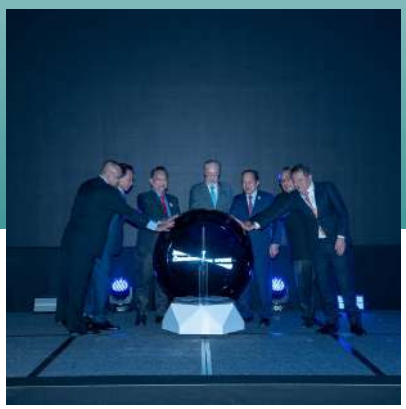
CREAM
CONSTRUCTION RESEARCH INSTITUTE OF MALAYSIA

2026 CREAM



Constructing Tomorrow: Innovation, Productivity and Sustainability

E-MAGAZINE

ISSUE 22: APR- JUN 2026

"YOUR TRUSTED PARTNER IN RESEARCH AND CONSTRUCTION SOLUTIONS"

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.

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.

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

Editorial Team

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CREAM APPRECIATION CEREMONY 2024/2025 CELEBRATES DEDICATION AND EXCELLENCE OF EMPLOYEES

Kuala Lumpur | 16 April 2026 – Construction Research Institute of Malaysia (CREAM) successfully organised the CREAM Appreciation Ceremony 2024/2025 to recognise and celebrate the dedication, commitment, and outstanding contributions of its employees in supporting the organisation's continuous growth and achievements.

The ceremony was honoured by the presence of the CIDB Board of Trustees, who witnessed the presentation of awards and joined CREAM in celebrating the achievements of its employees. Their presence reflected the strong support and recognition towards CREAM's efforts in fostering excellence and strengthening organisational performance.

Held on 16 April 2026, the ceremony served as a platform to acknowledge employees who have demonstrated exceptional dedication, professionalism, and commitment in carrying out their responsibilities throughout 2024 and 2025.

The event featured the presentation of the *Anugerah Perkhidmatan Khas* and *Anugerah Perkhidmatan Cemerlang*, which were awarded to selected employees in recognition of their remarkable contributions, exemplary performance, and continuous efforts in advancing CREAM's role as a research and innovation institution supporting Malaysia's construction industry.

The appreciation ceremony highlights CREAM's commitment to cultivating a culture of recognition and excellence, where employees' achievements and contributions are valued as key drivers of organisational success. Such initiatives also serve as an encouragement for the workforce to continue delivering impactful services, enhancing productivity, and contributing towards the achievement of CREAM's strategic objectives.

CREAM extends its heartfelt congratulations to all award recipients and expresses its appreciation to all employees for their dedication, teamwork, and unwavering commitment. The organisation remains committed to empowering its people and fostering a high-performance culture towards achieving greater milestones in the future.

Anugerah Perkhidmatan Khas 2024

MOHD IKHWAN BIN ABDULLAH
RESEARCHER

MOHD SYAHMI BIN HAMDAN
BUILDING TECHNICIAN

MOHD SHEARHAN BIN MAHTAR
CERTIFICATION OFFICER

UMMI KHAIRA BINTI MD RADZI
ADMIN ASSISTANT

MUHAMMED ASRAFF BIN ABDUL RAHMAN
MANAGER

SYAZANA RASHIQAH BINTI ROSLI
COA EXECUTIVE

MOHD FAIZAL BIN MOHD YUSOF
INSPECTION ASSISTANT

AHMAD SHAHIR BIN MOHAMAD
CONSULTING OFFICER

NOR AIN SYANIEZA BINTI MAHAYUDDIN
ENGINEER

Anugerah Perkhidmatan Khas 2025

MHD. JUMAIN BIN MAPPLATI
CONSULTING OFFICER

NURAMIN BIN BASLAN
COA EXECUTIVE

MUHAMMAD FAIZ BIN RUSHDI
CERTIFICATION OFFICER

NUR ALIFAH ILYANA BINTI ROSLAN
CERTIFICATION EXECUTIVE

FARID HAFIZUDIN BIN ZAMRY
CERTIFICATION OFFICER

Ir. SYED HAMAD NAGUIB BIN SYED AZMI
RESEARCHER

HASSANAIN HAFIZ BIN MOHD ASNAN
ASSISTANT ENGINEER

MASTURINA BINTI BOHI
ASSISTANT ENGINEER

MUHD HAFIZ KURNIAWAN BIN CHALIDI AGUS
ADMIN ASSISTANT

Anugerah Perkhidmatan Cemerlang 2024

NURULHUDA BINTI MAT KILAU
SENIOR RESEARCHER

MUHAMAD AZAM BIN AZMAI
ASSESSMENT OFFICER

MOHAMMAD KHAIRUL ANNAM BIN ROSLAN
COMPLIANCE OFFICER

Ts. YUZAIRY ROZAIDI BIN ROHAIZAN
ENGINEER

Ts. SYAZA NABILLA BINTI MOHD SUHAIMI
ENGINEER

MUHAMMAD ARIF BIN ZUHAIRI
INSPECTION OFFICER

Anugerah Perkhidmatan Cemerlang 2025

NURUL NAJIHA BINTI MOHD AZMAN
ASSISTANT ENGINEER

NOR ASMIRA FARAHA BINTI MUSTAFA KAMAL
ADMIN ASSISTANT

Ir. Ts. DR. Hj MOHD KHAIROLDEN BIN GHANI
SENIOR MANAGER

AINA SYAZWANI BINTI AZHAR
ADMIN ASSISTANT

TENGKU MOHD HAFIZI BIN RAJA AHMAD
SENIOR ASSISTANT RESEARCHER

MARLIA BINTI MASRAN
MARKETING OFFICER


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OFFICIAL LAUNCH OF MKRM SABAH MARKS A NEW MILESTONE FOR CONSTRUCTION QUALITY ASSURANCE IN EAST MALAYSIA

Kota Kinabalu, Sabah | 12 May 2026 – Construction Research Institute of Malaysia (CREAM) participated in the International Construction Week (ICW) Borneo 2026, held at the Sheraton Hotel Kota Kinabalu, to promote the services of Makmal Kerja Raya Malaysia (MKRM) Sabah and enhance awareness of its laboratory testing capabilities among construction industry stakeholders in East Malaysia.

As part of its participation, CREAM highlighted the role of MKRM Sabah in supporting the construction industry through the provision of reliable and efficient construction materials testing services. This promotional effort aimed to introduce the laboratory's capabilities while strengthening engagement with contractors, consultants, developers, manufacturers, and government agencies.

The availability of MKRM Sabah marks a significant enhancement in supporting the construction ecosystem in Sabah by providing greater accessibility to accredited laboratory testing services. With the establishment of local testing facilities, construction industry players in Sabah are now able to submit material samples directly to MKRM Sabah without the need to transport them to MKRM Kuala Lumpur.

This initiative is expected to reduce logistical costs, improve testing turnaround times, and facilitate more efficient project implementation while ensuring compliance with established construction standards.

MKRM Sabah was officially launched by YB Datuk Seri Panglima Haji Masidi Bin Manjun, Deputy Chief Minister II of Sabah, representing YAB Datuk Seri Panglima Haji Hajiji bin Haji Noor, Chief Minister of Sabah. The launch ceremony was witnessed by YB Dato Sri Alexander Nanta Linggi, Minister of Works, Malaysia, and YB Datuk Seri Dr Ahmad Maslan, Deputy Minister of Works, alongside senior government officials, industry leaders, and built environment professionals.

The official launch signifies the strong commitment of both the Federal and Sabah State Governments towards strengthening quality assurance infrastructure and expanding access to accredited construction materials testing services in East Malaysia, in line with the growing needs of the regional construction industry.

In conjunction with ICW Borneo 2026, a technical visit to MKRM Sabah was organised on 13 May 2026 for participants of the ICW seminar. The visit offered participants firsthand exposure to the laboratory's facilities, testing equipment, and operational processes. The technical visit was also attended by the Chairman of the Construction Industry Development Board Malaysia (CIDB), YB Dato' Ir. Haji Yusuf bin Haji Abd. Wahab, and the Chief Executive Officer of CREAM, Ts. Syed Hazni bin Abd Gani, reflecting the commitment of both organisations in strengthening technical support and quality assurance within the construction industry.

The visit served as an important platform to enhance industry understanding of MKRM Sabah's role in supporting construction materials quality assessment and promoting best practices in construction quality management. Through this initiative, participants gained greater insight into the importance of laboratory testing in ensuring the reliability, safety, and performance of construction materials. CREAM remains committed to advancing construction excellence through research, innovation, and quality assurance initiatives that support the sustainable development of Malaysia's construction industry.


