

# CREAM

e-magazine

# Stepping Into 2026 With Purpose



# 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)
- Forensic Investigation
- Technical Opinion
- Journal Publication





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## Message from the CEO

### *A Year of Milestones, A Future of Possibilities*

*Assalamualaikum and warm greetings,*

*I am truly honoured to address you for the first time as the newly appointed Chief Executive Officer of CREAM. I would like to extend my heartfelt appreciation to the entire CREAM team and our valued industry partners for your continuous support, trust, and commitment towards advancing the construction industry in Malaysia.*

*This issue of the CREAM E-Magazine brings you a comprehensive recap of our journey throughout 2025. 2025 was a year that has been both meaningful and impactful. It was a year marked by significant achievements and key milestones, from the launch of the Makmal Kerja Raya Malaysia Sarawak to the successful hosting of the 2nd Digital Construction Summit. These accomplishments reflect our collective dedication to innovation, excellence, and industry progress.*

*As we step into 2026, we are filled with renewed energy and optimism. CREAM is poised to reach greater heights, with many exciting initiatives and strategic developments in the pipeline. We remain committed to driving research, innovation, and industry collaboration to support a more sustainable and resilient construction ecosystem.*

*As we move forward, it is my sincere hope that CREAM will continue to be a catalyst for progress, innovation, and excellence, while contributing meaningfully to the growth and transformation of Malaysia's construction industry.*

*Thank you.*

**Ts. Syed Hazni Abd Gani**  
Chief Executive Officer



# PAAB Achieves Sustainable INFRASTAR Recognition: Advancing Malaysia's Infrastructure Towards a Greener Future

In a significant milestone for Malaysia's infrastructure sector, Pengurusan Aset Air Berhad (PAAB) has been awarded the Sustainable INFRASTAR recognition for four of its projects assessed in 2025. This achievement reflects PAAB's strong commitment to embedding sustainability principles into the planning, design, and delivery of critical water infrastructure.

Sustainable INFRASTAR is a sustainability rating and assessment framework developed to evaluate infrastructure projects based on key environmental, social, and governance (ESG) criteria. It provides a structured and measurable approach to assess how infrastructure developments contribute to long-term sustainability goals. Through INFRASTAR, projects are evaluated on aspects such as resource efficiency, environmental impact, resilience, innovation, and community well-being. By adopting this framework, organisations are better equipped to align their projects with global sustainability standards while addressing local development needs.



For agencies like PAAB, INFRASTAR serves not only as a benchmarking tool but also as a strategic guide to improve project performance. It encourages the adoption of sustainable materials, efficient construction practices, and forward-thinking design solutions that reduce carbon footprint and enhance lifecycle value. More importantly, it promotes a holistic approach—ensuring that infrastructure is not only functional, but also resilient, environmentally responsible, and socially beneficial.

The recognition of four PAAB projects under this framework highlights the organisation's proactive efforts in integrating sustainability into Malaysia's water infrastructure development. It also demonstrates how public sector entities can lead by example in adopting best practices that contribute to national and global sustainability agendas.



Through this assessment, PAAB has demonstrated its proactive approach in embedding sustainability into its project lifecycle. The recognised projects include:

**Project 1: Pembinaan Loji Rawatan Air Jernih**  
(Stage: Design)

**Project 2: Pembinaan Tangki Air Imbangan**  
(Stage: Design)

**Project 3: Pembinaan Tangki Terminal**  
(Stage: Design)

**Project 4: Cadangan Reka dan Bina Sistem Pelupusan Enapcemar untuk Loji Rawatan Air Langat 2** (Stage: Design & Construction)

The occasion was further marked by the presence of Ir. Zulkiflee Omar, Chief Executive Officer of PAAB, who personally received the certificates. His participation signifies strong leadership and a clear vision in driving sustainability within the organisation. The visit also provided a valuable opportunity for engagement and discussion on potential areas of collaboration, reinforcing a shared commitment to innovation and continuous improvement within the industry.



CREAM extends its heartfelt congratulations to PAAB on this remarkable accomplishment. As a research, testing, and certification body under CIDB Malaysia, CREAM remains dedicated to supporting industry players through initiatives that promote sustainable construction practices, advanced technologies, and performance-based standards.

This achievement marks not just a recognition, but a step forward in shaping a more sustainable and resilient infrastructure landscape in Malaysia. CREAM looks forward to strengthening its collaboration with PAAB and other industry stakeholders to further drive innovation, elevate standards, and accelerate the transition towards a greener built environment.



# Celebratory Luncheon for the Conclusion of the YTL Cement–CREAM MoU



The successful conclusion of the Memorandum of Understanding (MoU) between YTL Cement and Construction Research Institute of Malaysia, originally signed in April 2024, was commemorated with a celebratory luncheon, marking the end of a meaningful and impactful collaboration.

Over the course of the partnership, both parties worked closely to advance initiatives that contributed to the development of the construction industry, particularly in areas of research, innovation, and knowledge sharing. The collaboration reflected a shared commitment to strengthening industry capabilities and promoting sustainable practices within the built environment.

The luncheon served not only as a platform to celebrate the achievements and milestones attained throughout the MoU period, but also as an opportunity to acknowledge the strong spirit of cooperation that defined the partnership. CREAM extends its sincere appreciation to YTL Cement for its generosity, trust, and unwavering support, which played a crucial role in the success of this collaboration.

As the MoU reaches its conclusion, both organisations look ahead with optimism, building on the strong foundation established over the past year. The partnership stands as a testament to what can be achieved through strategic collaboration, and both parties look forward to exploring new opportunities to work together in driving innovation and sustainability within the industry.



# A Legacy of Leadership: Celebrating the Retirement of Puan Zainora Zainal

The construction industry extends its heartfelt appreciation to Puan Zainora Zainal, Chief Executive of CIDB Malaysia, as she retires after years of dedicated and impactful service.

In addition to her leadership at CIDB, Puan Zainora has played a significant role as Deputy Chairman of CREAM, where her guidance has been instrumental in shaping the organisation's direction and strengthening its position within the industry. She consistently championed the advancement of research, innovation, and practical solutions, ensuring that CREAM's initiatives remain relevant and impactful to industry needs.

Her strong advocacy for collaboration fostered closer partnerships between industry, government, and academia, enabling CREAM to expand its reach and deliver meaningful contributions in areas such as sustainable construction, quality assurance, and technology adoption. Her strategic insights and steady leadership have supported CREAM's growth as a trusted research, testing, inspection, and certification body.

Widely respected for her integrity, clarity, and forward-thinking approach, Puan Zainora leaves behind a lasting legacy not only at CIDB but also within CREAM and the broader construction ecosystem. Her contributions have helped lay a strong foundation for a more progressive, innovative, and sustainable industry.

As she embarks on a new chapter, we extend our sincere gratitude for her invaluable service and wish her a fulfilling and rewarding retirement.



# Engineering Timber Performance through Modulus of Elasticity Testing



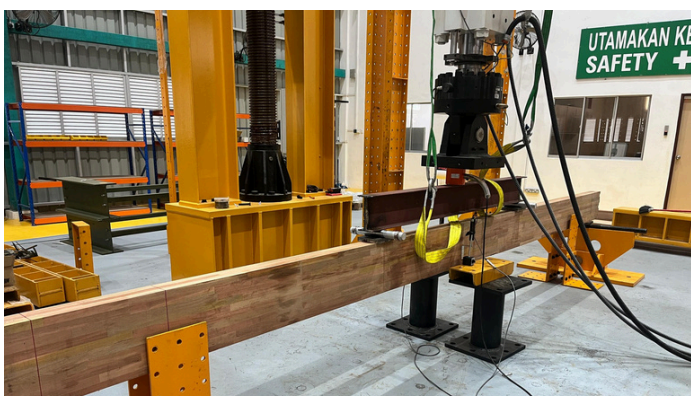
by Ir. Ts. Ahmad Hazim Abdul Rahim, Ts. Nor Azila Maulihasan and Hassanain Mohd Asnan

Timber continues to gain wider acceptance in structural applications, driven by its sustainability, classification as a green material, and suitability for modern construction. As its use expands in beams, flooring systems, and engineered components, there is an increasing need to ensure that its mechanical performance is properly understood and verified through testing.

