D Scanning and Photogrammetry	Adopt	1	
	iii. Autonomous Construction	Adopt	1	
	iv. Advanced Building Material	Adopt	2	
	v. Prefabrication & Modular Construction			
	(a) Prefabricated Volumetric Module (PVM)	Nos	3	6
	(b) Prefabricated staircase	Nos	2	4
	(c) Usage of Prefabricated Mechanical, Electrical, and Plumbing (MEP) systems	Nos	2	4
	d) Other Enhancing Solutions			
	i. Usage of self-climbing working platform	Adopt	2	
	ii. Usage of Modular Gridlines in drawings	Nos	3	6
			Total (max)	**30**

CONSTRUCTION 4.0 TECHNOLOGY ADOPTION

Sources: CIS 18 (2023) - Manual for IBS Content Scoring System (IBS Score)

Figure 2. Adoption of 12 key technologies under C4.0 in the IBS Content Scoring System

Through the adoption of these C4.0 advancements, Malaysia's construction industry is moving towards a future where projects are executed with higher accuracy, reduced risks, and increased productivity. As more stakeholders embrace digital construction, IBS implementation will continue to evolve, ensuring the industry meets the growing demands for efficiency and sustainability.

C4.0 And IBS : Enhancing Implementation

While the benefits of digital IBS are significant, there are several challenges to widespread adoption. Addressing these barriers is essential for fully realising the potential of C4.0 in Malaysia's construction sector.

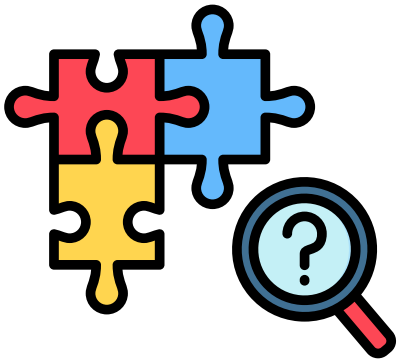
High Initial Cost

Challenge:
The initial investment required for digital technology implementation remains a significant barrier, especially for small and medium-sized enterprises (SMEs). Many construction firms operate on tight budgets, making it difficult to justify the high upfront costs associated with modern technologies such as BIM, AI-powered project management tools, and IoT-enabled monitoring systems. Without immediate, tangible returns, businesses may hesitate to make these critical investments.

Strategy:
Addressing this challenge requires a multi-faceted approach. Government support through funding programs, financial incentives, and tax relief can alleviate some of the financial burdens faced by SMEs. Additionally, construction firms can adopt a phased approach to digitalisation, starting with low-cost technologies before gradually implementing more advanced systems. BIM-based cost analysis tools can also help companies evaluate long-term savings, demonstrating that digital investments can lead to significant reductions in material waste, labour costs, and rework expenses.

Skills and Knowledge Gaps

Challenge:
The successful implementation of C4.0 relies on a highly skilled workforce proficient in emerging technologies such as BIM, AI, robotics, and data analytics. However, the construction industry faces a significant shortage of professionals with the necessary digital expertise. Many construction workers and project managers are more familiar with traditional practices and may lack the technical knowledge required to navigate and implement digital construction solutions effectively.



Strategy:
To bridge this gap, industry-academic collaborations are essential in developing tailored education and training programs that equip future professionals with digital skills. Construction firms should actively invest in workforce upskilling initiatives, including hands-on training, certification courses, and on-the-job mentorship programs. Government and private sector partnerships can further enhance workforce development through apprenticeships and knowledge-sharing platforms, ensuring that industry players stay ahead in the rapidly evolving digital construction landscape.

Resistance to Digital Adoption

Challenge:
The construction industry has long relied on conventional building techniques, with many stakeholders resistant to change. Contractors, developers, and even regulatory bodies may be hesitant to move away from familiar processes, fearing that digital transformation could disrupt existing workflows or require extensive retraining. Additionally, misconceptions about the complexity and reliability of new technologies further hinder widespread adoption.

Strategy:
Overcoming this resistance requires clear communication on the benefits of digitalisation. Showcasing real-world success stories from companies that have successfully implemented digital construction methods can help build confidence. Hands-on training programs that allow workers to experience the advantages of digital tools firsthand can also drive acceptance. Furthermore, industry-wide policies that encourage or mandate the use of C4.0 technologies—such as government-backed incentives for digital adoption—will push the sector towards more widespread transformation.

By addressing these challenges proactively, Malaysia can facilitate the seamless adoption of digital IBS, ensuring long-term success in the construction sector.

Conclusion

The integration of IBS with C4.0 represents a transformative shift in Malaysia's construction landscape. The adoption of BIM, IoT, AI, automation, and blockchain enhances efficiency, optimises IBS scoring, and reduces overall costs.

Furthermore, innovations such as AI-powered project planning and 3D printing continue to revolutionise construction, making processes more seamless and data-driven.

Malaysia's commitment to digitalisation is reflected in CIDB Malaysia's C4.0 Strategic Plan (2021-2025) and the Malaysia Digital Economy Blueprint (MyDIGITAL). These initiatives establish digital construction as the industry benchmark, fostering sustainability, competitiveness, and resilience.

By overcoming barriers to adoption and embracing smart construction technologies, Malaysia is set to become a leader in digital and sustainable construction, securing a smarter and more efficient future for the industry.

Acknowledgement

The authors sincerely thank the Construction Research Institute of Malaysia (CREAM) for its dedication to research, innovation, and advancing digital transformation in the construction sector. CREAM's efforts in developing smart construction solutions, fostering collaborations, and supporting C4.0 and IBS adoption have been instrumental in shaping a more efficient and resilient industry in Malaysia.

We also appreciate the Construction Industry Development Board (CIDB) Malaysia for its commitment to driving digitalisation, policy formulation, and technology adoption. CIDB's leadership in modernising Malaysia's construction sector has created new opportunities for efficiency, sustainability, and competitiveness.

Our gratitude extends to all players in Malaysia's construction industry, including contractors, developers, consultants, manufacturers, and suppliers, for embracing digital transformation. Their proactive adoption of new technologies and commitment to innovation and sustainability are shaping a more advanced and efficient construction landscape.

We deeply appreciate all stakeholders' contributions, resources, and support, which have been invaluable to this research and publication.