International Construction Week Borneo
BUILD XPO MALAYSIA
OPENING & LAUNCHING
CEREMONY
12 May 2026


UTAMAKAN KESELAMATAN
SAFETY FIRST

STRENGTHENING INDUSTRIALISED BUILDING SYSTEM (IBS) IMPLEMENTATION IN EAST MALAYSIA: A SHARED RESPONSIBILITY FOR SUSTAINABLE CONSTRUCTION GROWTH

Moving Beyond Policy Towards a Stronger IBS Ecosystem in Sabah, Sarawak and Wilayah Persekutuan Labuan

Mohd Ikhwan Abdullah, Nurulhuda Mat Kilau and Maria Zura Mohd. Zain

Research and Development Division, Construction Research Institute of Malaysia (CREAM)

The Industrialised Building System (IBS) has long been recognised as a key approach to improving construction productivity, quality, sustainability, and efficiency in Malaysia. However, while IBS implementation continues to expand in Peninsular Malaysia, the realities in East Malaysia, particularly in Sabah, Sarawak, and Wilayah Persekutuan Labuan, present a very different operational landscape.

CIDB, through CREAM, conducted comprehensive studies to understand the implementation of IBS in Sabah, Sarawak and Wilayah Persekutuan Labuan. The studies involved extensive stakeholder engagement, project case studies, mapping of IBS suppliers and construction projects using Geographic Information Systems (GIS), as well as technical analyses of local conditions.

IBS implementation in Sarawak, Sabah, and Wilayah Persekutuan Labuan revealed that the challenges faced in East Malaysia are not merely technical. Instead, they involve a complex interaction between geography, logistics, infrastructure readiness, supply chain capability, governance coordination, and industry ecosystem maturity.

The findings clearly demonstrate that strengthening IBS implementation in Borneo requires a more integrated, region-specific strategy that involves the Federal Government, State Governments, industry players, and local communities.

IBS in East Malaysia Faces a Different Reality

Unlike many urban areas in Peninsular Malaysia, construction projects in Sabah and Sarawak often involve:

- remote and rural project locations,
- mountainous terrain,
- river crossings,
- limited road connectivity, and
- difficult logistics access.

Several case studies involving school projects in Sarawak and Sabah highlighted how transportation constraints significantly affect IBS implementation. Some projects require delivery through narrow roads, temporary bridges, river transportation, or long-distance hauling across challenging terrain. As example projects situated in Kapit, Belaga, Mukah and Lawas frequently rely on long-distance road transport or river barges before materials can reach construction sites.

In Sarawak, the study identified that:

- road access is heavily concentrated in western regions,
- logistics routes to interior areas remain limited, and
- handling of IBS components through river transportation creates risks of damage during delivery and installation.

Figure 1: Site Visit on IBS Project in Sarawak

Figure 2: Site Visit on IBS Project in Sabah and Wilayah Persekutuan Labuan

Similarly, in Sabah and Wilayah Persekutuan Labuan, logistics costs remain high due to:

- long-distance transportation,
- inadequate infrastructure access,
- additional transportation permits, and
- dependence on inter-state supply chains.

These geographical realities inevitably influence project cost, construction schedules and the selection of suitable IBS components. These realities show that IBS implementation in East Malaysia cannot simply replicate approaches used in Peninsular Malaysia. Instead, IBS implementation must be adapted to local conditions through flexible planning, appropriate technologies and region-specific policy interventions.

IBS Solution for East Malaysia

a) **The Need for Stronger Federal and State Coordination**

One of the strongest messages emerging from both studies is the importance of coordination in governance between the Federal and State Governments.

IBS implementation is not only about achieving IBS scores or complying with policy requirements. It also requires long-term ecosystem planning involving:

- infrastructure development,
- procurement strategies,
- industrial development,
- local manufacturing support,
- technical training, and
- logistics readiness.

The Federal Government plays a critical role in establishing national IBS policies and aligning procurement requirements across ministries and agencies. At the same time, State Governments are equally important because they understand local development conditions, land availability, infrastructure limitations, and regional economic priorities more directly.

For example, the Sarawak and Sabah study proposed the development of a dedicated IBS Hub ecosystem that includes:

- manufacturing facilities,
- training centres,
- technical support capability,
- and investment attraction initiatives.

Such initiatives require strong collaboration between Federal agencies, State development authorities, local councils and authority and industry stakeholders. Without coordinated planning, IBS implementation risks becoming fragmented and inconsistent across different regions.

b) **Strengthening Local IBS Supply Chains**

Another major challenge identified is the imbalance between IBS demand and local supply capability. Although the construction project for IBS continues to increase due to policy requirements and compliance with IBS scores, the number of local IBS manufacturers and suppliers remains limited in several parts of East Malaysia. As a result:

- construction costs increase,
- delivery timelines become longer,
- and contractors become dependent on suppliers from Peninsular Malaysia.

The studies on Sabah and Wilayah Persekutuan Labuan similarly found that certain IBS components, such as AAC blocks, are still sourced from Peninsular Malaysia due to limited local supply. This situation demonstrates the urgent need to strengthen local IBS ecosystems in Borneo.

The industry should therefore focus on:

- developing regional IBS hubs,
- expanding local manufacturing capability,
- increasing supplier participation,
- and improving distribution networks closer to project locations.

At the same time, government agencies may consider:

- investment incentives,
- industrial land support,
- strategic infrastructure planning to encourage more IBS manufacturing in East Malaysia.

Developing stronger local supply chains would not only improve the efficiency of IBS implementation but also contribute to regional economic growth and job creation.

c) **Developing Skilled Local Talent**

The studies also highlighted the continuing shortage of skilled IBS personnel across East Malaysia. Among the identified challenges were:

- lack of skilled installers,
- limited IBS technical expertise,
- low awareness among local workers,
- and an insufficient understanding of IBS coordination among industry professionals.

In some cases, the lack of local expertise has increased dependency on external labour and created inconsistencies in installation quality and project coordination.

This issue cannot be solved solely through short-term training programmes. A long-term talent development ecosystem, such as an apprenticeship program, is needed, involving CIDB, universities, training institutions and industry players. More importantly, local industry can gradually reduce dependency on external labour while creating sustainable employment opportunities for local talent.

IBS Implementation Must Consider Local Conditions

One of the most important lessons from the studies is that IBS implementation should not adopt a **"one-size-fits-all"** approach.

Project planning in East Malaysia must consider:

- accessibility,
- topography,
- soil conditions,
- logistics capability,
- material availability,
- and local construction practices.

The studies recommended that suitable IBS systems in East Malaysia be selected based on actual site conditions.

For example, at remote and limited accessibility;

- lightweight IBS components,
- steel framing,
- AAC blocks, and
- on-site casting approaches

Figure 3: IBS project using steel framing – Sekolah Kebangsaan Tagasan at Semporna

This study also supports greater adoption of temporary precast casting yards and on-site casting solutions for suitable projects. Producing selected precast components near construction sites can significantly reduce transportation distances, minimise the risk of component damage and improve project scheduling. This approach is particularly suitable for remote locations where transporting large structural components presents considerable logistical challenges.

Figure 4: Precast Casting Yard near Project Area at Kota Kinabalu, Sabah

Future IBS implementation should therefore focus not only on achieving minimum IBS scores, but also on ensuring that the selected systems are practical, sustainable, and suitable for local operational realities.

Building a More Sustainable IBS Ecosystem for Borneo

The findings from both studies show that East Malaysia possesses significant long-term potential for IBS growth. However, unlocking this potential requires a more comprehensive ecosystem approach.

One of the most significant findings from both studies is that successful IBS implementation begins long before construction starts. Project planning should incorporate feasibility assessments that consider accessibility, transportation routes, available suppliers, construction methodology and local environmental conditions.

The future of IBS implementation in Borneo depends not only on contractors and manufacturers but also on how effectively the Federal Government, State Governments, industry players, and stakeholders work together to address structural challenges.

Ultimately, strengthening IBS implementation in East Malaysia is not merely about improving construction methods. It is about creating an integrated construction ecosystem that reflects the unique needs of Sabah, Sarawak and Wilayah Persekutuan Labuan while contributing to Malaysia's broader aspirations for sustainable development, technological advancement and a more productive construction industry.

ADVANCING SUSTAINABLE CONCRETE THROUGH FLY ASH INNOVATION

How CREAM and ACE Greencemt Are Shaping the Future of Green Construction in Malaysia

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(2) Ace Greencemt Venture (M) Sdn. Bhd.

Concrete remains one of the most widely used construction materials in the world. However, the production of cement, its primary ingredient, is responsible for a substantial amount of global carbon emissions. As the construction industry moves toward more sustainable practices, researchers and industry leaders are actively seeking cleaner and more environmentally responsible alternatives. One of the most promising solutions is the use of **fly ash.**

Fly ash is a fine powder generated as a by-product of coal-fired power plants. While traditionally regarded as industrial waste, fly ash contains high levels of silica and alumina, enabling it to react chemically with cement compounds to form additional cementitious materials. This process, known as the pozzolanic reaction, significantly improves the long-term performance, durability and strength development of concrete.