In Malaysia, regulatory oversight by the Construction Industry Development Board (CIDB) Malaysia is essential in ensuring the quality and compliance of construction materials. Prefabricated timber is included under the Fourth Schedule of the CIDB Act 520, which requires it to meet specified standards prior to its use in construction works. As the use of timber—particularly in engineered forms—continues to grow due to its efficiency in fabrication and installation, the need for proper material characterisation becomes increasingly important. In this context, the evaluation of stiffness, including the determination of the modulus of elasticity (MOE), supports the verification of material performance to ensure that timber elements behave as intended once installed on site.



Stiffness, expressed as the modulus of elasticity (MOE), plays a direct role in how timber behaves under bending loads, particularly in relation to deflection and serviceability performance. To evaluate this property with improved accuracy, laboratory testing is required. Several established standard testing procedures are available. One of the most widely used standards, BS EN 408, provides a recognised framework for determining these properties, including the assessment of the local modulus of elasticity under Clause 9. This method focuses on a defined region of the specimen, allowing a more consistent representation of timber behaviour in bending.

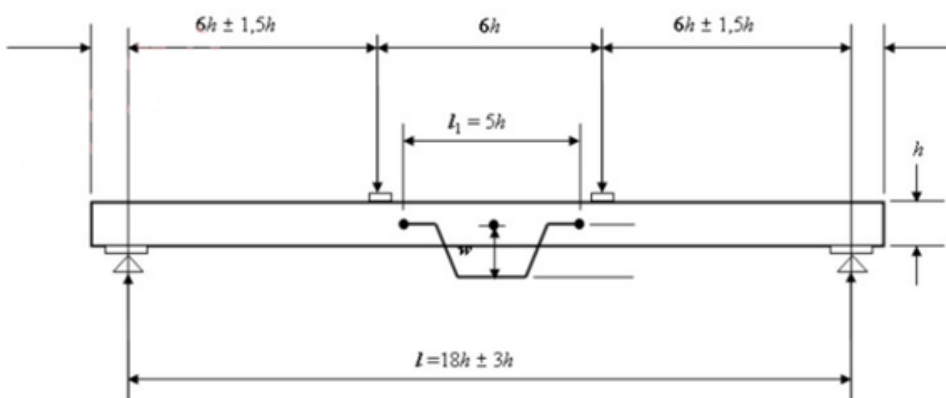


The MOE of timber can be classified into two types, namely local MOE and global MOE, both of which can be determined through laboratory testing. Local MOE measures stiffness purely under bending deflection, whereas global MOE includes additional factors contributing to deflection, such as shear. Deflection for local MOE is measured over a smaller gauge length compared to global MOE; therefore, the value of local MOE is generally higher than that of global MOE.

The test for local MOE is conducted using a four-point bending arrangement, specifically selected to establish a constant bending moment region at mid-span. Within this region, deformation is measured over a defined gauge length, ensuring that the recorded displacement is primarily due to bending rather than shear effects. The reliability of the test depends on how well this condition is achieved. In practice, this requires accurate positioning of supports, loading heads, and measuring devices, as even minor deviations in alignment can introduce additional effects that may influence the results.

From a laboratory perspective, the setup phase plays a significant role in determining the quality of the outcome. Proper seating of the specimen is necessary to eliminate unintended gaps or rotations before loading begins. A small preload is typically applied to ensure full contact between the specimen and the supports, stabilising the system prior to measurement. Displacement gauges must be positioned within the constant moment zone and securely fixed to prevent movement during testing. These considerations are essential in producing reliable and repeatable data.

The loading process must be carefully controlled and maintained within the elastic range of the material. The procedure involves applying two defined load levels and measuring the corresponding deformation over the gauge length. The relationship between load and deformation is then used to determine the stiffness of the timber. The load should be applied smoothly, without sudden increments, and care must be taken to avoid exceeding the elastic limit, as this would invalidate the basis of the calculation.



Four-point bending test arrangement for the determination of local modulus of elasticity in accordance with BS EN 408.



Although the calculation method is defined in the standard, the accuracy of the result depends largely on the quality of the measurements obtained during testing. Displacement readings must be taken with sufficient precision, as small errors can lead to noticeable variations in the calculated modulus. For this reason, proper calibration of equipment and disciplined testing procedures are essential.

Several factors may influence the outcome of the test. Variations in moisture content can affect the stiffness of timber, making conditioning an important consideration where required. Misalignment of the specimen or instability in the support system may introduce additional deformation that is not representative of actual bending behaviour. In addition, poorly secured instrumentation may result in inconsistent readings. These are common challenges encountered in laboratory work, highlighting the importance of strict control during testing and adherence to established procedures.

The determination of the local modulus of elasticity plays a significant role in structural timber grading, quality control, and research into engineered wood products. By focusing on a defined region of the specimen, the method provides engineers with a more dependable measure of stiffness, supporting both design verification and material assessment. As timber continues to gain recognition as a sustainable construction material, the need for accurate and standardised testing becomes increasingly important.



Recently, MKRM Sabah successfully conducted a series of tests to determine the local MOE of glulam timber beams. These tests were made possible with the availability of advanced testing equipment, including a static actuator with a loading capacity of up to 1000 kN and various high-precision measuring devices. This enables controlled loading conditions and accurate measurement of deformation, ensuring reliable and consistent test results.

The testing involved glued laminated timber (glulam) specimens with dimensions of approximately 5700 mm × 300 mm × 108 mm, manufactured from Kapur timber (*Dryobalanops* spp.). These specimens represent structural-scale elements commonly used in construction, allowing the results to reflect actual structural behaviour. Through this approach, the determination of the local modulus of elasticity is directly related to real structural applications, supporting structural design assessment and material verification.

As timber continues to be adopted in modern construction, the role of well-controlled testing becomes increasingly important. The application of standardised methods supports the reliable assessment of timber performance, contributing to safe and efficient structural design.

*This test, along with other similar full-scale testing for timber components, is available at MKRM Sabah and all other MKRM branches. Please contact us for more information.*

# Water Absorption Test for Concrete: An Overview



*by Tc. Mohd Azizi Arshad and Nurul Najiha Mohd Azman*

Concrete is one of the most widely used construction materials due to its strength, durability, and versatility. However, its long-term performance is heavily influenced by its ability to resist water penetration and absorption. The water absorption test for concrete is a critical evaluation method used to determine its porosity and permeability, which are key indicators of durability and service life. This article provides an in-depth overview of the water absorption test, its significance, methodology, and interpretation of results.

One of the most significant concerns related to high water absorption is the corrosion of reinforcement. Concrete structures often contain embedded steel reinforcement, which provides tensile strength to complement concrete's compressive strength. When water penetrates the concrete, it can carry harmful chemicals such as chloride ions into the structure. These chemicals initiate the corrosion of steel reinforcement, leading to rust formation. As rust occupies a larger volume than steel, it creates internal stresses, causing cracks and reducing the overall structural integrity of the concrete.

Another critical issue caused by water absorption is freeze-thaw damage, particularly in regions that experience fluctuating temperatures. When water infiltrates the concrete and temperatures drop below freezing, the absorbed water turns into ice and expands. This expansion creates internal pressure, which can lead to cracking, surface spalling, and gradual deterioration of the structure. Repeated freeze-thaw cycles exacerbate the damage, significantly compromising the durability of the concrete.