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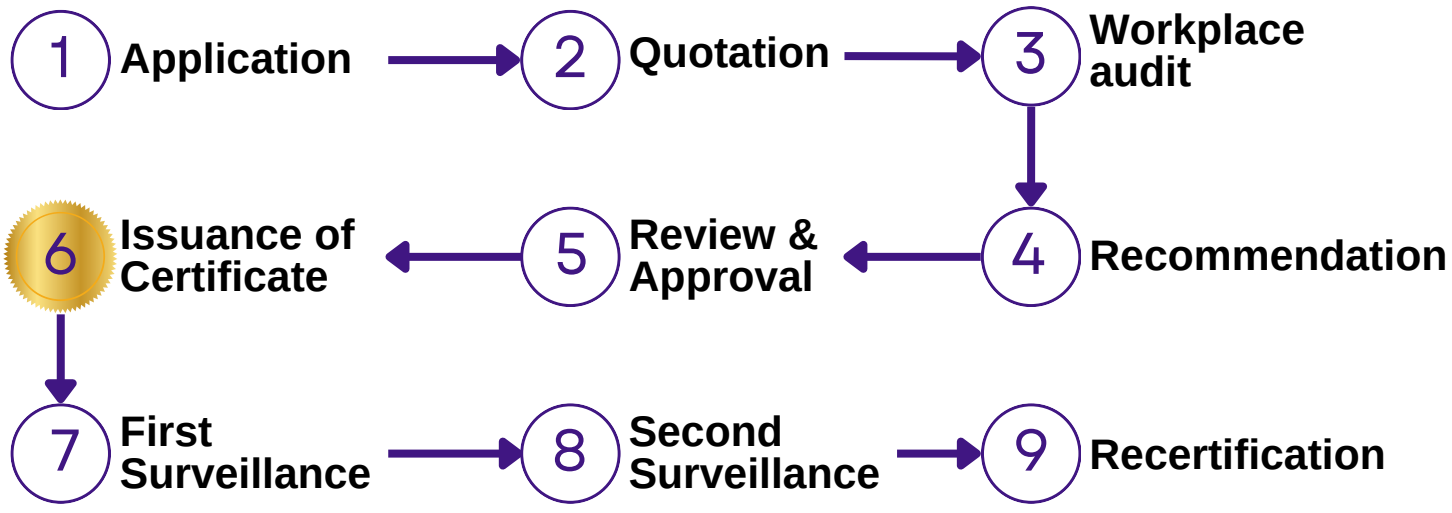
Contractor's Quality Management System (CQMS)

Contractor's Quality Management System (CQMS) CIS 29:2021 is an independent system that evaluates a contractor's quality management implementation based on the Construction Industry Standard (CIS 29). Serving as an affordable alternative to ISO 9001, CQMS is ideal for budget-conscious contractors who prioritize the quality of their work. By choosing CQMS, contractors can maintain quality control, meet client standards, and gain additional benefits for PPK registration in Malaysia. Implementing CQMS also earns contractor's extra points in MCORE/SCORE CIDB assessments for PPK registration.

CIDB MALAYSIA Construction Industry Development Board Malaysia
LEMBAGA PEMBANGUNAN INDUSTRI PEMBINAAN MALAYSIA

With a certification fee of RM4000, CQMS covers one-day training, documentation for the quality manual, third-party audit, and certification to CIS 29:2021. The audit process is streamlined, taking only one day, and the certification remains valid for three years. Furthermore, CQMS carries equivalent weightage to ISO 9001 for CIDB SCORE/MCORE, making it an attractive and cost-effective choice for contractors in Malaysia, specially designed for their needs.

CQMS Process



Validation

Contractor's Quality Management System (CQMS) is applicable for all G1 - G7 contractors and CQMS Certification is given a validity term of three (3) years from the date of issuance. They can be reviewed as and when necessary subject to the CQMS Assessment Programme.

Benefits of CQMS

- Specialized Evaluation: Tailored assessments based on CIS 29
- Cost-effective: an affordable alternative for contractors, only RM4000, with high-quality standards
- Enhanced Reputation: Maintains rigorous quality control, enhancing credibility
- Smooth PPK Registration: Streamlines registration process for Malaysian contractors
- Extra Points in Assessments: Earns additional points in MCORE/SCORE CIDB assessments
- Streamlined Audit Process: One-day audit minimizes disruptions and saves time
- Long-Term Certification: Valid for three years, ensuring continuous credibility
- Equivalent Recognition: Carries same weightage as ISO 9001 for CIDB SCORE/MCORE

Scan the QR code for CQMS Application Form

Testing Facilities Available at CREAM -MKRM

We offer over 10 years of experience, providing a broad range of services to clients around the globe.

Our global network of laboratories and testing facilities, staffed by knowledgeable, experienced and competent personnel, help you to reduce risks, shorten time to market and demonstrate the quality and safety of materials, components, or products.

Full scale structure component test is our main forte. We can test actual size structure components such as beam, wall, slab, piles, segmental box girder, scaffolding, railway component, etc. We also offer testing services for wide range of construction material for your product quality determination, regulatory requirement, or any other compliance purposes.

CREAM-MKRM and its branches are accredited to MS ISO/IEC 17025 by Department of Standards Malaysia, thus ensuring the high standard and quality of the report produced.

Some of our facilities are:

1. Reaction floor (15m x 26m)
2. Reaction wall (6m x 6m)
3. Universal testing machine 100 kN- 2000 kN
4. 200 kN-300 kN dynamic testing machne 100 kN- 2000 kN
5. 300 kN dynamic actuator
6. 500 kN - 2000 kN static actuator
7. 500 kN resonance testing machine
8. Hardness tester
9. Spectrometer
10. 3D bar measurement

Scope and Testing Services

include but not limited to

IRON & STEEL

Typical Product : Rebar, Plate, Mesh, Wire, Rod, Tube, Strand, Hook, Anchor, Lifting Clutch etc.

- Dimension
- Mass
- Tensile
- Yield
- Fatigue
- Chemical Element Analysis (XRF, Spectrometer, ONH Analyzer)
- Coating thickness (Magnetic & Gravimetric method)
- Coating mass
- Surface coating
- Shear weld
- Flattening
- Surface geometry (Microscope & 3D high speed camera scan
- Pull out force
- Bend/Rebend
- Elogation
- Relaxation
- Hardness (Brinell, Rockwell & Vickers)
- Rebar bond test
- Mechanical splice test
- Weathering
- Corrosion
- Sample cutting

SCAFFOLDING & FALSEWORK

Typical Product : A-Frame, Modular, Tubular, Vertical & Horizontal Frame, Standard, Ledger, Transom, Cross Brace, U-Head & Jack Base, Sleeve, Coupler, Pin, Steel Prop, Platform, Clamp & Hook, Catwalk, Toe board, Guardrail, Stairway etc

- Dimension
- Mass
- Tensile
- Fatigue
- Chemical Element Analysis (XRF, Spectrometer, ONH Analyzer)
- Coating thickness (Magnetic & Gravimetric method)
- Coating mass
- Surface coating
- Bending /Flexural
- Shear
- Proof load
- Cross cut test
- Corrosion
- Weathering
- Deflection
- Surface geometry (Microscope & 3D high speed camera scan
- Load test on U-Head/Jack base
- Side protection test
- Bending test on platform
- Dynamic test on staircase
- Drop test
- Global test on shoring system
- Full scale test in scaffold, falsework & shoring system
- 1x3, 3x3, high tower, low tower
- Test on sleeve & coupler
- Straightness
- Load test on prop
- Pin test on prop
- Unintentional disengagement on prop Cross brace pi

CONCRETE

Typical Product : Ready Mixed Concrete (RMC), Fresh Concrete, Concrete Coring, Mortar, Aggregates, Cement, Bricks, Blocks