Recognising its potential, CREAM, in collaboration with ACE Greencemt, has undertaken an extensive research programme focusing on the technical validation and performance assessment of Malaysian fly ash for concrete applications. This collaboration represents an important step toward advancing sustainable construction materials in Malaysia while ensuring that environmental benefits are achieved without compromising structural performance or quality.

One of the key challenges in utilising fly ash is the variability of its properties depending on its source and production conditions. To address this, the research team conducted comprehensive material characterisation and testing on **various fly ash samples supplied by ACE Greencemt**. The study aims not only to evaluate performance, but also to validate that the fly ash products under ACE Greencemt consistently meet the technical requirements necessary for use in high-quality concrete applications.

Various concrete mixes incorporating different proportions of fly ash were produced and rigorously tested under controlled laboratory conditions. The research programme includes detailed investigations into workability, compressive strength development, structural assessment and long-term durability performance. In addition, extensive durability testing has been conducted to assess the concrete's resistance against aggressive environmental conditions, ensuring its suitability for long-term infrastructure and structural applications.

To further strengthen the technical validation, the research has progressed beyond laboratory-scale material testing into full structural performance assessments. Structural tests are currently being conducted to evaluate the behaviour of fly ash concrete under actual loading conditions, simulating real-world structural demands. These tests are crucial in demonstrating that concrete containing ACE Greencemt fly ash can achieve the structural reliability, safety, and performance required for modern construction.

The findings to date have been highly encouraging. Results indicate that the incorporation of fly ash not only reduces cement consumption and carbon emissions but also enhances the long-term durability and performance of concrete. Improved resistance to cracking, reduced heat generation, enhanced durability, and better long-term strength development are among the key benefits observed throughout the study.

Importantly, the collaboration with ACE Greencemt provides strong industry-backed confidence in the practical applicability of the material. Through continuous technical evaluation, quality verification, and performance testing, the research validates that the fly ash supplied by ACE Greencemt possesses the necessary engineering characteristics for sustainable and reliable concrete production. This gives industry stakeholders greater assurance in adopting fly ash as a viable supplementary cementitious material for future projects.

This research aligns closely with Malaysia's broader sustainability agenda and the national push toward greener construction practices. By partially replacing conventional cement with fly ash, the industry can significantly reduce carbon emissions while simultaneously transforming industrial by-products into valuable construction resources. Such initiatives support the development of a circular economy and contribute toward a more sustainable built environment.

With strong progress achieved and continued support from industry partners, the research is expected to be completed within the year. The collaboration between CREAM and ACE Greencemt demonstrates how strategic partnerships between research institutions and industry can drive meaningful innovation and accelerate the adoption of sustainable technologies within the construction sector.

As the project enters its final phase, it stands as a compelling example of how collaboration among science, engineering, and industry can shape the future of construction, creating concrete solutions that are not only stronger and more durable but also significantly greener and more sustainable for generations to come.

MEASURING WHAT MATTERS

Why Malaysia Needs a Productivity Culture in Construction

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Research and Development Division,
Construction Research Institute of Malaysia (CREAM)

Malaysia's construction sector has undergone a major transformation over the years, adopting innovations such as the Industrialised Building System (IBS), Building Information Modelling (BIM), digitalisation, automation, and various Construction 4.0 initiatives to boost efficiency and competitiveness. Yet, a crucial issue often overlooked is the development of a productivity culture.

Productivity is frequently defined by speed, workforce, or project completion, but true productivity is more comprehensive. It encompasses how effectively the industry plans, manages, coordinates, measures, and optimises resource use for better results. Additionally, productivity signals the maturity and competitiveness of the industry. Despite numerous initiatives, standards, and tools aimed at enhancing productivity, Malaysia's construction industry still lacks a strong, consistent productivity culture throughout the ecosystem.

Productivity is More Than Working Faster

In construction, productivity is commonly misunderstood as simply "working faster" or "reducing manpower." In reality, **productivity is about achieving better results using resources more efficiently.**

A productive project is not only one that finishes quickly. It is also a project that:

- minimises rework,
- reduces wastage,
- improves coordination,
- achieves better quality,
- enhances safety,
- controls cost effectively, and
- delivers consistent performance.

This is why productivity plays such an important role in project success.

The construction industry remains one of the most important sectors contributing to national economic growth. However, compared to many other industries, construction productivity growth has historically remained relatively slow.

The industry still faces recurring challenges, such as:

- fragmented work processes,
- inefficient coordination,
- overreliance on foreign labour,
- shortage of skilled workers,
- project delays, and
- inconsistent quality performance.

These challenges directly affect productivity performance across the construction value chain.

The Industry Cannot Improve What It Does Not Measure

One of the biggest obstacles in improving productivity is the lack of consistent measurement and benchmarking practices within the industry.

In many projects, productivity is still evaluated based on general assumptions rather than actual performance data. Without proper measurement, it becomes difficult to:

- identify inefficiencies,
- compare project performance,
- optimise work processes, or
- establish realistic improvement targets.

Recognising this issue, CIDB Malaysia and CREAM have introduced several important initiatives over the years, including:

- Productivity Measuring Tool (PMT), and
- Trade-Level Productivity Measuring Tool (TL-PMT),

These initiatives represent important steps towards building a more data-driven and performance-oriented construction industry. The purpose is not merely to calculate productivity scores. More importantly, these tools help the industry:

- benchmark performance,
- monitor project efficiency,
- identify productivity gaps,
- improve planning and resource allocation, and
- support continuous improvement.

In simple terms:
Productivity measurement creates visibility,
and visibility is the first step towards improvement.

Technology Alone is Not Enough

Today, the industry is actively promoting:

- IBS,
- BIM,
- automation,
- digitalisation, and
- smart construction technologies.

These technologies undoubtedly offer significant productivity benefits.

Research conducted by CIDB and CREAM has shown that IBS can improve productivity, reduce dependency on labour, improve quality consistency, and enhance overall project efficiency. However, technology alone cannot transform the industry without the right mindset and culture. Without a productivity culture:

- BIM becomes only a modelling requirement,
- IBS becomes only a compliance exercise, and
- digitalisation becomes merely software adoption without operational improvement.

True transformation only happens when the industry begins to use technology together with:

- measurable performance,
- continuous benchmarking,
- process optimisation, and
- data-driven decision-making.

This is where productivity culture becomes critical.

Productivity Culture Must Start from Leadership

One of the most important lessons from global high-performing industries is that productivity improvement must be driven consistently from the leadership level.

A productivity culture cannot grow if productivity is treated only as a technical issue or short-term project requirement. Instead, productivity must become part of:

- organisational strategy,
- project planning,
- workforce development,
- procurement approaches, and
- long-term industry transformation.

Leadership plays a major role in shaping this culture.

When industry leaders prioritise productivity:

- performance measurement becomes more consistent,
- innovation adoption becomes more substantial, and
- improvement initiatives become more sustainable.

This is especially important as Malaysia moves towards Construction 4.0, ESG expectations, and an increasing demand for higher-quality, faster project delivery.

Towards a More Data-Driven Construction Industry

Globally, industries that successfully improve productivity are those that rely heavily on:

- benchmarking,
- performance data,
- process optimisation, and
- continuous monitoring.

The construction industry must move in the same direction.

The future of construction productivity will increasingly involve:

- digital monitoring systems,
- AI-assisted analytics,
- BIM-integrated project monitoring,
- automated reporting,
- smart construction technologies, and
- predictive productivity analysis.

In this future environment, productivity will no longer depend solely on workforce quantity, but on how effectively projects utilise:

- technology,
- coordination,
- planning, and
- real-time information.

This shift will eventually move the industry from: labour-driven construction to performance-driven construction.

Building the Right Mindset for the Future

Malaysia has already established strong national aspirations through:

- Construction Industry Transformation Programme (CITP),
- National Construction Policy 2030 (NCP2030),
- Construction 4.0 Strategic Plan, and
- various productivity-related initiatives.

The next challenge is ensuring that productivity becomes embedded in the culture of the construction industry. This requires stronger collaboration between:

- government agencies,
- contractors,
- consultants,
- developers,
- academia, and
- industry professionals.

Most importantly, the industry must begin viewing productivity not merely as a reporting exercise but as a long-term strategy for competitiveness, sustainability, and resilience. Because ultimately, a more productive construction industry does not only benefit projects. It benefits:

- businesses,
- workers,
- clients,
- public infrastructure, and
- national economic growth as a whole.