In addition to freeze-thaw damage, concrete is also susceptible to chemical attack when exposed to aggressive environments. Water serves as a medium through which harmful substances, such as sulphates, chlorides, or acids, can penetrate the concrete matrix. These chemicals react with the cementitious materials in concrete, breaking down its structure over time and causing considerable damage. This deterioration not only affects durability but also reduces service life and overall performance.

Furthermore, prolonged exposure to water can result in a reduction in concrete strength. The ingress of water weakens the bond between the cement paste and the aggregates, which form the core of the concrete's internal structure. As this bond deteriorates, the concrete loses its ability to bear loads effectively, leading to a reduction in strength and stability.

By assessing water absorption characteristics, engineers and material scientists can better predict the performance and durability of concrete structures.

### Test Standards and Procedures

Several standards outline the procedure for conducting a water absorption test, including ASTM C642 and BS 1881-122. For this article, the BS 1881-122 methodology is adopted:

#### 1. Sample Preparation

This involves preparing concrete specimens (e.g., cubes or cylinders) of specified dimensions. The specimens are cured for a period between 28 days (minimum) and 32 days (maximum), followed by the determination of their physical properties.

#### 2. Drying the Specimens

BS 1881-122 specified to dry the specimens in an oven at a temperature of  $105\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$  for  $72 \pm 2$  hours before the dry mass of specimens are measured ( $W_{\text{dry}}$ ).



Figure 1: Drying hardened cubes in oven

#### 3. Immersion in Water

The specimens are then submerged in a curing tank for  $30 \pm 0.5$  minutes, and the water temperature shall be controlled at  $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ .



Figure 2: Submerged hardened concrete

#### 4. Weighing the Specimens

All specimens are then weighed in to measure the immersed mass ( $W_{\text{imm}}$ ).



Figure 3: Weighing of saturated sample

## Calculations

The water absorption percentage is calculated using the formula:

$$\text{Water Absorption (\%)} = \left( \frac{W_{imm} - W_{dry}}{W_{dry}} \right) \times 100\%$$

Correction factor shall be applied to the water absorption value using the following equation :

$$\text{Correction Factor: } \left( \frac{\text{Volume (mm}^3\text{)}}{\text{Surface Area} \times 12.5 \text{ (mm}^3\text{)}} \right) \times 100\%$$

## Interpreting Results

The water absorption percentage indicates the porosity and permeability of the concrete. Lower values signify better resistance to water ingress and, consequently, higher durability. Typical ranges are as follows:

- 1. Mix Design:** The water-cement ratio, aggregate grading, and type of cement significantly impact porosity.
- 2. Curing:** Proper curing enhances hydration, reducing voids and permeability.
- 3. Compaction:** Adequate compaction minimizes voids and improves density.
- 4. Admixtures:** Use of water-reducing agents, pozzolanic materials, and sealers can improve water resistance.

## Applications of Water Absorption Test

The test is crucial for:

- Evaluating the quality of concrete for critical structures like bridges, dams, and marine installations.
- Assessing the performance of repair materials and surface treatments.
- Ensuring compliance with design specifications and standards.

## Limitations of the Test

While the water absorption test provides valuable insights, it has certain limitations:

- It does not measure the rate of water ingress.
- It may not fully replicate field conditions, where concrete is exposed to varying pressures and chemical environments.

## Conclusion

The water absorption test is an essential tool for evaluating the durability and performance of concrete. By understanding its principles and results, engineers can make informed decisions to enhance the longevity of concrete structures. However, for a comprehensive assessment, the test should be used alongside other evaluations, such as permeability tests and chloride ion penetration tests.

*This test, along with other relevant laboratory tests on concrete specimens, is available at MKRM Kuala Lumpur and other MKRM branches in Malaysia. Please contact us for more information.*

# Engagements and Courtesy Visits

CREAM continues to strengthen its role as a catalyst for industry growth through active courtesy visits and strategic engagements with government agencies, industry players, and academic institutions. These initiatives aim to foster collaboration, exchange expertise, and explore opportunities for mutual support in advancing research, innovation, and best practices within the construction sector.

## **Persatuan Kontraktor India Malaysia (PKIM) & MILA University Visited Makmal Kerja Raya Malaysia (MKRM)**

9 February 2026 (Tuesday)

Makmal Kerja Raya Malaysia (MKRM), Kuala Lumpur



## **Engagement Session with Malaysian Timber Industry Board (MTIB)**

25 February 2026 (Wednesday)

Makmal Kerja Raya Malaysia (MKRM), Kuala Lumpur



**Meeting with Cenviro Sdn Bhd**  
26 February 2026 (Thursday)  
Makmal Kerja Raya Malaysia (MKRM), Kuala Lumpur



**PETRONAS Visited Makmal Kerja Raya Malaysia (MKRM)**  
3 March 2026 (Tuesday)  
Makmal Kerja Raya Malaysia (MKRM), Kuala Lumpur



**Engagement Session with The Biochar Malaysia Association (BMA)**  
12 March 2026 (Thursday)  
CIDB 520, The MET Corporat Towers, Kuala Lumpur



**Courtesy Visit from Faculty of Civil Engineering Universiti Teknologi MARA Shah Alam**  
12 March 2026 (Thursday)  
CIDB 520, The MET Corporat Towers, Kuala Lumpur



**Courtesy visit from The Ministry of Housing Settlements and Development of  
Bangsamoro Autonomous Region of Muslim Mindanao (BARMM) from Philippines**  
8 April 2026 (Wednesday)  
Makmal Kerja Raya Malaysia (MKRM), Kuala Lumpur



**Courtesy Visit by CREAM to Master Builders Association Malaysia (MBAM)**  
13 April 2026 (Monday)  
Wisma MBAM, Putra Heights, Selangor



**Courtesy Visit by CREAM to Persatuan Rakan Niaga Strategik Malaysia (PERNISMA)**

14 April 2026 (Tuesday)

Petaling Jaya, Selangor



**Courtesy Visit by CREAM to Persatuan Kontraktor Melayu Malaysia (PKMM)**

14 April 2026 (Tuesday)

Ibu Pejabat PKMM, Kuala Lumpur



**Meeting with Geoquest Solution (M) Sdn Bhd**

17 April 2026 (Friday)

CIDB 520, The MET Corporat Towers, Kuala Lumpur



**Courtesy Visit by CREAM to Indah Water Konsortium Sdn Bhd**  
20 April 2026 (Monday)  
Menara Indah Water, Damansara, Kuala Lumpur



**Courtesy Visit by CREAM to CIDB Negeri Sabah**  
22 April 2026 (Wednesday)  
Pejabat CIDB Negeri Sabah, Kota Kinabalu, Sabah



**Courtesy Visit by CREAM to Akademi Binaan Malaysia (ABM) Wilayah Sabah**  
22 April 2026 (Wednesday)  
ABM Wilayah Sabah, Kota Kinabalu, Sabah



# RECAP 2025

A Year of Excellence, Growth & Trust



# MKRM Sarawak Officially Launched at ICW Borneo 2025



Makmal Kerja Raya Malaysia (MKRM) Sarawak was officially launched on 13 May 2025 in Kuching, in conjunction with International Construction Week (ICW) Borneo 2025—marking a significant milestone in strengthening infrastructure quality and development in East Malaysia.

The launch ceremony was officiated by the Premier of Sarawak, YAB Datuk Patinggi Tan Sri (Dr) Abang Haji Abdul Rahman Zohari bin Tun Datuk Abang Haji Openg, and attended by key federal and state leaders, including the Deputy Premier of Sarawak, the Minister and Deputy Minister of Works, as well as senior representatives from CIDB Malaysia. The Construction Research Institute of Malaysia (CREAM) was represented by its Chairman and Chief Executive Officer.