- Sample Preparation
- Dimension & Mass
- Compression test (Cube, Cylinder, Core)
- Flexural Test
- Density
- Water absorption
- Specific Gravity
- NDT Test on Concrete
- Slump test
- Cement chemical properties (XRF)
- Sieve analysis
- Compacting factor
- Cube test with RFID technology
- Concrete coring
- Tensile splitting
- Immersion

NON-DESTRUCTIVE TEST (NDT)

Typical Product : Concrete, Iron & Steel , Cement

- Rebound / Schmidt Hammer
- Ground Penetrating Radar (up to 6 m)
- Ultrasonic Pulse Echo Wireless Imaging System
- Eddy Current Instrument
- Digital Ultra Sonic Flaw Detector
- Handheld XRF
- Digital Microscope
- 3D Bar Scanner for Surface Geometry

FULL SCALE STRUCTURAL TEST

Typical Product : Industrialized Building System (IBS) Component, Precast Concrete, Steel Frame, Timber Frame, Formwork, Blockworks, Innovative Product, Wall Panel, Beam, Slab, Hollow Core Slab, Staircase, Precast Piles, Pipes, Culvert, Non Load Bearing Wall, Bridges, Pier, Segmental Box Girder etc.

- Static load test (Vertical, Horizontal)
- Flexural & Bending test
- Compression test
- Load Combination (Vertical + Horizontal)
- Dynamic Load Test
- Dimension
- Proof Load Test
- Design Conformity Test
- Strength & robustness test of Wall Panel
- Customized structure test

RAILWAY INFRASTRUCTURE

Typical Product : Precast Concrete Railway Sleepers, Composite Sleepers, Bearers, Rail Track

- Bending moment test on sleepers (Negative / Positive)
- Bending moment test on rail seat (Negative / Positive)
- Dynamic load test on rail seat
- Fatigue test on rail seat
- Insert Pull out test
- Bend test on rail track
- Chemical composition test
- Hardness Test
- Dynamic/Fatigue test

MKRM SABAH & MKRM SARAWAK

Typical Product : Concrete, Cement, Aggregate & Iron & Steel

CONCRETE

- Compression
- Flexural
- Water depth of penetration
- Slump
- Density
- Dimension
- Air content
- Degree of Compatibility
- Water absorption

CEMENT

- Compression on mortar
- Soundness
- Setting time
- Fineness (Blaine method)

AGGREGATE

- Particle size distribution
- Impact value
- Crushing value
- Flakiness index
- Elongation

IRON & STEEL

- Tensile
- Yield strength
- Elongation
- Dimension

Get our complete list of testing facilities

Activities Highlights

Seminar Kualiti Projek Terjamin | Contractor's Quality Management System (CQMS)
Date : 9 September 2025
Venue : Pejabat CIDB Wilayah Persekutuan Kuala Lumpur

The Construction Research Institute of Malaysia (CREAM) in collaboration with CIDB Wilayah Persekutuan Kuala Lumpur successfully organised the **Seminar Kualiti Projek Terjamin: Contractor's Quality Management System (CQMS**) on 9 September 2025 at the CIDB Wilayah Persekutuan Kuala Lumpur Office. The seminar aimed to enhance understanding and awareness among industry players regarding the implementation of CQMS as an essential framework for ensuring quality assurance in construction projects.

The seminar commenced with an opening speech delivered by Puan Nabila Syazwanie Kamaluddin, Senior Manager at CREAM, who highlighted the importance of adopting systematic quality management practices within the construction industry. She emphasised that CQMS serves as a tool to assist contractors in establishing, maintaining, and improving their project quality processes in alignment with CIDB's commitment to elevate construction standards nationwide.

The programme featured two knowledge-sharing sessions led by experienced speakers from CREAM. Session One, conducted by Ts. Syed Hazni, provided participants with an overview of the CQMS framework, key components, and its integration within the construction quality management process. The session also discussed best practices in quality control and the benefits of implementing CQMS to ensure consistent project delivery.

Following the lunch break, Session Two was conducted by Mr. Farid, who focused on the practical aspects of CQMS implementation. He shared real-life case studies, common challenges faced by contractors, and strategies for continuous improvement through systematic documentation and performance monitoring.

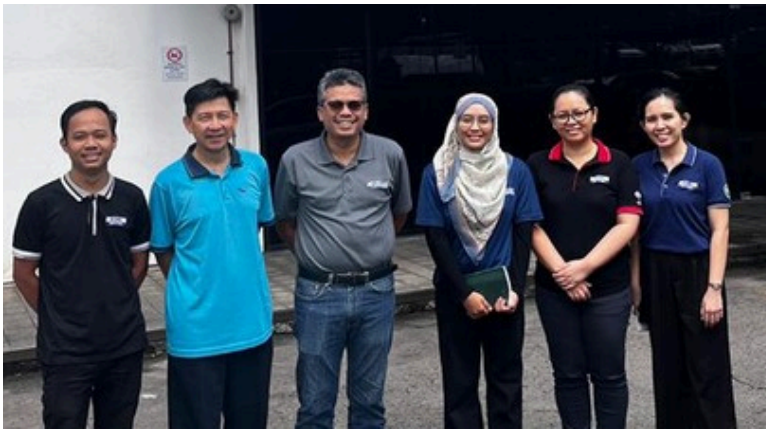
A total of 45 participants comprising contractors, consultants, and representatives from various construction-related organisations attended the seminar. The interactive sessions provided a valuable platform for participants to exchange insights, ask questions, and gain practical knowledge on enhancing construction quality through CQMS.

The seminar concluded with a short discussion and closing remarks, reaffirming CREAM and CIDB's continuous efforts in promoting quality excellence and professionalism across the Malaysian construction industry.

MKRM Sabah Strengthens Ties with Steel Industries

Date : 10 September 2025

Venue : Steel Industries (Sabah) Sdn. Bhd



On 10 September 2025, CREAM MKRM Sabah visited **Steel Industries (Sabah) Sdn. Bhd.**, one of Sabah largest steel manufacturers, to showcase their testing services and product certification programs, which are essential for manufacturers seeking Product Certification Scheme (PPS) approval. The visit was led by Ir. Ts. Ahmad Hazim Abdul Rahim, accompanied by Ts. Nor Azila, Test Engineer of MKRM Sabah.

During the visit, the CREAM team toured the factory and participated in a discussion and knowledge sharing session with Steel Industries. The session focused on ensuring that laboratory operations and testing procedures fully comply with MS ISO 17025 requirements, emphasizing the importance of accuracy, reliability, and consistency in testing steel materials for the construction industry. The interaction went beyond observation.

Both teams discussed technical requirements, material standards, and quality assurance practices, highlighting the critical role of testing in achieving compliance with MS ISO 6892-1:2017, MS ISO 15630-1:2012, and MS 146 standards for reinforcement bars.

This hands-on exchange gave the CREAM team valuable insight into the real-world challenges faced by steel manufacturers and allowed Steel Industries to understand how MKRM Sabah services can support their compliance needs.