THE EVOLUTION OF MALAYSIA'S INDUSTRIALISED BUILDING SYSTEM (IBS) SCORE FRAMEWORK

Past Achievements, Present Reforms, Future Directions

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Introduction

For more than two decades, the Industrialised Building System (IBS) has been a central part of Malaysia's construction industry transformation agenda. Introduced as a strategy to improve productivity, quality and efficiency, IBS has continued to evolve in response to changing industry needs, technological development and national construction priorities.

The construction industry continues to face issues related to productivity, labour dependency, project delivery, quality assurance and sustainability. In response, Malaysia has progressively strengthened its industrialisation agenda through various policies and programmes that encourage the adoption of modern methods of construction. IBS remains one of the key mechanisms supporting this transformation.

Since the launch of the IBS Strategic Plan in 1999 and the subsequent IBS Roadmap 2003–2010, the Government has introduced various policies and initiatives to encourage the use of industrialised construction practices. One of the most important tools supporting this effort is the IBS Content Scoring System, commonly known as the IBS Score. The IBS Score provides a standardised method for measuring the level of IBS implementation in building projects.

Over the years, the IBS Score framework has undergone several revisions. These include the IBS Score Manual 2005, CIS 18:2010, CIS 18:2018 and, most recently, CIS 18:2023. Although the main objective has remained consistent, the assessment framework has evolved to reflect the changing meaning of industrialisation in the construction industry.

Today, the IBS Score is no longer only a measurement of prefabricated components. It has become a broader framework that recognises productivity, standardisation, digitalisation and Construction 4.0 technologies. More importantly, the evolution of the IBS Score framework shows how Malaysia's construction industry has progressed from component-based industrialisation towards a more technology-enabled construction ecosystem.

However, as the IBS Score framework becomes broader and more technology-driven, its successful implementation increasingly depends on the readiness of project teams, designers, contractors, suppliers and the wider construction ecosystem.

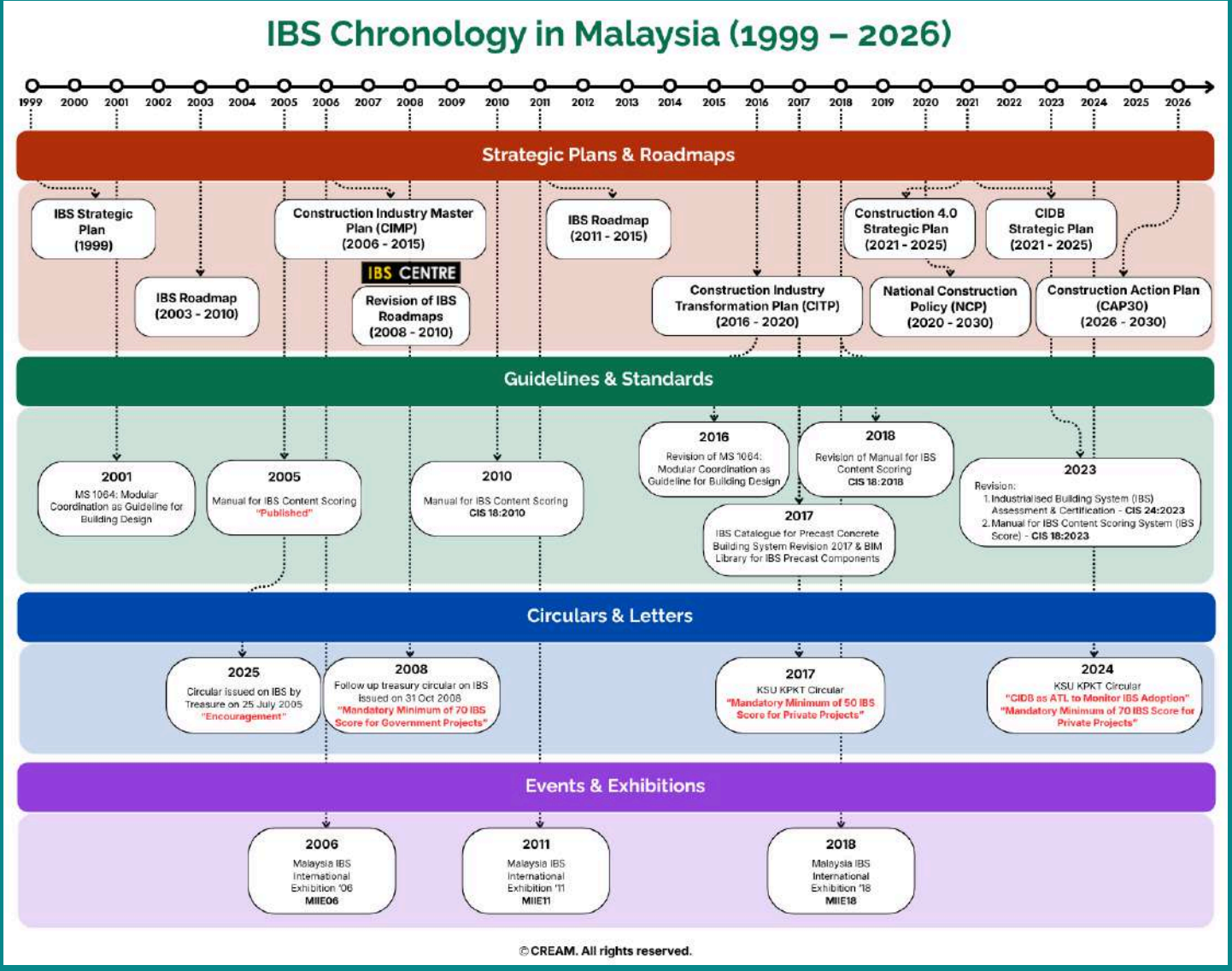


Figure 1: IBS Chronology in Malaysia (1999 – 2026)

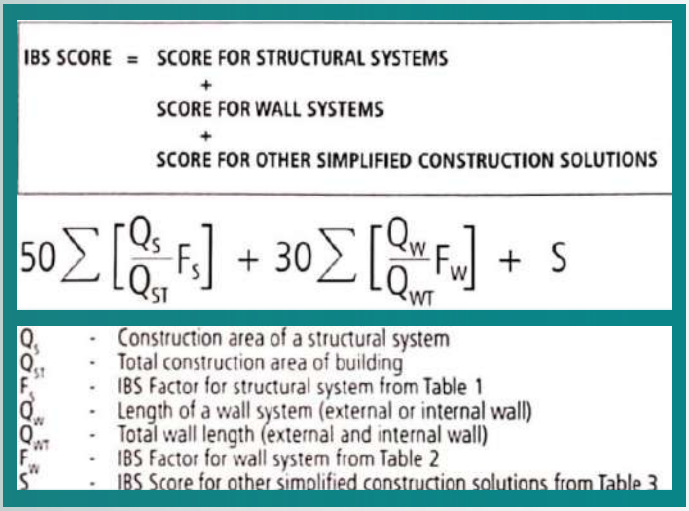
The Beginning: IBS Score Manual 2005

The first IBS Score Manual was introduced in 2005 during a period when the Malaysian construction industry was still highly dependent on labour-intensive construction methods.

At that time, the Government's main objective was to reduce reliance on foreign labour, improve construction quality and encourage greater use of prefabricated building components. IBS was largely associated with precast concrete systems, steel structures and factory-produced building elements that could reduce on-site work.

As a result, the original IBS Score framework placed strong emphasis on structural and wall systems. It also awarded marks for design repetition, the use of Malaysian Standard MS 1064 – Guide to Modular Coordination in Buildings, and the use of prefabricated three-dimensional (3D) units such as toilets, staircases and lift shafts. Projects were rewarded based on the extent to which prefabricated components were incorporated into the building.

The method of calculation, including its formulas and tables, was adapted from the Building and Construction Authority (BCA) of Singapore's Code of Practice on Buildability. Singapore has implemented buildability legislation for building projects since 2001. The aim was to improve productivity and quality while reducing reliance on foreign workers.



At this stage, IBS was mainly viewed as a construction method centred on prefabrication. The focus was on replacing conventional labour-intensive construction methods with factory-produced building components that could improve productivity and quality.