The Premier marked the official opening with the signing of a commemorative plaque, accompanied by the unveiling of the MKRM Sarawak launch video.

As a strategic facility, MKRM Sarawak enhances quality assurance for construction materials and infrastructure components, offering advanced testing and certification services to support industry growth in Sarawak and the wider East Malaysia region.

# Malaysia's First Repurposed Concrete Aggregates (RCA) Facility

Malaysia reached a major sustainability milestone with the launch of its **first Repurposed Concrete Aggregates (RCA) Facility**, a collaboration between YTL Cement Group and the Construction Research Institute of Malaysia (CREAM).

Launched at the RC Aggregates facility, Jalan Chan Sow Lin, the pilot project, operational since April 2025, was officiated by Puan Zainora Zainal, Chief Executive of CIDB Malaysia, and Datuk Aziyah Mohamed, Director of YTL Cement.



- Returned fresh concrete is repurposed into high-quality aggregates.
- Up to 30% replacement of natural aggregates in structural concrete.
- Finer materials reused for road base and brick production.



- Addresses ~5% unused concrete from Malaysia's annual production.
- Supports National Construction Policy 2030 (NCP 2030).
- Reduces landfill waste, material extraction, and carbon emissions.



- Functions as an R&D platform for sustainable construction materials.
- Located near high-density construction zones to cut transport emissions.

## Power of Collaboration

This initiative reflects the strong partnership between CREAM and YTL Cement, combining industry leadership, research excellence, and talent development to advance low-carbon construction in Malaysia.



# SustainBuild Mark:

## Malaysia's First ESG Certification for Construction

The SustainBuild Mark (SB Mark) is Malaysia's first voluntary construction product certification integrating Environmental, Social, and Governance (ESG) principles. Developed by CREAM under CIDB Malaysia's sustainability agenda, SB Mark sets a benchmark for products in the built environment—rewarding greener, safer, and ethically produced materials.



Unlike traditional certifications, SB Mark evaluates both performance and responsible production. It is product-specific, voluntary, and open to manufacturers or importers of construction materials and systems.

### Key Features:

#### ESG Compliance

Certified products come from organisations committed to:

- Environmental: Waste control, carbon reduction, resource efficiency
- Social: Worker welfare, safety, fair labour practices
- Governance: Documentation, transparency, quality controls

#### Environmental Claims Verification

Supports 15 types of verified environmental claims, including:

- Recyclable/recycled content
- Reduced energy & water consumption
- Reduced carbon footprint
- Waste reduction & design for disassembly

#### Accessible & Product-Specific

- No prior ISO certification needed.
- Certification applies to specific products at specific locations, ensuring traceability.

#### Six-Step Certification Process

- Initial enquiry
- Mandatory ESG training
- Training assessment
- Application with documentation
- Evaluation by assessors & Product Certification Committee
- Certification outcome (valid 3 years)

#### A Milestone for Malaysia

Officially launched by Deputy Minister of Works, Dato' Seri Ahmad bin Maslan on 29th October 2025, SB Mark sets a new benchmark for ESG in construction, encouraging manufacturers to adopt sustainable practices, ethical governance, and worker well-being. With its holistic framework and accessible process, SB Mark is set to transform Malaysia's construction industry—paving the way for a responsible, future-ready, and sustainable built environment.

# MKRM's Achievement

## New Extension of Scopes for Testing under MS ISO/IEC 17025:2017



12 New Accredited Testing Scopes

**Accredited by:** Department of Standards Malaysia (DSM)

**Date Granted:** 18 February 2025

Strengthening MKRM's position as a **globally recognised and trusted testing laboratory.**

Why This Matters

- Compliance with **national & international standards**
- Tests conducted by **competent personnel & calibrated equipment**
- **High-quality, accurate test reports**
- **Increased confidence** among clients, stakeholders, industry & universities

## Extension of Scopes - MKRM Kuala Lumpur

### Railway Track Materials - Prestressed Concrete Sleepers

#### Test Conducted:

- Rail Seat Vertical Load Test
- Centre Negative Bending Moment Test
- Centre Positive Bending Moment Test

#### Standard:

- AS 1065:14:2019 (Annex E, H & I)

### Components of Frame Scaffolding

#### Test Conducted:

- Deflection & Bending Test on Catwalk (Tread Board)
- Load Test on Gripper Fitting (Hooks)
- Compression Test on Vertical Tubes

#### Standard:

- MS 1462-1:2021 (Annex H1, H2 & E2)

# Extension of Scopes - MKRM Sabah & Sarawak

## Metallic Materials & Steel for Concrete Reinforcement

### Test Conducted:

- Tensile Strength
- Yield Strength
- Elongation After Fracture
- Elongation at Maximum Force

### Standard:

- MS ISO 6892-1:2017 (Method B)
- MS ISO 15630-1:2012 (Clause 5)

## Steel Fabric for Concrete Reinforcement

### Test Conducted:

- Dimension

### Standard:

- In-house Method (TM 4-1)
- MS 146:2014 (Clause 7.4)

## Steel for Concrete Reinforcement

### Test Conducted:

- Deviation from Nominal Mass per Metre

### Standard:

- MS ISO 15630-1:2012 (Clause 12)
- MS 146:2014 (Clause 7.4)

With this expanded accreditation, MKRM continues to support the construction industry with **reliable, high-quality testing services.**

*Contact us at [mkrm@cream.my](mailto:mkrm@cream.my) - our competent team is ready to support your testing needs.*



# CREAM Expands Product Certification Scopes

Accredited under MS ISO/IEC 17065:2012

CREAM Certification Services (CCS) has successfully extended its product certification accreditation under **MS ISO/IEC 17065:2012**, adding **ten new certification scopes** approved by the Department of Standards Malaysia. This achievement enhances CCS's capability to support Malaysia's construction industry with credible, high-quality, and internationally recognised certification services.



## Certification Scope Overview



### Building Materials

Ceramic Tiles

Sanitary Appliances

Cement



### Railway Infrastructure

Concrete Sleepers

Prestressed Sleepers



### Reinforcement Steel

Steel Wire

Steel Fabric

Reinforcing Bars



### Scaffolding Systems

Frame Scaffolding

Tubular Scaffolding

***"Enhancing confidence, safety,  
and global recognition for  
Malaysia's construction  
products."***

# CREAM Inspection Services

## MS ISO/IEC 17020:2012 Accreditation

CREAM Inspection Services has officially received the prestigious MS ISO/IEC 17020:2012 accreditation from the Department of Standards Malaysia, effective 12 December 2024 - A significant achievement reflecting our commitment to **competence, quality, and integrity** in inspection services.

### What This Accreditation Represents

- Independent & impartial inspection practices
- High standards of **technical competence**
- Strong governance, integrity & traceability
- Compliance with **internationally recognised inspection standards**

## A Commitment to Excellence



**>10 YEARS EXPERIENCE** in Inspection & Sampling



**500+** **INSPECTIONS & SAMPLINGS COMPLETED**  
Local & International



Adhere to **CIDB Act 520 Schedule 4** Requirements

With this achievement, **CREAM** is now recognised as a **fully developed institute** offering comprehensive technical services for the construction industry.

## Our Accreditation Portfolio



**Inspection Body**  
MS ISO/IEC 17020



**Testing Body**  
MS ISO/IEC 17025



**Certification Body**  
MS ISO/IEC 17065

# Overview of CREAM Assessment Programmes

Figure below highlights the performance of key assessment programmes implemented by CREAM, including QCLASSIC, SHASSIC, MyCREST and Sustainable INFRASTAR. The figures reflect the total number of assessments conducted across government and private sector projects, underscoring the construction industry's growing commitment to quality, safety, sustainability and building performance.