The collaboration deepened on 5 November 2025, when Steel Industries (Sabah) Sdn. Bhd. reciprocated the visit to CREAM MKRM Sabah, led by Mr. Lee Eng Seong, General Manager, and his technical team. The discussions focused on two-way collaboration, sharing of technical knowledge, and exploring joint initiatives such as Interlaboratory programs and best practice exchanges, aimed at enhancing both operational and testing capabilities.

The visits highlighted how connecting technical expertise with industry needs can help provide more focused testing services and ensure that materials meet the highest standards required for PPS (Perakuan Pematuhan Standard) certification.

The partnership between CREAM MKRM Sabah and Steel Industries (Sabah) Sdn. Bhd. showcases how industry and testing institutions can collaborate to improve product quality, compliance, and innovation, ultimately supporting the growth of Sabah construction sector.

OSH Week Madani 2025
Date : 22-25 September 2025
Venue : CIDB 520 The MET Corporate Towers, Kuala Lumpur

The Occupational Safety and Health (OSH) Week Madani CIDB 2025 was successfully held as part of CIDB's ongoing commitment to cultivating a safe, healthy, and caring workplace — in line with the Madani values of sustainability, well-being, and compassion.

The week-long programme featured a variety of exciting and meaningful activities, including a **Talk Series titled "Smart Health: How AI is Changing Our Lifestyle," a Pre-Loved Exhibition, Health Screening, Blood Donation Drive, Treasure Hunt, and Reflexology Session**. Each activity was designed to encourage healthy living, raise awareness of workplace safety and well-being, and foster stronger camaraderie among CIDB staff.

In her opening remarks, **YBrs. Puan Zainora Zainal Chief Executive of CIDB Malaysia** emphasized that safety and health are shared responsibilities that reflect care and respect within the organization.

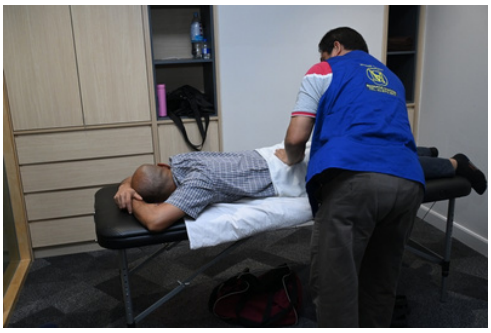
"A safe and healthy culture must be part of our everyday practice. OSH is not just about compliance — it is about how we take care of ourselves, our colleagues, and the organization as a whole," she said.

She also highlighted the growing role of technology in shaping safer and smarter workplaces, stating:

"Through Artificial Intelligence (AI), the Internet of Things (IoT), automation, smart monitoring systems, early hazard detection, emergency applications, and virtual training, we now have greater opportunities to create a safer, healthier, and more efficient work environment."

The event served not only as a reminder of the importance of safety and health but also as a platform to promote community spirit through social engagement activities such as exhibitions and blood donation.

The OSH Week Madani CIDB 2025 successfully achieved its goal of strengthening safety awareness and nurturing a culture of care and well-being embodying the true spirit of Madani, where every CIDB employee thrives in a safe, harmonious, and compassionate work environment.



"Kerja Selamat, Hati Senang"- Teknologi kan ada!

MTCP 2025 Participants Visit CREAM MKRM Laboratory

Date : 24 September 2025

Venue : Makmal Kerja Raya Malaysia, Kuala Lumpur

On 24 September 2025, participants of the **Malaysian Technical Cooperation Programme (MTCP) 2025** made an educational visit to the Malaysia Construction Research Laboratory (MKRM), operated by the Construction Research Institute of Malaysia (CREAM). The visit served as a platform for knowledge sharing and exposure to Malaysia's cutting-edge research facilities and innovative practices in the construction industry.

The delegation consisted of international participants from **Bangladesh, Ghana, Kyrgyz Republic, Libya, Nigeria, Palau, Somalia, Timor-Leste, Turkiye, and Uzbekistan.** They were warmly welcomed by representatives from CREAM, Ir. Ts Ahmad Hazim Abd Rahim who provided an overview of the institute's pivotal role in supporting the Construction Industry Development Board (CIDB) Malaysia through research, innovation, and technological advancement.

The visit aimed to enhance participants' understanding of Malaysia's research and testing capabilities in construction materials, technologies, and quality assurance—key pillars in promoting sustainable and resilient infrastructure development.

During the tour, participants were briefed on CREAM's core functions and were taken to several specialized laboratories at MKRM, including the materials testing lab, non-destructive testing section, pavement research unit, and structural performance lab. Each session provided insights into Malaysia's approach toward improving construction quality, safety, and performance through scientific testing and data-driven research.

The engaging session also fostered discussions on potential collaborations between CREAM and international agencies under the MTCP framework. Participants expressed their appreciation for the informative visit, emphasizing how Malaysia's research-based practices could be adapted to strengthen construction standards and capacity building in their respective nations.

CREAM Team Building 2025: "We Build, We Rise"
Date : 26-28 September 2025
Venue : Gopeng, Perak

In line with CREAM's spirit of collaboration and innovation, the **Team Building 2025** programme was held from 26 to 28 September 2025 in Gopeng, Perak to strengthen bonds, inspire teamwork, and cultivate a resilient mindset among staff.

Carrying the theme **"We Build, We Rise**," the event symbolised CREAM's shared journey in building trust, unity, and excellence together as one team. The activities focused on enhancing communication, teamwork, and leadership through engaging outdoor challenges, group tasks, and strategic problem-solving games.

During his opening remarks, Chief Executive Officer Ir. M. Ramuseren emphasised the importance of collaboration across all departments, reminding staff that teamwork is the foundation of organisational success.

"We must work as a team. Everyone should understand the work of other departments as well; we cannot operate in silos. When we work together and support one another, we grow stronger as one CREAM."

More than just a recreational escape, the programme reflected CREAM's core values of integrity, collaboration, and continuous growth. Each participant played a vital role, contributing ideas, energy, and enthusiasm to ensure success — just as every individual contributes to CREAM's mission of advancing Malaysia's construction research and innovation.

The event concluded with renewed motivation and camaraderie, reinforcing the belief that with unity, passion, and purpose — we build, and indeed, we rise.

WE BUILD, WE RISE!

Seminar Kualiti Projek Terjamin | Contractor's Quality Management System (CQMS)
Date : 29 September 2025
Venue : Pavillion Hotel Sandakan, Sabah

A **Seminar on Contractor's Quality Management System (CQMS)** was successfully held through a collaboration between CREAM and CIDB Sabah Cawangan Sandakan at Pavilion Hotel, Sandakan, Sabah. The half-day program aimed to raise awareness among contractors in Sandakan and nearby areas on the importance of implementing CQMS to enhance project quality and performance.

The event commenced with a welcoming remark by Ts. Poul bin Joannes, Manager of CIDB Sandakan, who emphasized the significance of quality assurance and compliance in strengthening the construction industry. The seminar then continued with an insightful session by Ir. M. Ramuseren, Chief Executive Officer CREAM who shared his expertise on the CQMS framework, its benefits, and effective implementation strategies within construction projects.

This program served as a valuable platform for participants to gain a deeper understanding of CQMS requirements and to promote a culture of continuous improvement and quality excellence within the local construction sector.