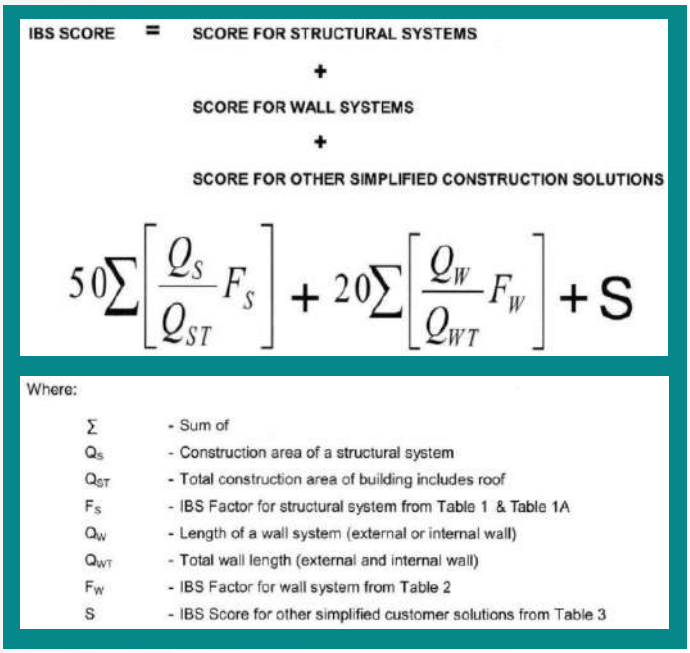
Moving Towards Industrialisation: CIS 18:2010

As the industry matured, it became increasingly clear that productivity improvement could be achieved through more than just the use of prefabricated components. Efficient design, standardisation and repetitive construction layouts also contributed significantly to better construction performance.

Recognising this shift, CIDB introduced Construction Industry Standard - CIS 18:2010, which expanded the assessment framework beyond component usage alone.

One of the most notable changes was the increased emphasis on standardisation and repetition. The revised framework encouraged the use of standardised building components, modular coordination principles and repetitive layouts to improve efficiency and reduce waste during construction.

The scoring structure was also rebalanced. Greater weightage was given to other simplified construction solutions, reflecting the growing importance of design efficiency and industrialised construction processes.



Compared to the previous IBS Score, the 2010 IBS Score for the wall system has decreased from 30 to 20 points, while the score for other simplified construction solutions has increased from 20 to 30 points.

This marked an important transition in the industry's understanding of IBS. Rather than measuring only the quantity of prefabricated components used in a project, the framework began to recognise broader industrialisation practices that contribute to project efficiency.

In essence, the industry's focus evolved from "what is built" to "how it is built".

The Productivity Era: CIS 18:2018

The next major evolution occurred with the publication of CIS 18:2018.

This revision coincided with the implementation of the Construction Industry Transformation Programme (CITP) 2016–2020, which placed strong emphasis on productivity, quality and innovation.

For the first time, Building Information Modelling (BIM) was formally recognised within the IBS Score framework. Projects that implemented BIM could earn additional IBS points. This reflected the growing importance of digital technologies in project planning, coordination and delivery.

The 2018 edition also introduced greater recognition for productivity-enhancing solutions such as Prefabricated Bathroom Units (PBUs) and modular gridlines. These additions acknowledged that productivity gains could be achieved through better design coordination, planning and construction methodology.

The inclusion of BIM represented a significant milestone. It showed that IBS was no longer limited to physical construction systems but had begun incorporating digital processes to enhance project efficiency.

This revision signalled a broader shift towards measuring productivity rather than simply measuring prefabrication.

Entering the Construction 4.0 Era: CIS 18:2023

The latest edition, CIS 18:2023, represents the most significant transformation of the IBS Score framework since its introduction.

Aligned with the Construction 4.0 Strategic Plan, the CIDB Strategic Plan 2021–2025, and the National Construction Policy 2030, the revised framework broadens the concept of IBS to encompass digitalisation, automation, and advanced construction technologies.

In addition to traditional structural and wall systems, the framework now recognises technologies and solutions such as:

- Building Information Modelling (BIM)
- Artificial Intelligence (AI)
- Internet of Things (IoT)
- Big Data and Predictive Analytics
- Blockchain
- Augmented Reality (AR) and Virtualisation
- Cloud and Real-Time Collaboration
- 3D Printing and Additive Manufacturing
- Autonomous Construction
- Advanced Building Materials
- Prefabrication and Modular Construction
- Photogrammetry and 3D Scanning

The framework also provides recognition for Prefabricated Volumetric Modules (PVM), prefabricated mechanical, electrical and plumbing (MEP) systems, self-climbing working platforms and other productivity-enhancing technologies.

Another major change is the shift from a material-based assessment approach to a construction method-based assessment approach. Rather than focusing mainly on whether a building uses precast concrete, steel or timber, the framework evaluates how selected construction methods contribute to productivity, quality and industrialisation.

In addition, productivity-enhancing solutions within cast-in-situ construction are now recognised. These include precut and prebend reinforcement, prefabricated reinforcement cages, self-compacting concrete, and advanced formwork systems.

These changes reflect the industry's transition towards smart construction and Construction 4.0, where technology adoption plays an increasingly important role in project delivery.

Why the 70 IBS Score Benchmark Remains Relevant

One of the most enduring features of Malaysia's IBS policy framework is the minimum IBS Score requirement of 70.

Under the IBS Roadmap 2003 – 2010, the initial IBS Score for government projects started at 30 in 2004, increased to 50 in 2006, and reached a minimum of 70 points. Under the 2005 component-based scoring approach, projects with extensive use of precast structural and wall systems had a clearer pathway to achieving a high IBS Score. However, as the framework evolved, achieving 70 points became less dependent on a single construction system and more closely linked to broader industrialisation practices, including standardisation, productivity-enhancing methods, digital tools, and Construction 4.0 technologies.

The benchmark was officially introduced in a government policy for government projects through the Treasury Circular on IBS implementation in 2008. Government projects valued at RM 10 million or more are required to attain a 70 IBS Score. Since then, it has remained a key requirement throughout various national initiatives, including the IBS Roadmaps, Construction Industry Master Plan (CIMP), Construction Industry Transformation Programme (CITP), Construction 4.0 Strategic Plan, Construction Action Plan (CAP30) and National Construction Policy 2030. The latest Treasury Circular on IBS implementation maintains the minimum IBS Score requirement of 70 for Government projects valued at RM10 million and above.

More recently, the requirement has also been extended to selected private sector developments. Through the implementation of KPKT Circular No. 4/2024 and the decision of the National Council for Local Government (MNKT), selected private development projects are now required to achieve a minimum IBS Score of 70 as part of the planning approval process. Only private building projects with a development cost of RM50 million and above and a Gross Floor Area (GFA) of 50,000 square metres and above are required to achieve an IBS score of 70. CIDB is designated as an External Technical Agency (Agensi Teknikal Luaran, ATL) in the OSC Committee to monitor IBS implementation for private projects.

However, the objective of the benchmark has never been to promote a specific construction material or system. Instead, it serves as a policy instrument to encourage meaningful adoption of industrialisation practices across the construction value chain.

What has changed over time is not the target itself, but the pathway towards achieving it.

In the early years, projects typically relied heavily on precast structural and wall systems to achieve high scores. CIS 18:2010 introduced additional opportunities through standardisation and repetitive design. CIS 18:2018 expanded the framework to recognise BIM and other productivity-focused solutions. Today, CIS 18:2023 allows projects to earn points through a broader range of industrialised construction methods, modular construction, digitalisation and Construction 4.0 technologies.

Consequently, a project achieving an IBS Score of 70 today may demonstrate a much wider range of industrialisation practices than a project assessed under the original 2005 framework.

The benchmark has remained constant, but the industry's understanding of industrialisation has evolved considerably.

Why Were Some IBS Factors Revised?

Some industry stakeholders have noted that several structural and wall system factors in the latest editions of CIS 18 differ from those in earlier versions. These revisions should not be viewed only as a reduction in scoring opportunities.

Rather, they reflect CIDB's effort to align the assessment framework with evolving industry practices. As productivity-enhancing technologies, modular construction methods and digital solutions become more widely adopted, the IBS Score framework has expanded to recognise these contributions.

Consequently, scoring opportunities are now distributed across a broader range of industrialisation practices, rather than being concentrated mainly on structural and wall components.

This approach reflects the industry's transition from component-based industrialisation towards a more comprehensive assessment of productivity, innovation and technology adoption. Therefore, the revised factors should be understood as a redistribution of scoring emphasis, rather than a weakening of IBS recognition.