PROGRAMME	TOTAL ASSESSMENT CONDUCTED	GOVERNMENT PROJECTS	PRIVATE PROJECTS
	<b>362</b>	<b>33</b>	<b>329</b>
	<b>194</b>	<b>47</b>	<b>147</b>
	<b>58</b>	<b>53</b>	<b>5</b>
	<b>5</b>	<b>0</b>	<b>5</b>

These programmes play a vital role in enhancing construction standards, promoting safer worksites, improving environmental responsibility and delivering better-performing buildings and infrastructure. Organisations interested in applying or learning more about these assessment programmes are encouraged to contact CREAM for further information and guidance.

# CREAM and CIDB Strengthen Industry Engagement Through a Series of Strategic Programmes from 27 to 31 October 2025

The Construction Research Institute of Malaysia (CREAM), in collaboration with the Construction Industry Development Board (CIDB) Malaysia, executed a comprehensive series of strategic programs. The initiative aimed to accelerate the **Construction 4.0 Strategic Plan**, focusing on:



## Digitalisation

Increasing the adoption of BIM, Digital Twins, and advanced infrastructure software



## Sustainability

Promoting green practices and ESG (Environmental, Social, and Governance) standards



## Governance

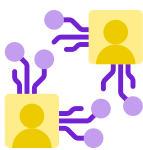
Strengthening industry leadership and organisational direction

### DCS 2025 Masterclass: Efficient Design and Construction with Digital Twins and AI

Date: 27 October 2025

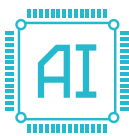
Venue: MITEC, Kuala Lumpur

The Masterclass focused on the Bentley Infrastructure Cloud, demonstrating how integrated software ecosystems can reduce errors and improve the "golden thread" of information from design through to facility management. The session was divided into three practical modules:



### Digital Twins Integration:

Adoption of Infrastructure Digital Twins to support planning, design, construction and operations.



### AI- Powered Project Delivery:

Leveraging data and artificial intelligence to improve decision-making, productivity, and project performance.



### Collaborative Data Environments (CDE):

Effective management of design, documents, and data through ISO 19650



The DCS 2025 Masterclass reaffirmed CIDB's and CREAM's commitment to advancing digitalisation, fostering innovation, and enhancing industry capability development, in support of a more efficient, sustainable and future-ready construction industry.

# The CIC-EPPM Joint Conference 2025

Date: 28-30 October 2025

Venue: MITEC, Kuala Lumpur



The 2<sup>nd</sup> Construction Industry Congress (CIC) and the 15<sup>th</sup> Engineering, Project, and Production Management (EPPM) conference represented the “brain trust” of the week.

By bringing together the academic rigor of Universiti Malaysia Pahang Al Sultan Abdullah (UMPSA) and Construction Research Institute of Malaysia (CREAM), this event turned MITEC Kuala Lumpur into a hub for evidence-based innovation.

The presentations were categorise into five high-impact themes that align with Malaysia’s Construction 4.0 Statgic Plan:

1 **Smart Innovation, Systems & Technologies**

2 **Digital Transformation in Construction**

3 **Sustainable and Green Practices**

4 **ESG Integration**

5 **Data-Informed Dicismon Making**

The congress provide more than just academic credit; it offered a roadmap for evidence based practice:



**Validation**



**Future-Proofing**



**Efficiency**

# Presidential Dialogue “Resilient Construction: Forging Ahead in Uncertain Times”

Date: 30 October 2025

Venue: The MET Corporate Towers, Kuala Lumpur



The Presidential Dialogue served as a high-level knowledge exchange platform, bringing together a diverse group of stakeholders—including government agencies, contractors, engineers, and academics—to address how the construction industry can survive and thrive despite global economic and environmental volatility.

The dialogue featured distinguished speakers Prof. James O.B. Rotimi, President of Engineering Project and Production Management (ERPPM) and Professor at Massey University, New Zealand, and Prof. Dong Ping, President of the International Council for Research and Innovation in Building and Construction (CIB) and Professor at Tsinghua University, China. The session, which was moderated by Mr. Oliver from Master Builders Association Malaysia (MBAM). The core themes of discussion included:



**Engineering and Organisational Resilience**



**Innovation and Technology Adoption**



**Safety, Workforce Well-being, and Leadership**



**Collaboration Across Stakeholders**

The dialogue reinforced CREAM’s role as a leader in industry transformation. By integrating international expertise with local context, the event provided actionable strategies to enhance Malaysia's standing in the global construction community through safety, innovation, and stakeholder synergy.



## 2nd Digital Construction Summit (DCS) 2025

Date: 29-30 October 2025

Venue: MITEC, Kuala Lumpur



The 2nd Digital Construction Summit (DCS) 2025, held from 29 to 30 October 2025 at the Malaysia International Trade and Exhibition Centre (MITEC), Kuala Lumpur, successfully convened more than 400 participants from across Malaysia's construction ecosystem, including policymakers, industry leaders, technology innovators, academics, and emerging professionals. Under the theme *"AI in Construction: Transforming the Industry,"* the event served as a launchpad for several national initiatives aimed at modernizing the built environment.



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.

The two-day summit featured a distinguished line-up of international and local experts, offering in-depth discussions on the application of artificial intelligence across the construction value chain.



In his closing remarks, YB Dato Ir Haji Yusuf bin Haji Abd Wahab, Chairman of CIDB Malaysia, expressed confidence in the industry's readiness to embrace digital transformation. The summit concluded with the Digital Construction Competition 2025 Awards Ceremony, recognising innovation and excellence among Malaysian students.



## Session 1 : The Role of AI in Sustainable Construction

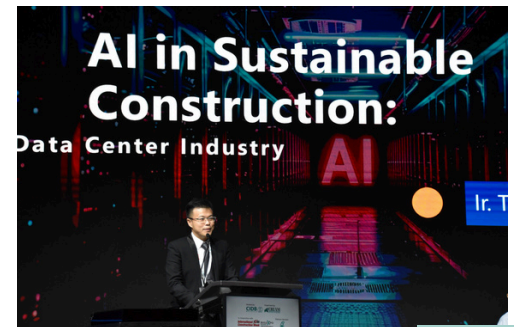
- Moderator** ➤ **Ts. Dr. Pramila Tamunaidu**  
Research Fellow, Malaysia-Japan Advanced Research Centre (MJARC),  
Universiti Teknologi Malaysia (UTM)
- Speakers** ➤ **Dr. Ali Ghahramani**  
Assistant Professor, National University of Singapore
- **Dr. Piia Sormunen**  
Associate Professor, Tampere University, Finland
- **Ir. Ts. Maxx Wong Meng Fai**  
Head of Technical and Solutions, YTL Data Centers

## Plenary Address 1 : Cybersecurity & Digital Trust

- Speaker** ➤ **Ir. Dr. Megat Zuhairy bin Megat Tajuddin**  
Chief Executive, National Cyber Security Agency, Malaysia (NACSA)

## Session 2 : Implementing AI in Construction Project Management

- Moderator** ➤ **Assoc. Prof. Ts. Dr. Abdul Rahimi Abdul Rahman**  
Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA)
- Speakers** ➤ **Dr. Adrianto Oktavianus**  
Bandung Institute of Technology (ITB), Indonesia
- **Mr. Orven Fajardo**  
Senior Manager, Solution Engineering APAC, Bentley Systems (Singapore) Pte. Ltd
- **Mr. Cheah Wei Tsong**  
Technical General Manager, BIMAGE Consulting (M) Sdn Bhd
- **Mr. Ben Shanks**  
Senior Director, Novade