Driving Sustainability in Construction: CIDB Selangor Leads MyCREST & Sustainability INFRASTAR Engagement with Local Authorities and Developers

Date : 30 September 2025

Venue : Pejabat CIDB Negeri Selangor, Wisma PKPS Shah Alam, Selangor

The Construction Industry Development Board (CIDB) Selangor successfully conducted an **Industry Engagement Programme on MyCREST and Sustainable INFRASTAR** with local authorities (PBT) and developers across Selangor. The programme was held on 30 September 2025 at CIDB Selangor, Wisma PKPS, Shah Alam.

This initiative aimed to strengthen awareness and encourage the adoption of sustainable development practices within the construction sector. Participants were introduced to systematic approaches for evaluating sustainability performance in building and infrastructure projects, aligning with national objectives for carbon reduction and environmental protection.

As part of the engagement, CIDB Selangor invited the Construction Research Institute of Malaysia (CREAM) to share in-depth insights on sustainability assessment. The session was delivered by Mr. Muhamad Azam Azmai, CREAM Assessment Officer, who presented the key principles, rating framework, and implementation strategies for both MyCREST and Sustainable INFRASTAR.

CIDB Selangor extends its heartfelt appreciation to all participating local authorities, developers, industry stakeholders, and invited partners for their attendance, cooperation, and meaningful contributions throughout the programme. The active engagement and positive response received during the session truly reflected the industry's readiness to embrace sustainable construction practices and environmental stewardship.

Laboratory Visit by DOSH Federal Territory of Kuala Lumpur, Putrajaya, and Selangor
Date : 2 October 2025
Venue : Makmal Kerja Raya Malaysia, Kuala Lumpur

On 2nd October 2025, the Construction Research Institute of Malaysia (CREAM) welcomed a delegation from the **Department of Occupational Safety and Health (DOSH) Federal Territory of Kuala Lumpur, Putrajaya, and Selangor** for a technical laboratory visit to the Malaysia Construction Research Laboratory (MKRM). The delegation, led by Ts. Habsah binti Ishak, Regional Director of DOSH Federal Territory of Kuala Lumpur, comprised 30 participants, including Factory and Machinery Inspectors, Deputy Directors of Operations for the Federal Territory and Selangor, and the Head of Construction Works Section.

The visit commenced with welcoming remarks by Ir. M. Ramuseren, Chief Executive Officer of CREAM, followed by a briefing and presentation by Ts. Ir. Ahmad Hazim Abdul Rahim, Senior Manager of the Testing Division. The session provided insights into CREAM's research initiatives, testing capabilities, and the role of MKRM in supporting Malaysia's construction industry through advanced material and structural testing.

Following the briefing, participants were taken on a guided tour around the Strong Floor area and Material Testing facilities, where they observed ongoing testing operations and learned about the laboratory's state-of-the-art equipment and procedures.

The visit fostered valuable knowledge exchange between DOSH and CREAM, strengthening collaboration in promoting safety, quality, and innovation within the construction sector.

CREaTE JKR Conducts Technical Visit to CREAM MKRM

Date : 16 October 2025

Venue : Makmal Kerja Raya Malaysia, Kuala Lumpur

On 16th October 2025, a delegation from the **Centre for Research and Testing (CREaTE), Public Works Department (JKR),** conducted a technical visit to the Malaysia Construction Research Laboratory (MKRM), operated by the Construction Research Institute of Malaysia (CREAM). The visit was led by Ir. Dr. Sheliza binti Zaini Sooria, Senior Director of CREaTE, and participated by 10 officers from the centre.

The session commenced with welcoming remarks by Ir. M. Ramuseren, Chief Executive Officer of CREAM, followed by a presentation by Ir. Ts. Ahmad Hazim bin Abdul Rahim, Senior Manager of the Testing Division. The presentation provided an overview of CREAM's testing facilities, research functions, and the key role of MKRM in supporting the construction industry through quality assurance and technical excellence.

The visit continued with a guided tour of the Strong Floor area and Material Testing laboratories, where participants observed demonstrations of ongoing testing works and explored the advanced equipment available at MKRM. This engagement strengthened collaboration between CREaTE JKR and CREAM, fostering mutual learning and technical exchange towards enhancing research, development, and innovation in the construction sector.

MTIB & FIDEC Strengthen Collaboration with CREAM MKRM Sabah in Advancing Timber-Based Construction Testing

Date : 16 October 2025

Venue : Makmal Kerja Raya Malaysia Kota Kinabalu, Sabah

Innovation in timber technology took centre stage as CREAM MKRM Sabah welcomed a special visit from the **Malaysian Timber Industry Board (MTIB) and the Fibre and Biocomposite Centre (FIDEC)** on 16 October 2025. The visit marked an important step toward strengthening collaboration in timber-based construction research and testing. The delegation was led by Ir. Dr. Izwan Johari, Director of the Industry Development Division, together with Pn. Norliza Mat Yasok representing FIDEC, and Puan Salbiah Abdul Lahap, MTIB representative from the Sabah branch. The visit was hosted by Ir. Ts. Ahmad Hazim, Head of CREAM MKRM Sabah, accompanied by the MKRM Sabah team, Ts. Nor Azila and En. Hassanain Hafiz.

The discussion focused on introducing CREAM MKRM Sabah comprehensive testing capabilities, particularly those related to timber-based structural products such as glued laminated timber (glulam). Both sides explored potential collaborations in testing programs, technical studies, and compliance support to further develop Malaysia engineered timber sector. As the construction industry continues to embrace sustainable and innovative materials, glulam has gained recognition as a viable alternative to conventional construction materials like concrete and steel. However, its application demands rigorous mechanical performance evaluations, including bending, shear, compression, and adhesive bond strength testing, in accordance with MS EN standards.

MTIB and FIDEC have been actively championing the development and use of engineered timber and biocomposite materials in the construction sector. Their collaboration with CREAM MKRM Sabah aims to strengthen product validation, quality assurance, and technical support for timber manufacturers, ensuring that locally produced materials meet the required safety and performance standards for modern construction. According to Ir. Dr. Izwan, "This partnership reflects our shared vision to elevate Malaysia timber and biocomposite industry. By combining technical capabilities and innovation, we can enhance industry confidence and open new opportunities for sustainable construction solutions."

CREAM MKRM Sabah committed to supporting the timber industry through reliable testing and research services. This collaboration with MTIB and FIDEC is an important milestone in bridging research innovation with practical application in the construction industry. The visit concluded with a laboratory tour, where the delegation was introduced to the testing facilities and equipment available at MKRM Sabah. The session provided a valuable opportunity for knowledge exchange and the identification of future areas for collaboration.

This initiative highlights a shared commitment to advancing sustainable construction practices and strengthening the technical foundation of Malaysia timber industry, particularly in Sabah, a region rich in natural timber resources and innovation potential.