Evolution of the IBS Score Framework

Aspect	IBS Score Manual 2005	CIS 18:2010	CIS 18:2018	CIS 18:2023
Primary Focus	Prefabrication and labour reduction	Industrialisation and standardisation	Productivity and digitalisation	Construction 4.0 and technology adoption
Industry Context	Reduce dependency on foreign labour and promote IBS components	Improve efficiency through standardisation and modular coordination	Improve productivity and project coordination	Accelerate digital transformation and smart construction
How IBS Was Viewed	Use of prefabricated components	Industrialised construction process	Productivity-enhancing construction approach	Technology-enabled industrialised construction ecosystem
Main Assessment Approach	Component-based	Component and design-based	Productivity-based	Productivity and technology-based
Structural Systems	Strong emphasis on precast and steel systems	Enhanced classification and standardisation	Revised structural factors	Construction method-based classification introduced
Wall Systems	High weightage (30 marks)	Reduced weightage (20 marks)	Expanded wall technologies	Continued recognition of industrialised wall systems
Standardisation & Repetition	Limited emphasis	Major enhancement	Maintained	Further strengthened through modular approaches
Modular Coordination (MC)	Based on MS 1064	Increased emphasis	Modular gridlines recognised	Coordinating sizes was introduced to broaden compliance
BIM Recognition	Not included	Not included	Introduced (up to 6 points)	Expanded as part of Construction 4.0 technologies
Prefabricated Bathroom Unit (PBU)	Prefabricated 3D units, including toilet units, recognised	Not specifically recognised	PBU formally recognised/ reintroduced	Continued and integrated within a broader modular construction approach
Prefabricated Volumetric Module (PVM)	Not included	Not included	Not included	Introduced and formally recognised
Prefabricated MEP Systems	Not included	Not included	Not included	Introduced and formally recognised
Construction 4.0 Technologies	Not included	Not included	Limited digital recognition through BIM	AI, IoT, Blockchain, Big Data, AR/VR, Cloud Collaboration, 3D Printing and Autonomous Construction recognised
In-Situ Productivity Solutions	Minimal recognition	Limited recognition	Limited recognition	Precut and prebend reinforcement, prefabricated reinforcement cages, SCC and advanced formwork recognised
Key Message	IBS = Prefabrication	IBS = Industrialisation	IBS = Productivity	IBS =Construction 4.0 and Smart Construction

Table 1: Evolution of the IBS Score Framework in Malaysia (2005–2023)

Current Challenges and Future Considerations

Despite the continuous improvement of the IBS Score framework, several implementation challenges remain. As the framework now covers productivity, digitalisation and Construction 4.0 technologies, successful IBS implementation increasingly depends not only on the scoring method, but also on the readiness of project teams, designers, contractors, suppliers and the wider construction ecosystem.

One key challenge is the limited integration of industrialisation principles during the early design stage. Effective IBS implementation requires early consideration of standardisation, modular coordination and Design for Manufacture and Assembly (DfMA). However, in some projects, these elements are only considered during the construction stage. This limits the opportunity to optimise design, improve buildability and achieve better productivity outcomes.

Another concern is the tendency to view the IBS Score mainly as a compliance requirement. In such cases, the focus may be on achieving the minimum score of 70 rather than on using IBS as a strategy to improve productivity, quality, safety, sustainability, and project delivery. This may reduce the real value of IBS implementation, especially when the score is achieved without meaningful changes to the overall construction process.

Industry readiness also remains uneven across Malaysia. The availability of IBS suppliers, manufacturing facilities, technical expertise and digital capabilities may vary between regions. This is particularly relevant for projects in remote or less-developed locations, where logistics, supply chain capacity, and access to skilled personnel may affect the practical adoption of advanced IBS and Construction 4.0 solutions.

Moving forward, the main issue is no longer only how to achieve an IBS Score of 70. The more important question is how to ensure that projects achieving the score can genuinely deliver the intended benefits of industrialisation. Future improvement of the IBS Score framework should therefore continue to support early design integration, stronger ecosystem readiness, better supply chain planning and wider adoption of productivity-enhancing technologies.

Way Forward

The evolution of the IBS Score framework reflects the broader transformation of Malaysia's construction industry over the past two decades. What began as a tool to promote the use of prefabricated building components has gradually evolved into a broader framework that supports productivity improvements, standardisation, digitalisation, and the adoption of Construction 4.0.

Throughout this journey, the minimum IBS Score requirement of 70 has remained an important benchmark for measuring the level of industrialisation in construction projects. Although the scoring methodology has evolved over time, the main objective remains the same: to encourage the adoption of better construction practices that improve quality, productivity, efficiency, safety and sustainability.

The latest development of CIS 18:2023 shows that IBS is no longer limited to specific materials or prefabricated components. Instead, the framework now recognises a wider range of construction methods, modular solutions, digital tools and productivity-enhancing technologies. This shift is important because it allows projects to achieve industrialisation through different pathways, depending on project needs, design approach, technology readiness and supply chain capability.

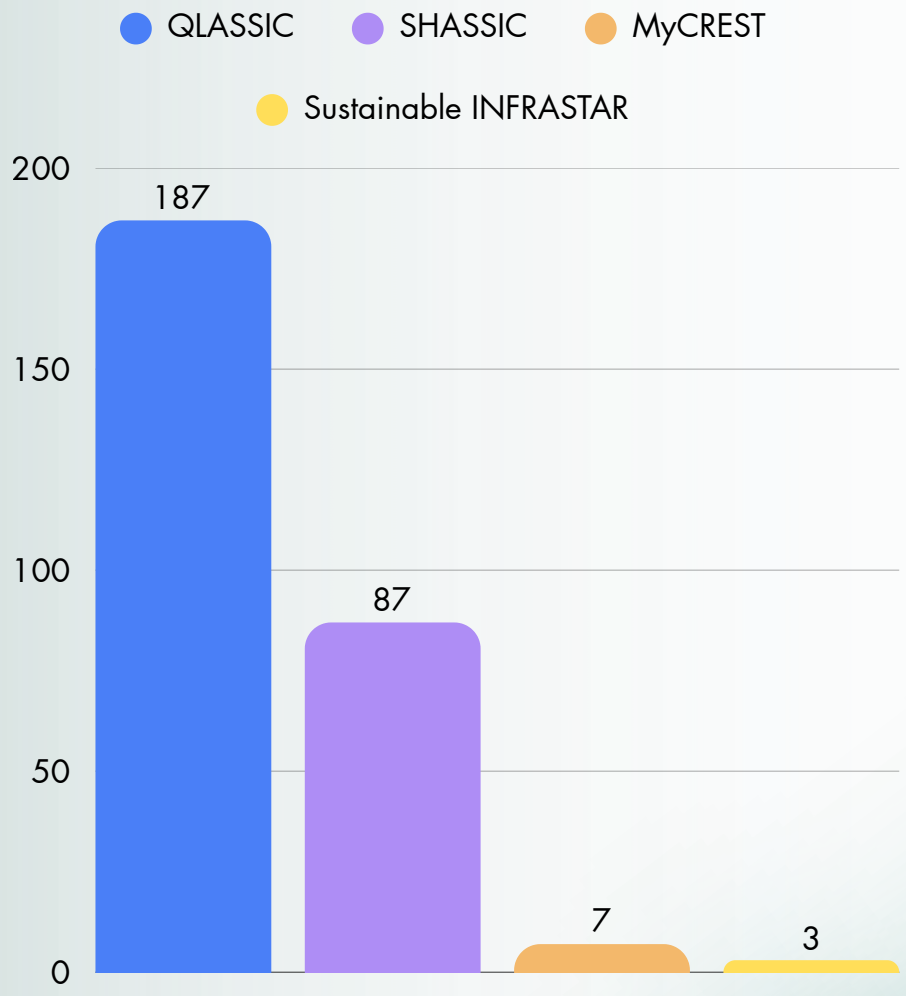
However, the future success of IBS implementation should not be measured only by whether a project achieves the minimum IBS Score of 70. The more important question is whether the project can deliver the intended benefits of industrialisation in practice. This requires that IBS principles be considered from the early design stage, including standardisation, modular coordination, and Design for Manufacture and Assembly. When these principles are only considered during construction, the opportunity to maximise productivity and improve project delivery may be limited.

Moving forward, greater attention should also be given to industry readiness. The availability of IBS suppliers, manufacturing facilities, technical expertise, digital capability and skilled personnel may differ across regions. These factors can affect the ability of project teams to adopt advanced IBS solutions and Construction 4.0 technologies, particularly in remote or less-developed locations.

Therefore, the next phase of the IBS Score framework should focus not only on compliance but also on meaningful implementation. Achieving 70 points should represent real improvement in construction planning, design coordination, productivity, quality and digital transformation. As Malaysia progresses towards the aspirations of the National Construction Policy 2030, the IBS Score framework will remain an important mechanism to guide the industry towards a more productive, resilient and technology-driven construction ecosystem.

Driving Quality and Sustainability Across the Built Environment

CREAM continues to play a pivotal role in advancing quality and sustainability standards within the construction industry through its assessment and certification programmes. As of June 2026, a total of 187 QLASSIC, 87 SHASSIC, 7 MyCREST, and 3 Sustainable INFRASTAR project assessments have been completed. The strong uptake of QLASSIC and SHASSIC demonstrates the industry's emphasis on construction quality and safety, while the growing adoption of MyCREST and Sustainable INFRASTAR reflects increasing awareness of sustainable building and infrastructure development practices.