## PETRONAS Leadership Address

- Speaker** ▶ **Ir. Shah Rizal Dahlan**  
Vice President of Group Project Delivery, Projects, Technology & Health, Safety & Environment (PT & HSSE), PETRONAS

## Session 3 : Digitalisation in Oil, Gas Industry & Energy Services

- Moderator** ▶ **Mr. Rosman Hamzah**  
Managing Director, Rosergy Consulting
- Speakers** ▶ **Mr. Fairudul Azhar B A Satar**  
General Manager, Construction & Decommissioning Delivery, PETRONAS
- ▶ **Ts. Ikhwan Sunoto**  
Executive Committee, The Malaysian Oil, Gas, Energy Services Council (MOGSC)
- ▶ **Mr. Abdul Qavi Mohammed**  
Associate Partner, McKinsey & Company

## Session 4 : Data-Driven Decision Making in Construction

- Moderator** ▶ **Mr. Muhammad Iyas Mahzan**  
Secretary & Managing Director, Pertubuhan BIM Malaysia (PBM) & UTNM Resources Sdn Bhd
- Speakers** ▶ **Dr. Naveed Anwar**  
Asian Institute of Technology, Thailand
- ▶ **Mr. Liew Ziqing**  
Head of Digitalisation, Development & Delivery (3D), Sunway Property
- ▶ **Mr. William Low**  
Regional Senior Manager Asia, Construction Sales, Autodesk



## Plenary Address 2 : The Evolution of Digital Construction

**Speaker** ▶ **Ir. Prof. Llewellyn Tang**  
Founder and Group CEO of LPC Co. Ltd.  
Associate Professor in BIM, University of Hong Kong

## Session 5 : AI-Powered Design for Smart Cities

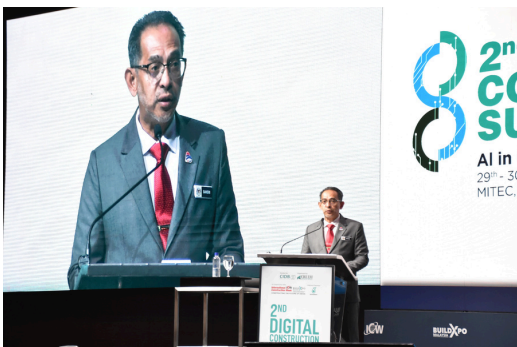
**Moderator** ▶ **Ts. Anusha Magendram**  
Assistant Vice President / Senior Principal Analyst II  
Sustainable Development Technologies Division, Malaysian, Industry-Government Group for High Technology (MiGHT)

**Speakers** ▶ **Mr. William Ong**  
Chief Digital Officer, IT Max Berhad

▶ **Assoc. Prof. Ts Dr Chai Chang Sa'ar**  
Taylor's University, Malaysia

▶ **Ar. Dr. Tan Loke Mun**  
Principal of DrTanLM Architect and founder director of ArchiCentre Sdn Bhd and DTLM Design Group

▶ **Ir Zulkifli Mohamed**  
Project Director for RTS Link, MRT Corporation Sdn Bhd



The Digital Construction Summit (DCS) 2025 concluded with remarkable success, underpinned by a powerhouse coalition of industry leaders. This year's event served as a critical nexus for innovation, driven by the visionary support of our sponsors.

Leading the charge as our Platinum Sponsor was PETRONAS, whose commitment to digital transformation continues to set the gold standard for the energy sector. They were joined by an elite group of Gold Sponsors—including MRT Corp, Bentley Systems, TNB, Novade, Autodesk, and MRANTI—each playing a pivotal role in showcasing the future of smart infrastructure and sustainable technology.

We also extend our deepest gratitude to our Silver Sponsors (Sarawak Energy, Sime Darby Property, and Glodon Software) and our Bronze Sponsors (TRC, FBG Builder, MahSing, Aspen Vision, and Matrix Excelcon). Their collective contribution ensured that DCS 2025 remained a world-class platform for networking, knowledge-sharing, and the advancement of Malaysia's digital built environment.

With artificial intelligence, data, and digital technologies steering the next wave of progress, the 2nd Digital Construction Summit 2025 marked a significant milestone in Malaysia's journey towards a smarter, safer, and more sustainable built environment.

### PLATINUM SPONSOR



### GOLD SPONSORS



### SILVER SPONSORS



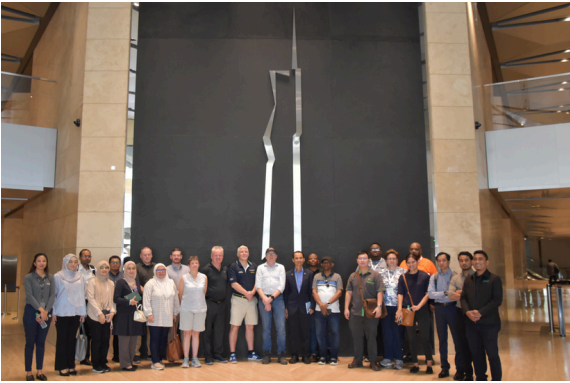
### BRONZE SPONSORS



## DCS 2025 Technical Visit to Menara PNB Merdeka 118

Date: 31 October 2025

Venue: Menara PNB Merdeka 118



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. This exclusive session offered participants a behind-the-scenes look at one of Malaysia's most significant engineering and architectural milestones.

The visit brought together approximately 40 delegates, including summit participants and representatives from the International Council for Research and Innovation in Building and Construction (CIB) Board, marking a meaningful extension of the summit's focus on innovation and digital advancement in the built environment.

The programme commenced with an insightful presentation by Y.M. Dato' Tengku Ab. Aziz Tengku Mahmud, Chief Executive Officer of PNB Merdeka Ventures Sdn Bhd. He shared the strategic vision and development journey of the precinct, highlighting:



### Engineering milestones

The technical challenges of constructing the world's second-tallest tower.



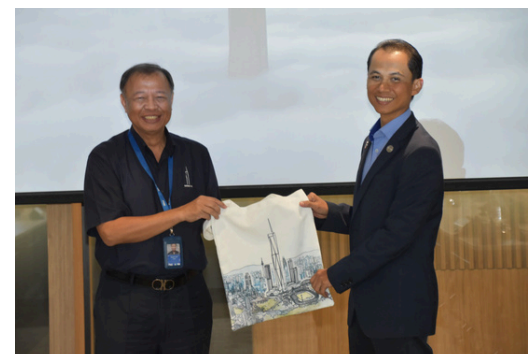
### Sustainability

The tower's commitment to LEED Platinum and Green Building Index (GBI) standards.



### Digital Integration

The advanced technologies and BIM applications used throughout the construction process.



The experience culminated in a visit to Level 118, where participants were treated to breathtaking panoramic views of Kuala Lumpur. This provided delegates with a deeper appreciation for the precision and complexity required to execute a project of this scale.

By connecting industry professionals with real-world examples of Construction 4.0 excellence, the technical visit successfully reinforced the mission of DCS2025 to drive transformative urban development through technology.