MATRIX Excelcon Sdn. Bhd. Achieves Excellence in QLASSIC ® Assessment

Date : 23 October 2025

Venue : Seremban, Negeri Sembilan

A QLASSIC® Assessment Certificate Presentation Ceremony was held to recognise the achievement of **Matrix Excelcon Sdn. Bhd.** for its outstanding performance in a residential development project. The certificate was presented by Mr. Muhamad Afif Mohamed Jamil, Manager of the Technology Development Division, and was also attended by representatives from CIDB Negeri Sembilan and the Construction Research Institute of Malaysia (CREAM).

The residential project achieved an impressive QLASSIC® score of 89%, reflecting the company's strong commitment to maintaining high standards of workmanship and quality.

CIDB and CREAM extend their appreciation to Matrix Excelcon Sdn. Bhd. for their continued support and collaboration in enhancing construction quality and professionalism across the industry. Such partnerships play a vital role in promoting industry best practices and elevating the image of Malaysia's construction sector.

CIDB and CREAM also encourage more industry players to adopt QLASSIC® as a benchmarking tool to drive excellence in construction quality and to deliver better-quality homes for the community.

Congratulations to Matrix Excelcon Sdn. Bhd. on this remarkable achievement.

Sesi Libat Urus CIDB Sabah bersama Persatuan Kontraktor di Sabah
Date : 23 October 2025
Venue : Pejabat CIDB Negeri Sabah

On 23 October 2025, CIDB Sabah organized the **"Sesi Libat Urus CIDB Sabah bersama Persatuan Kontraktor di Sabah",** bringing together members of Sabah Contractor Associations for an informative session. The event provided a platform for invited subsidiary companies to present and share their services, offering practical tools and solutions to support contractors in improving project quality and operational efficiency. Presentations were delivered by ABM (Akademi Binaan Malaysia), CIDB Tech, and CREAM MKRM Sabah, each highlighting their specialized contributions to the construction industry.

Representing CREAM MKRM Sabah, Ts. Nor Azila and En. Farid Hafizudin focused on presenting the Construction Quality Management System (CQMS). They explained how CQMS is a practical quality management system specifically designed for contractors, offering a structured framework to monitor workmanship, site processes, material compliance, and overall project delivery. CQMS enables contractors to achieve quality standards on par with ISO 9001, without the complexity and cost of implementing a full ISO system.

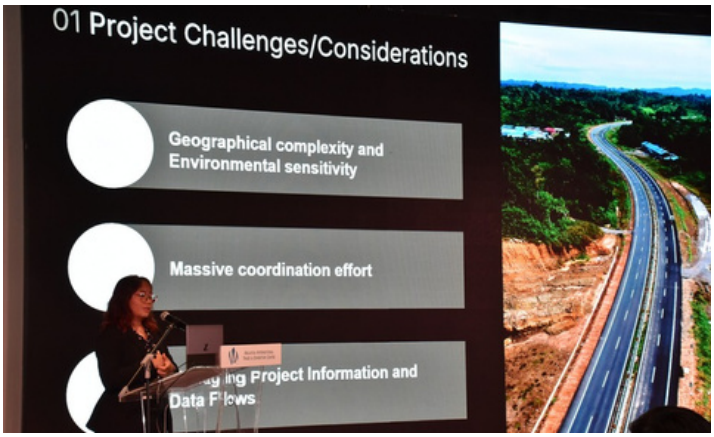
During the presentation, they emphasized that adopting CQMS allows contractors to demonstrate compliance with industry standards, improve operational efficiency, reduce errors, and promote continuous improvement through a "plan–do–check–act" approach. They also shared how CQMS certification can support contractor registration and scoring under CIDB frameworks, enhancing eligibility for tenders and contracts.

Participants gained practical insights into how CQMS can be applied in real projects, and its significance in enhancing project quality, compliance, and performance. The session reinforced CREAM MKRM Sabah commitment to providing contractors with practical quality management tools, helping raise the standards of Sabah construction industry.

DCS 2025 : DIGITAL TWIN & AI MASTERCLASS

Date : 27 October 2025

Venue : MITEC, Kuala Lumpur



DCS2025 kicked off with a focused **masterclass** on **"Efficient Design and Construction with Digital Twins and AI in Bentley Infrastructure Cloud"** on 27 October 2025 at MITEC, Kuala Lumpur. Organised by CREAM with Bentley as sponsor, the session gathered around 100 participants eager to strengthen their digital capabilities.

Speakers Orven Fajardo and Siva Thankappan from Bentley, together with Adam Kamarulail from PETRONAS, guided attendees through key topics including developing digital twins, ISO 19650–enabled CDE workflows, AI-driven process improvements, digital design review, cloud-based QA/QC, safety management and 4D construction simulation.

The session also featured success stories from PETRONAS and Pinnacle, showing the real-world impact of digital project delivery and operations.

This masterclass set a strong foundation for DCS2025, underscoring the growing importance of AI, data and digital twins in transforming Malaysia's construction ecosystem.

ICW BuildXpo 2025
Date : 28-30 October 2025
Venue : MITEC, Kuala Lumpur

The Construction Research Institute of Malaysia (CREAM) participated under the CIDB Malaysia Pavilion at ICW BuildXpo 2025, held from 28 to 30 October 2025 at MITEC, Kuala Lumpur. **Themed "Constructing the Future of ASEAN"**, the event showcased over 350 exhibitors highlighting innovation, sustainability, and digital transformation in construction. The exhibition featured more than 350 booths, showcasing products and solutions that emphasised digitalisation, green technology, smart infrastructure, and sustainable construction practices.

CREAM's team engaged actively with visitors, industry players, and academic representatives, strengthening collaboration and sharing insights into the institute's ongoing research and development efforts. The participation underscored CREAM's commitment to fostering innovation and supporting CIDB's mission to elevate Malaysia's construction standards in line with regional and global benchmarks.

The Construction Research Institute of Malaysia (CREAM) participated under the CIDB Malaysia Pavilion at ICW BuildXpo 2025, held from 28 to 30 October 2025 at MITEC, Kuala Lumpur. Themed "Constructing the Future of ASEAN", the event showcased over 350 exhibitors highlighting innovation, sustainability, and digital transformation in construction. The exhibition featured more than 350 booths, showcasing products and solutions that emphasised digitalisation, green technology, smart infrastructure, and sustainable construction practices.

CREAM's team engaged actively with visitors, industry players, and academic representatives, strengthening collaboration and sharing insights into the institute's ongoing research and development efforts. The participation underscored CREAM's commitment to fostering innovation and supporting CIDB's mission to elevate Malaysia's construction standards in line with regional and global benchmarks.

A major highlight for CREAM at this year's ICW BuildXpo was **the launch of the Sustainable Building (SB) Mark Certification, officiated by YB Datuk Dr. Ahmad Maslan, Deputy Minister of Works.**

The SB Mark Certification is a new initiative developed by CREAM, in collaboration with CIDB Malaysia, to assess and recognise sustainable building practices within the construction industry. It provides a comprehensive framework to evaluate a project's environmental performance, resource efficiency, and overall sustainability — from design to completion.

As ICW BuildXpo 2025 concluded, the spotlight on the SB Mark Certification launch and CREAM's active participation under CIDB's pavilion marked a defining moment for Malaysia's construction industry. It reaffirmed CREAM's commitment to advancing sustainability, innovation, and quality — shaping a future-ready construction environment that aligns with both national and global aspirations.








CIDB QUEST Award 2025
Date : 30 October 2025
Venue : MITEC, Kuala Lumpur

The CIDB QUEST Award 2025 was officiated by YB Datuk Seri Dr. Ahmad bin Maslan, Deputy Minister of Works, in recognition of outstanding achievements within Malaysia's construction industry. The event celebrated organisations and projects that have demonstrated excellence in workmanship quality, safety and health practices, and sustainability performance.

The QUEST Award serves as a national platform to acknowledge industry players who have successfully adopted and implemented CIDB's assessment systems, including QLASSIC® (Quality Assessment System in Construction), SHASSIC (Safety and Health Assessment System in Construction), MyCREST (Malaysian Carbon Reduction and Environmental Sustainability Tool), and Sustainable INFRASTAR (Malaysian Sustainable Infrastructure Rating Tool). These systems embody CIDB's ongoing commitment to elevating construction standards across the nation.

This year's programme recognised 262 award recipients representing 132 projects, underscoring the industry's strong commitment to improving construction quality, workplace safety and health, as well as environmental responsibility.

The QUEST Recognition Ceremony aims to encourage healthy competition among industry players while fostering a culture of quality, safety, and sustainability in construction practices. This initiative supports Malaysia's aspiration to develop a world-class, competitive, and sustainable construction sector.

Congratulations to all award recipients for their remarkable contributions towards advancing excellence in Malaysia's construction industry.

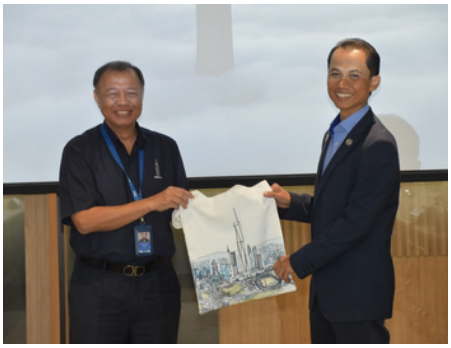
DCS2025 Technical Visit to Merdeka 118

Date : 31 October 2025

Venue : Menara Merdeka 118, Kuala Lumpur



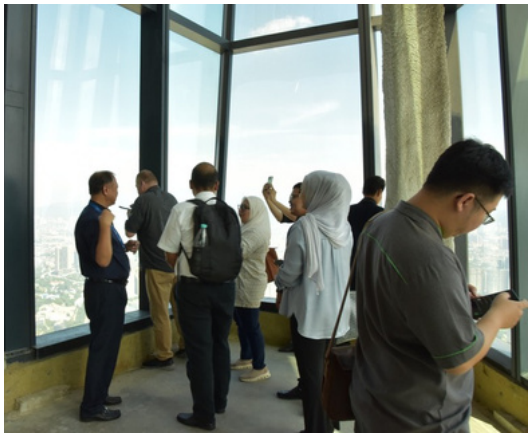
As part of the 2nd Digital Construction Summit 2025 (DCS2025), a **special technical visit** to the iconic **Merdeka 118** took place on 31 October 2025 (Friday), offering participants an exclusive behind-the-scenes look at one of Malaysia's most significant engineering and architectural achievements. The visit brought together around 40 participants, comprising DCS2025 delegates and representatives from the International Council for Research and Innovation in Building and Construction (CIB) Board, marking a meaningful extension of the summit's agenda on innovation and digital advancement in the built environment.



The session began with an insightful presentation by **Y.M. Dato' Tengku Ab. Aziz Tengku Mahmud, Chief Executive Officer of PNB Merdeka Ventures Sdn Bhd**, who shared the vision, development journey and strategic significance of Merdeka 118. His briefing highlighted the tower's engineering milestones, sustainability commitments, digital technologies applied throughout the construction process, and its role as a new symbol of national pride and global recognition.

The programme culminated in a remarkable visit to Level 118, where participants were treated to breathtaking panoramic views of Kuala Lumpur's skyline. The experience provided delegates with a deeper appreciation of of the complexity, precision and innovation embedded in the construction of the world's second-tallest building.

The technical visit not only enriched the knowledge of industry professionals but also reinforced DCS2025's mission of connecting delegates with real-world examples of Construction 4.0 excellence and transformative urban development.



upcoming events

CPD HOURS FROM BEM, MBOT, BoG & OTHERS APPLIED

CIDB MALAYSIA | CREAM CONSTRUCTION RESEARCH INSTITUTE OF MALAYSIA

Comprehensive Course

CIS 31: Flood Risk Assessment in Malaysia & CIS 32: Landslide Vulnerability Assessment and Development of Risk Index for Critical Infrastructure (CI) in Malaysia

The Construction Industry Standard (CIS) is an official document owned by CIDB Malaysia, developed and published under the provisions of Act 520 by the CIDB technical committee. It is intended to help reduce the impact of disaster risks at construction sites.

COURSE OBJECTIVES

01 Introduce the latest content of CIS 31:2024 and CIS 32:2024

02 Provide understanding of flood and landslide risk assessment methods based on CIDB guidelines and related regulations

03 Explain the process of developing a Risk Index for Critical Infrastructure (CI)

04 Enhance participants' ability to identify, assess, and plan risk mitigation strategies

9-10 December 2025
~~4-5 November 2025~~ **| UTM, Johor**

11 December 2025
~~6 November 2025~~ **| Technical Practical Visit in Johor Bahru (*Exact location TBC*)**

TARGET PARTICIPANTS

- Local Authority (PBT) technical officers
- Consulting engineers
- Technical agency officers
- Lecturers
- Researchers
- Asset managers for critical infrastructure
- Geologist
- And other relevant professionals

INSTRUCTORS

Dato' Ir. Dr. Che Hassandi Abdullah
Former Senior Director
CREaTE, Public Works Department Malaysia (JKR)

Prof. Madya Ir. Dr. Nor Eliza Alias
Senior Lecturer, Faculty of Civil Engineering,
Universiti Teknologi Malaysia (UTM)

P.Geol. Khairudin Muhamed
Head of Slope Division,
Majlis Perbandaran Ampang Jaya

Sr Dr. Muhammad Wafiy Adli Ramli
Senior Lecturer,
Universiti Sains Malaysia (USM)

COURSE FEE RM700*/pax

**inclusive of:*

- *CIS 31 & CIS 32 courses + technical visit*
- *Free access to 10 CREAM Webinar Series sessions (with 10 CCD Points per session worth RM750)*
- *Discount for testing services at CREAM Laboratories*
- *25% discount for CQMS certification*

REGISTER NOW

More info:

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creamcidb | cream_cidb | Construction Research Institute of Malaysia

CIS 31: Flood Risk Assessment in Malaysia

Day 1

TIME	PROGRAMME
08.30am - 09.00am	Participant Registration
09.00am - 09.15am	Introduction to CIS 31:2024
09.15am - 10.15am	Concept of Flood Risk and Related Legislation based on CIS 31:2024
10.15am - 10.30am	Morning Refreshments
10.30am - 01.00pm	Flood Hazard and Flood Risk Development & Assessment Calculations
01:00pm - 02:00pm	Lunch
02:00pm - 05:00pm	Flood Vulnerability Index Calculations
05:00pm - 05:15pm	Tea Break End of Day