# upcoming events

DATE	PROGRAMS	VENUE
<b>MAY</b>		
12 - 13 May 2026	ICW Borneo 2026	Sheraton Kota Kinabalu, Sabah
<b>JUNE</b>		
3- June 2026	CREAM Webinar Series 2026	Online
<b>JULY</b>		
14 July 2026	Training Auditor Contractor's Quality Management System (CQMS)	Kuala Lumpur
<b>AUGUST</b>		
5 - 6 Aug 2026	14th Annual Prefabrication Summit	Capri by Fraser, Kuala Lumpur
<b>SEPTEMBER</b>		
15 Sept 2026	Training Auditor Contractor's Quality Management System (CQMS)	Kuala Lumpur
29 Sept - 1 Oct 2026	3rd Construction Industry Congress (CIC 2026)	Kuala Lumpur
<b>OCTOBER</b>		
13 - 14 Oct 2026	Training Refresher Auditor Contractor's Quality Management System (CQMS)	Kuala Lumpur
<b>NOVEMBER</b>		
10 - 12 Nov 2026	International Construction Week (ICW) Malaysia & BuildXpo 2026	MITEC, Kuala Lumpur
<b>DECEMBER</b>		
15 Dec 2026	CREAM Webinar Series 2026	Online
16 Dec 2026	CREAM Webinar Series 2026	Online

*\*Please note that the CREAM Event Calendar is subject to change. CREAM reserves the right to amend, postpone, or cancel any scheduled events, programmes, or activities without prior notice.*

Hosted by



Jointly Organised by



# International **ICW** Construction Week

OFFICIAL TRADE EXHIBITION



## BEYOND LIMITS

12-13 May 2026, Sheraton Kota Kinabalu, Sabah  
10-12 Nov 2026, MITEC, Kuala Lumpur

**Be Part of the Premier Annual Event  
for the Construction Industry**

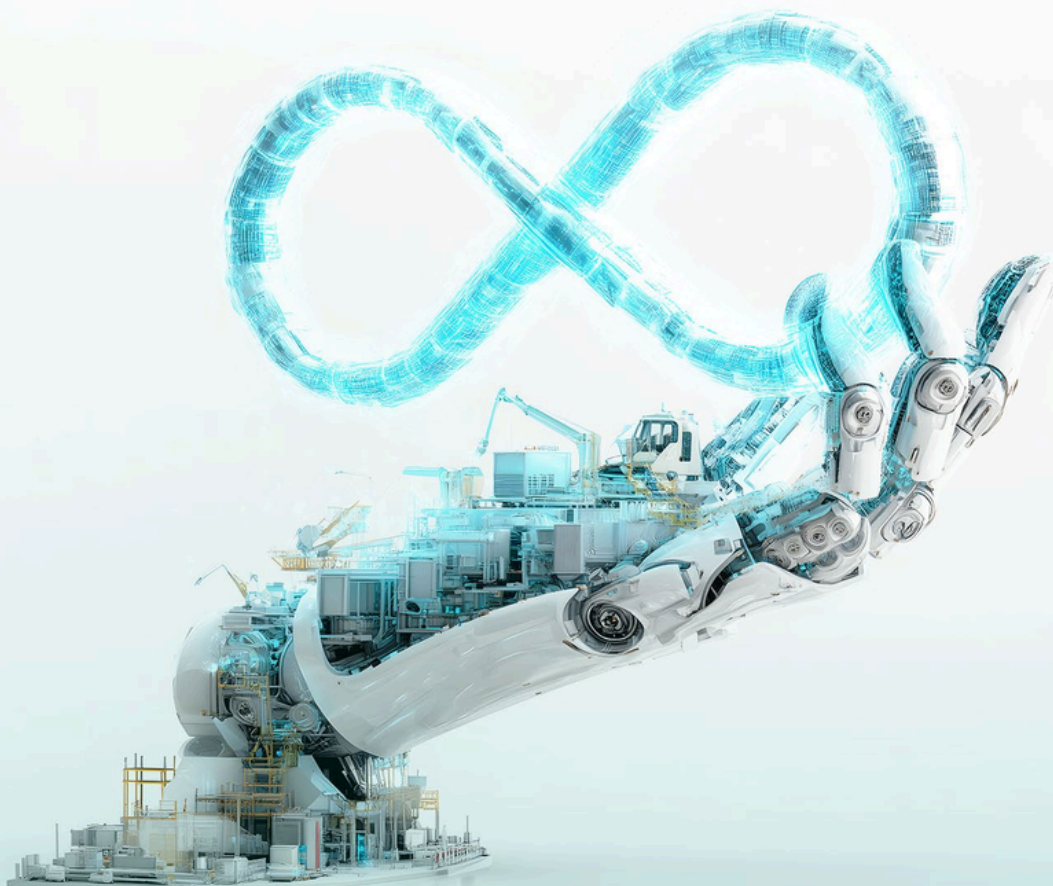
- **Showcase Your Brand**
- **Connect with the Industry Leaders**
- **Expand Market Reach**



**Join Us Today!**



**Follow Us & Stay Updated**



# International Construction Week (ICW): Beyond Limits

International Construction Week (ICW) is the premier annual event for the construction industry in Malaysia and Southeast Asia. Hosted by the Construction Industry Development Board (CIDB) Malaysia since 1999 and ICW returns this year for its 27<sup>th</sup> edition, bringing together industry leaders, policymakers, professionals, and innovators to showcase trends, technologies, and opportunities in the built environment. In 2025, ICW marked a significant milestone with its inaugural edition in East Malaysia, known as ICW Borneo, serving as a strategic platform connecting East Malaysia with West Malaysia and international construction markets.

ICW and BuildXpo Malaysia 2026 drive the industry to break boundaries through innovation, collaboration, and digitalization. Anchored by the theme 'Beyond Limits', the event sets the stage for new technologies, smarter infrastructure and technical knowledge exchange that are transforming the built environment and driving a resilient and sustainable future.

BuildXpo Malaysia, organised by Qube Integrated Malaysia Sdn Bhd, is the official trade exhibition of ICW, and served as a pivotal hub for industry leaders, innovators, and professionals across Malaysia and the region since its launch in 2023. It has recorded steady growth in trade value, exhibitor participation, and visitor turnout over the past three editions.

With strong synergy among national and international industry stakeholders, both ICW and BuildXpo Malaysia have grown significantly, driven by robust construction demand in Malaysia and across ASEAN. A key highlight for 2026 is the strategic collaboration between CIDB Malaysia, Qube Integrated Malaysia as well as MMI Asia, organiser of Glasstech Asia & Fenestration Asia (GAFA), bringing together complementary exhibitions to enhance industry value. For the first time, GAFA will be co-located with ICW & BuildXpo Malaysia 2026 at MITEC. This integrated platform will enable industry players to explore innovations across construction technologies, façade systems, glass applications and sustainable building under one roof.



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2. Bakal diwajibkan bagi kontraktor G4-G7
3. Memperoleh 60 CCD Point
4. Memperoleh bintang SCORE yang lebih baik
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*Daftar sekarang  
sebelum terlambat!*

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MRT Corp is the catalyst for economic and social development across three of Malaysia's key economic zones – **Klang Valley, Penang, and Johor**. Our projects drive urban growth, promote sustainable mobility, and enhance quality of life for communities.

## KLANG VALLEY



- MRT 1 Kajang Line
- MRT 2 Putrajaya Line
- MRT 3 Circle Line

The MRT network strengthens mobility in the capital, improves connectivity to key destinations, and empowers people with greater access to opportunities and a better quality of life.

## JOHOR BAHRU



- Johor RTS Link

A vital link between Malaysia and Singapore, the RTS strengthens cross-border cooperation and boosts the Johor-Singapore Special Economic Zone (JSEZ) as a strategic economic corridor.

## PENANG



- Penang LRT Mutiara Line

The Penang LRT supports growth in both the manufacturing and tourism industries, while offering modern mobility solutions that elevate the lifestyle and convenience of the local community.



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SYNCHRO™ transforms how transportation projects are planned, built, and delivered. With 4D planning, scheduling, and real-time field tracking, it connects teams, reduces risk, and improves coordination—helping you deliver with greater certainty.



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**NET ZERO**  
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# From field management to AI intelligence for construction



## Novade | Quality

**Deliver high quality projects from construction to handover:** Enforce high quality standards, reduce rework costs and boost overall customer satisfaction. Conduct quality inspections with digital forms, visualise key quality indicators, and efficiently manage defect rectification processes.