CIS 32: Landslide Vulnerability Assessment and Development of Risk Index for Critical Infrastructure (CI) in Malaysia

Day 2

TIME	PROGRAMME
08.30am - 09.00am	Participant Registration
09.00am - 09.15am	Introduction to CIS 32:2024
09.15am - 10.15am	Concept & Framework of Landslide Risk Analysis and Related Legislation based on CIS 32:2024
10.15am - 10.30am	Morning Refreshments
10.30am - 01.00pm	Landslide Vulnerability Assessment
01:00pm - 02:00pm	Lunch
02:00pm - 05:00pm	Hands-on: Landslide Vulnerability Index and Risk Classification
05:00pm - 05:15pm	Tea Break End of Day

Site Practical - CIS 31:2024 & CIS 32:2024

Day 3

TIME	PROGRAMME
08.30am - 09.00am	Safety Briefing
09.00am - 09.15am	Introduction to Types of Landslides and Rainfall Factors
09.15am - 10.15am	Case Study Based on CIS 31:2024 and CIS 32:2024
10.15am - 10.30am	Morning Refreshments
10.30am - 12.00pm	Marking Landslide Scars and Use of MALVAT Tool
12:00pm - 02:00pm	Lunch
02:00pm - 05:00pm	Technical Practical Visit in Johor Bahru (Exact location TBC)
05:00pm - 05:15pm	Tea Break End of Course

Anjuran Bersama:

CIDB MALAYSIA | CREAM CONSTRUCTION RESEARCH INSTITUTE OF MALAYSIA

15 MATA CCD

Kualiti Projek Terjamin: Kepentingan Contractor's Quality Management System

Alternatif kepada ISO 9001

Seminar ini bertujuan untuk memberikan pemahaman mendalam tentang kepentingan Contractor's Quality Management System (CQMS) bagi kontraktor dalam industri pembinaan. Peserta akan mempelajari bagaimana penerapan CQMS yang berkesan dapat meningkatkan prestasi projek, memastikan kepatuhan kepada piawaian kualiti, serta menjamin hasil projek yang berkualiti tinggi dan konsisten.

Tarikh Baharu

17 DIS 2025, RABU
~~11 NOV 2025, SELASA~~
08:30AM - 05:00PM

CIDB WP Kuala Lumpur, Tingkat 11, Wisma FGV

YURAN
RM150/ PAX

>>> Daftar Sekarang

Apa yang Anda Akan Peroleh

- **Tingkatkan Pengetahuan**
  Mendalami konsep dan prinsip CQMS dalam industri pembinaan.
- **Tingkatkan Reputasi**
  Membina reputasi sebagai kontraktor yang komited terhadap kualiti dan kepuasan pelanggan.
- **Pematuhan Standard**
  Mendapat panduan dalam mematuhi piawaian kualiti dan peraturan pembinaan terkini.

Maklumat Lanjut:

www.cream.my | +603 2779 1479 | marketing@cream.my

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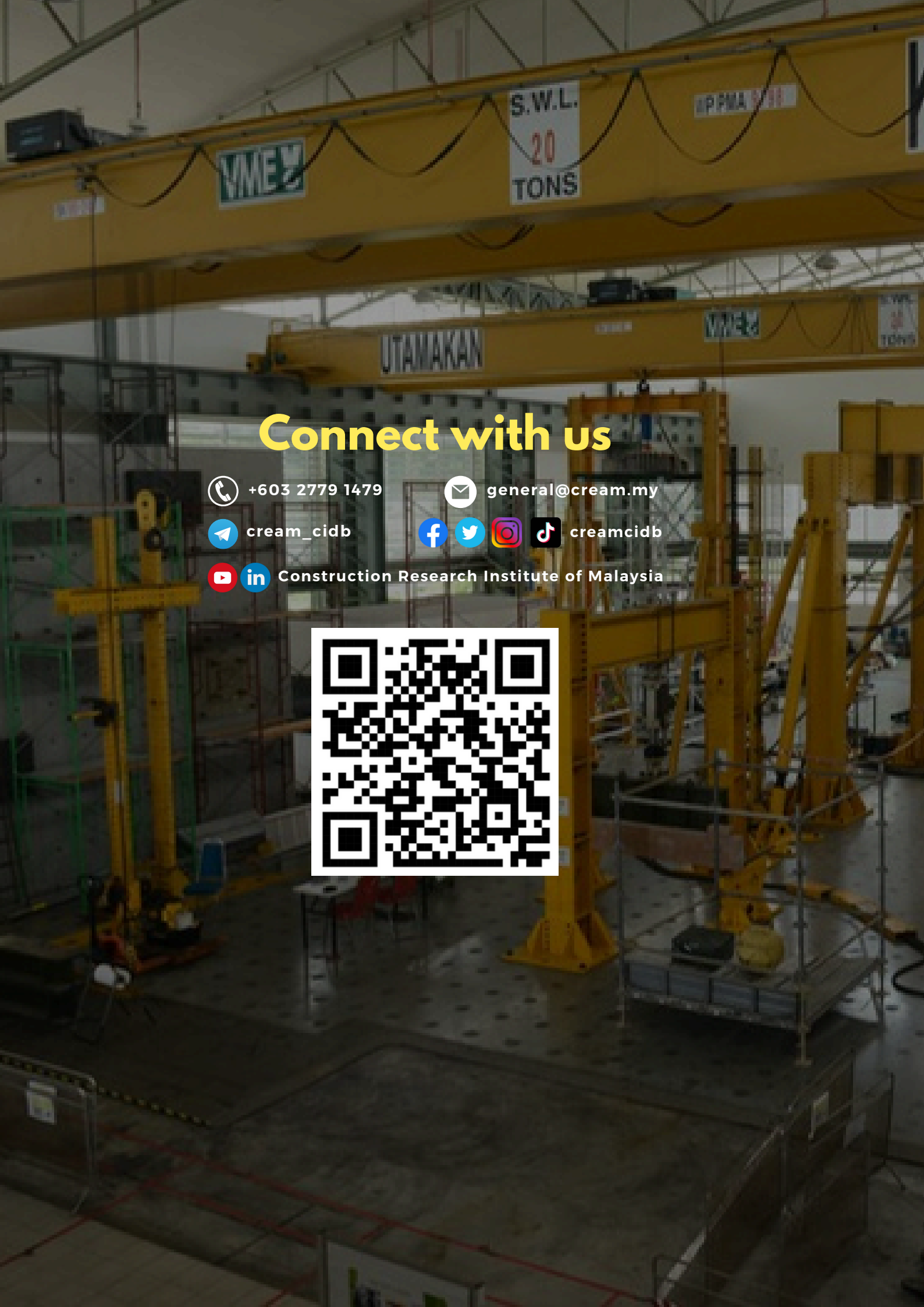

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