## Novade | Safety-HSE

**Drive health and safety performance on job sites:** Enforce compliance effectively, get everybody engaged, and prevent issues before they occur. Easily create and monitor all safety actions, conduct digital safety inspections, and digitise PTWs and safety forms.



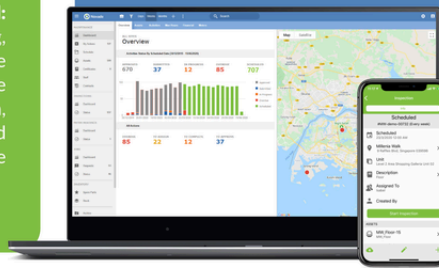

## Novade | Site Diary

**Monitor productivity in the field:** Facilitate production reporting, automate site diaries, and generate actionable data. Gain real-time access to production information, set up reports in minutes, and leverage the data to improve productivity and bidding accuracy.




## Novade | Maintenance

**Reduce operational costs:** Manage inspections and repairs, increase asset lifecycle, and improve teams' productivity. Manage fixed assets and equipment across multiple construction sites; schedule and track inspections—technicians get notified on mobile devices.



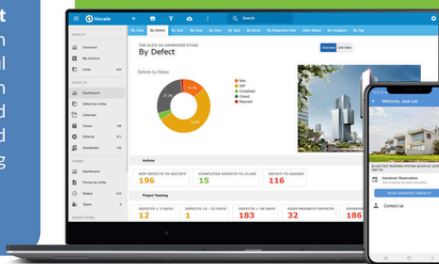

## Novade | Insights

**Change the way you look at data:** Manage reporting easy with dynamic dashboards and powerful data visualisations. Leverage on data to predict trends and profitability, manage risks and improve productivity by making faster and smarter decisions.




## Novade | Handover

**Simplify project handover:** Manage inspections, defects and rectification tasks in real time. Capture issues on site, assign actions instantly, track progress across teams, and improve customer satisfaction with faster, more efficient handover delivery.



### Secure

Access with secured login and passwords. All connections are encrypted with strict policies on data security and confidentiality.



### Reliable

All modules work offline and online with 99.9% uptime service for synchronisation server. All data is backed up daily.



### Scalable

The system is designed to handle hundreds of users and thousands of defects, pictures and checklists.

## Join Novade's AI Tech Talk Malaysia 2026

Location: The Red Beanbag, Menara Mudajaya, Selangor  
Date: 3 June 2026 (Wed)  
Time: 10:00 AM - 12:00 PM  
Free entry | Buffet provided | Limited seats

Scan QR to register

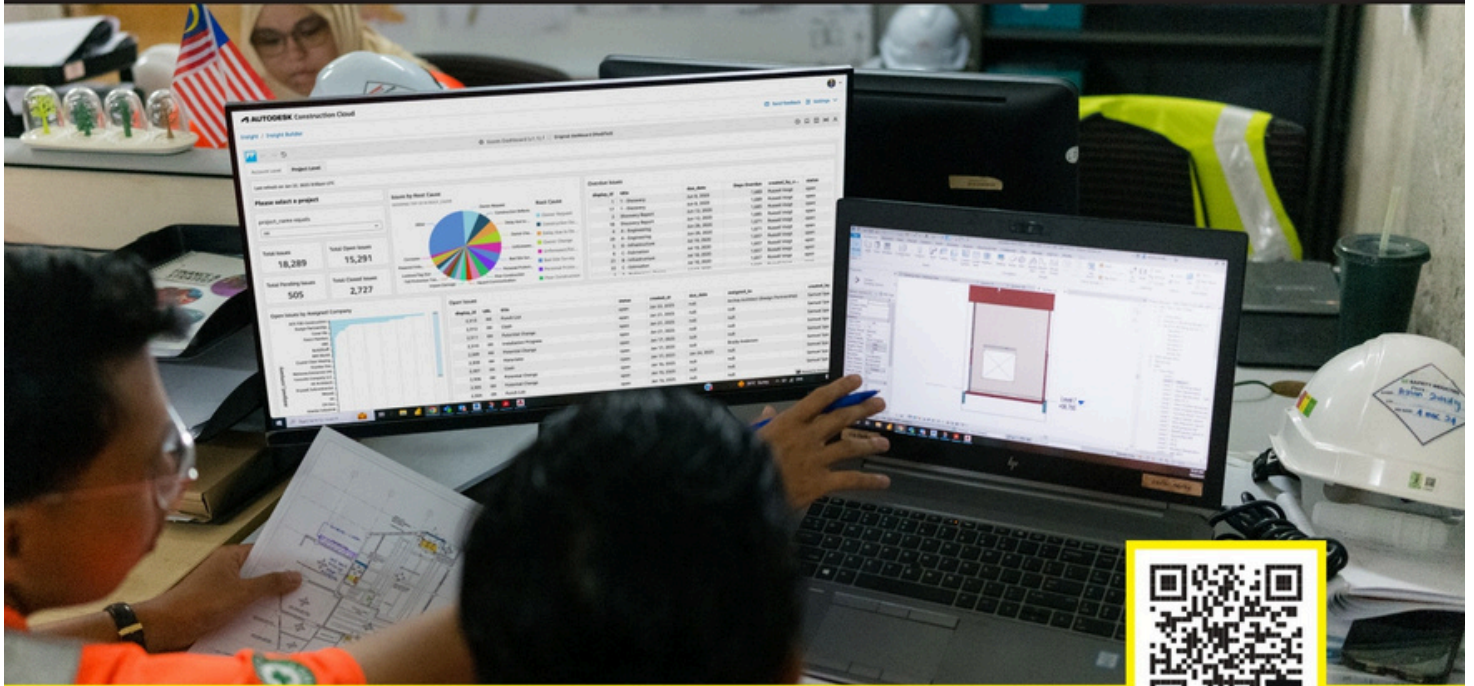




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# Overview of NTIS



## National Technology & Innovation Sandbox (NTIS)

The National Technology and Innovation Sandbox (NTIS) was first announced as part of the Short-Term Recovery Plan (PENJANA) in June 2020 and subsequently launched on 19 August, 2020 by the Prime Minister. A programme that allows researchers, innovators and entrepreneurs to test their products and services in a live environment and qualify for grants to bring those products and services to market. NTIS relaxes certain regulatory requirements to accelerate the development of innovation from the R&D stage to being commercially ready.

### Overview

From July 2020 - September 2025

 **966**  
Complete Applications Received

 **62**  
Cohorts

 **220**  
Approved Applications

 **48**  
Regulatory Cases Facilitated with 19  
Ministries Collaborations

 **65**  
Innovation Acceleration  
Network (IAN) Partners

 **RM 135.2mil**  
Funding Approved

**16**  
National  
Sandboxes

- Agriculture Sandbox with FELDA
- Robotics & Automation Sandbox with Drone & Robotics Zone (DRZ) Medini Iskandar
- Logistics Sandbox with Capital A
- DroneTech Sandbox with AREA57 MRANTI
- High-Tech Education Sandbox with MMU
- SportsTech Sandbox with ISN
- Smart Highway Sandbox with PLUS
- Digital IoT Sandbox with KSTI
- Sustainable Smart Cities Sandbox with Sunway iLabs
- HealthTech Hub Sandbox with KKM
- Construction Sandbox with CREAM
- Food Security Sandbox with NCIA
- Artificial Intelligence Sandbox with NVIDIA
- Sarawak Technology & Innovation (STI) Sandbox with SDEC, TEGAS, & SIGHT Digital
- Property Technology Sandbox with S P Setia
- Biotechnology Sandbox with NIBM

NTIS Secretariats

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*\*Artist's Impression of Bandar Universiti Pagoh Industrial Park Aerial View*

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Construction Research Institute of Malaysia