More info:

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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.

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

Courtesy visit by CREAM to Jabatan Kerja Raya Sabah
14 May 2026 (Thursday)
Jabatan Kerja Raya Sabah, Kota Kinabalu, Sabah

Courtesy visit by CREAM to Sabah Housing and Real Estate Developers Association (SHAREDA)
14 May 2026 (Thursday)
SHAREDA Office, Kota Kinabalu, Sabah

Courtesy visit by Building Technology Research Institute (BTRi) to Makmal Kerja Raya Malaysia
15 May 2026 (Monday)
Makmal Kerja Raya Malaysia (MKRM), Kuala Lumpur

Meeting with Institute of Quality Malaysia (IQM)
21 May 2026 (Thursday)
CIDB 520, The MET Corporat Towers, Kuala Lumpur

Courtesy visit by Institution of Engineers Malaysia (IEM) to CREAM
25 May 2026 (Monday)
CIDB 520, The MET Corporat Towers, Kuala Lumpur

A Technical Visit by CREAM to Rapid Transit System (RTS) Link Site Project
9 June 2026 (Tuesday)
Malaysia Rapid Transit System Sdn Bhd, Johor Bahru, Johor

A Technical Visit by Board of Trustees CREAM to MKRM Sarawak
16 June 2026 (Tuesday)
Makmal Kerja Raya Malaysia Sarawak, Kuching, Sarawak

A Technical Visit by Institution of Engineers Malaysia to MKRM Sarawak
16 June 2026 (Tuesday)
Makmal Kerja Raya Malaysia Sarawak, Kuching, Sarawak

Courtesy visit by Faculty of Civil Engineering, UiTM Caw. Pahang to CREAM
19 June 2026 (Friday)
CIDB 520, The MET Corporate Towers, Kuala Lumpur

Courtesy visit by CREAM to The Centre of Excellence in Engineering & Technology (CREaTE), Jabatan Kerja Raya
26 June 2026 (Thursday)
CREaTE, Melaka

Courtesy visit by CREAM to Majlis Perbandaran Selayang
30 June 2026 (Tuesday)
Majlis Perbandaran Selayang

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Upcoming Events

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Event Calendar

DATE	PROGRAMS	VENUE
	AUGUST	
4 - 5 Aug 2026	Contractor's Quality Management System (CQMS) Auditor Training Course	Kuala Lumpur
5 - 6 Aug 2026	14th Annual Prefabrication Summit	Capri by Fraser, Kuala Lumpur
	SEPTEMBER	
15 - 16 Sept 2026	Contractor's Quality Management System (CQMS) Auditor Training Course	Kuala Lumpur
29 Sept - 1 Oct 2026	3rd Construction Industry Congress (CIC 2026)	Kuala Lumpur
	OCTOBER	
13 - 14 Oct 2026	Training Refresher Auditor Contractor's Quality Management System (CQMS)	Kuala Lumpur
	NOVEMBER	
10 - 12 Nov 2026	International Construction Week (ICW) Malaysia & BuildXpo 2026	MITEC, Kuala Lumpur
	DECEMBER	
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.*

Kursus Latihan Juruaudit Contractor's Quality Management System (CQMS)

Kursus Latihan Juruaudit CQMS direka untuk membangunkan pengetahuan dan kemahiran peserta dalam melaksanakan audit Contractor's Quality Management System (CQMS). Kursus ini merangkumi prinsip pengauditan, keperluan CQMS dan kaedah audit yang sistematik bagi memastikan pematuhan terhadap standard kualiti pembinaan. Melalui gabungan pembelajaran teori dan latihan praktikal, peserta akan memperoleh kompetensi untuk menjalankan audit dengan berkesan serta menyokong penambahbaikan berterusan organisasi.

APA YANG AKAN ANDA PELAJARI?

Selepas mengikuti kursus ini, peserta akan dapat:

- Memahami prinsip, keperluan dan elemen utama CQMS.
- Merancang, melaksanakan dan melaporkan audit secara sistematik.
- Mengenal pasti ketidakpatuhan serta peluang penambahbaikan dalam organisasi.
- Memahami peranan dan tanggungjawab juruaudit dalam memastikan keberkesanan sistem pengurusan kualiti.

SIAPA YANG PERLU HADIR?

- Pengurus, eksekutif dan pegawai yang terlibat dalam pengurusan kualiti pembinaan.
- Jurutera, penyelia tapak, pegawai teknikal, kontraktor dan perunding pembinaan.
- Individu yang terlibat dalam pelaksanaan, pemantauan atau penilaian sistem pengurusan kualiti.
- Mereka yang ingin membangunkan kompetensi sebagai juruaudit CQMS.

APA YANG DISERTAKAN?

- Bahan dan modul latihan kursus
- Makan tengah hari dan minuman ringan
- Sijil penyertaan kursus

PRASYARAT PENYERTAAN

- Mempunyai pensijilan Juruaudit ISO 9001 yang masih sah atau diiktiraf.
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- **Track 4:** Infrastructure & Building Services
- **Track 5:** Safety, Quality & Compliance
- **Track 6:** Construction Management & Policy
- **Track 7:** Resilient Construction

IMPORTANT DATES

- **Abstract Submission**
  7 July 2026
- **Acceptance Notification**
  11 August 2026
- **Camera-ready Paper**
  2 September 2026
- **Payment & Registration**
  2 September 2026

PUBLICATION

We uphold high academic standards for all submissions. Authors are responsible for the originality, quality, and ethical compliance of their work. Papers rejected for plagiarism or quality issues are not the responsibility of the conference, and fees are non-refundable.

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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

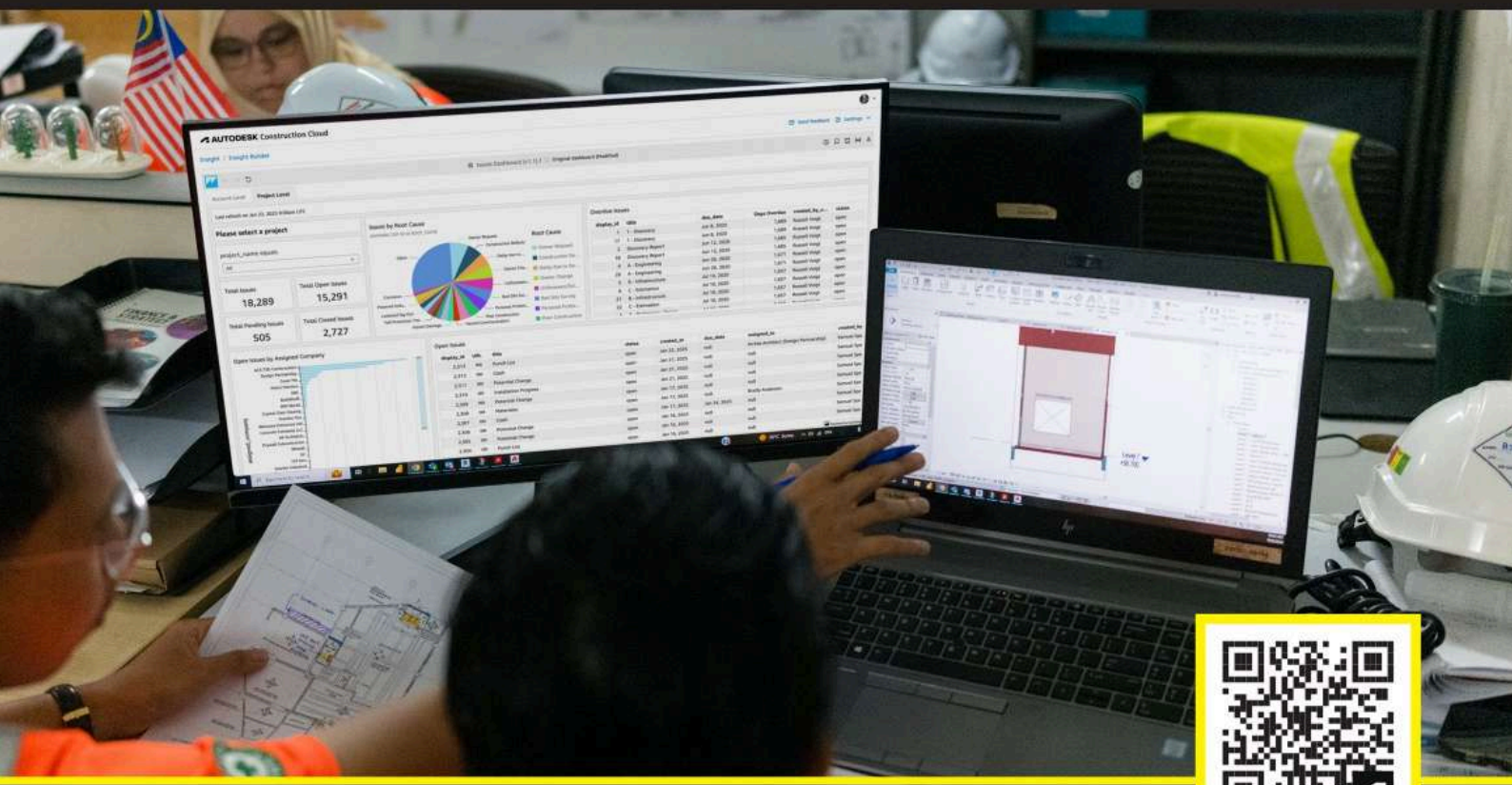
www.novade.net

AUTODESK
Construction Cloud

Turn insights into project wins

Harness the power of real-time insights:

- Make data-driven decisions
- Reduce rework and risks
- Improve quality, safety and efficiency



Contact us at:
asean.contact@autodesk.com

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KEMENTERIAN SAINS, TEKNOLOGI DAN INOVASI
MINISTRY OF SCIENCE, TECHNOLOGY AND INNOVATION

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

NATIONAL TECHNOLOGY & INNOVATION SANDBOX

NTIS Secretariats: MRANTI, MIMOS, FUTURISE

Main Funding Partner: MTDC

MALAYSIA MADANI kemampanan

ASEAN MALAYSIA 2025

YOUR GO-TO INDUSTRIAL EXPERTS

BANDAR UNIVERSITI PAGOH

Shaping The Future of Industry

Bandar Universiti Pagoh Industrial Park offers a strategic gateway to Johor's dynamic economy, with direct access to the North–South Expressway for seamless logistics and regional connectivity. Positioned between Kuala Lumpur and Johor Bahru, it features a unique industrial–academia ecosystem that drives innovation, talent development, and long-term business growth. Anchor your operations in a future-ready industrial ecosystem.

Strategic Location. Customised Solutions. Future-Ready.

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

For Industrial Land Enquiries:

06-984 2222

sdp-industrial.com

Sime Darby Property

Sime Darby Property Berhad (197301002148)

Bakun Hydroelectric Plant
2,520MW
Available Capacity

sarawak energy

Power to Grow

As Sarawak's primary power provider and Malaysia's largest renewable energy developer, Sarawak Energy is lighting up and powering our communities.

About Sarawak Energy

- Sarawak Energy is powered by a multidisciplinary workforce of over 6,000, serving a population of 3 million, covering 790,000 domestic, commercial, industrial and export customers through an extensive transmission and distribution network.
- Our mission is to deliver reliable, renewable and affordable energy for the people of Sarawak and beyond.

Follow us on

Sarawak Energy Berhad

Sarawak Energy

1SarawakEnergy

sarawakenergyofficial

- **Largest Hydropower Sustainability Standard Certified Hydropower Plant In Southeast Asia (Silver Rate)**
- **Winner of International Hydropower Association's Blue Planet Prize 2025**

Glodon

Digital Building Platform Service Provider

Providing End-to-End Solutions for the Building Life Cycle

Driving Construction Digitalization Since 1998

100+ Countries and Regions	80+ Global Branches	8 Global R&D Centers
390K+ Corporate Customers	7 million+ Construction Projects	10 million+ End Users

Glodon Cubicost 5D BIM Digital Cost Management Solution

Cubicost TAS
Takeoff for Architecture and Structure

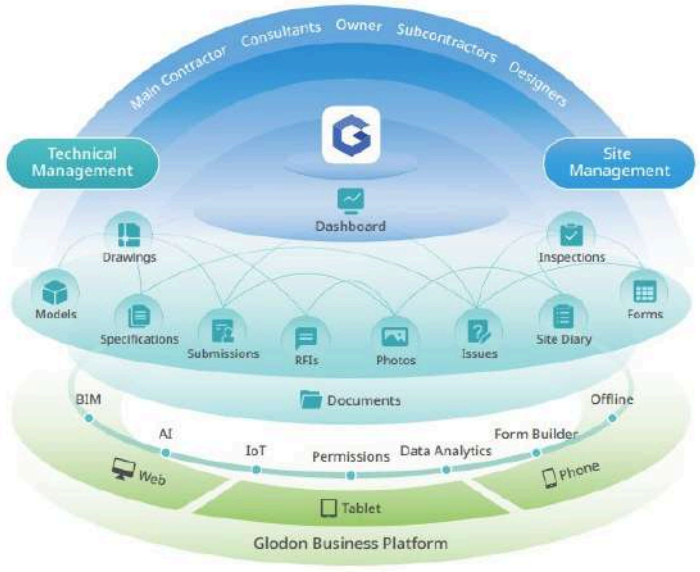
Cubicost TRB
Takeoff for Rebar

Cubicost TME
Takeoff for Mechanical and Electrical

Cubicost TBQ
Tender Series for Bill of Quantity

- Intelligent Identification
- Build-in Local Rules
- Customizable Report
- Visual Quantity Validation
- Integrated Quantity & Cost

Glodon Construction Project Management Platform



- Streamlined Collaboration Process
- Centralized Data Hub
- Visualized Site Management
- Seamless Data Interoperability

Asia Website

MY LinkedIn

AS ONE WITH THE NATION

Rail Transportation | **Airpor ts** | **Commercial & Residential** | **Security Complexes**









TRANS RESOURCES CORPORATION SDN BHD(120265-P)
TRC BUSINESSCENTRE
JALAN ANDAMAN UTAMA, 6800 AMPANG, SELANGOR
TEL : +603- 4103 8000
EMAIL US AT : info@trc.com.my
www.trc.com.my @trco cial84

SIRIM — CERTIFIED TO ISO 45001:2018 CERT. NO.: OSH 00780

SIRIM — CERTIFIED TO ISO 9001:2015 CERT. NO.: QMS 03588

SIRIM — CERTIFIED TO ISO 14001: 2015 CERT. NO.: EMS 00863

THE MAKERS OF TOMORROW

FBG has long been a trusted name in Malaysia's construction industry, renowned for delivering complex, high-value projects with precision, safety, and uncompromising quality. Established in 1976, the Group has grown into one of the country's leading G7-certified contractors, with a proven track record that includes landmark developments such as the Low-Cost Carrier Terminal (LCCT), Tampin Hospital, and the Ampang LRT Depot. With nearly five decades of expertise, FBG continues to shape Malaysia's built environment through excellence in construction.

Beyond construction, FBG has strategically diversified into property development, plantation, logistics, and related sectors - driving progress through innovation, operational excellence, and sustainable growth.

At the heart of our journey is a clear purpose: to build with intent today, so we may become the Makers of Tomorrow.

- CONSTRUCTION
- PROPERTY DEVELOPMENT
- LOGGING & TIMBER TRADING
- LOGISTICS
- TRADING OF BUILDING MATERIALS
- PLANTATION

FBG HOLDINGS BERHAD
(formerly known as Fajarbaru Builder Group Bhd)

No. 61 & 63, Jalan SS 6/12, Kelana Jaya,
47301 Petaling Jaya, Selangor Darul Ehsan,
Malaysia.

www.fajarbarugroup.com

SURIA HEIGHTS

BANDAR SRI SENDAYAN

MATRIX Property

Prestige Living within Golden Course Vicinity

Welcome to Suria Heights - a secure residential development strategically located in the prime area of Bandar Sri Sendayan. Spanning 116 acres of freehold land, it offers a variety of homes equipped with smart home technology for seamless living. At its heart, a 4.6-acre lake park provides serene spaces for relaxation and recreation. With excellent connectivity to major highways, Suria Heights blends modern comfort, suburban tranquility, and sustainable living.

A diverse selection of home types tailored for different lifestyles and family needs.

- TERRACES
- CLUSTER HOMES
- SEMI-DETACHED HOMES

- Versatile Home Layouts
- Smart Home Integration for Effortless Living
- Secured Enclave
- Complimentary Clubhouse Membership
- Sustainable Features for a Future-Ready Home

Developed by:
BSS DEVELOPMENT SDN BHD
200501012590 (689638-X)

A Subsidiary of:
MATRIX CONCEPTS HOLDINGS BERHAD
199601042262 (414615-U)

Artist's Impression

Bukit Suria Rumah Kluster (CH-P1) - No. Lesen Pemaju : 10613/11-2028/1282(A)- Tempoh Sah : 19/11/2023 – 18/11/2028 - No. Permit Iklan : 10613-61/11-2026/1071(N)-(L) - Tempoh Sah : 25/11/2024 – 24/11/2026 - Hakmilik Tanah : Kekal - Bebanan Tanah : Tiada - Pelan Bangunan Diluluskan oleh : Majlis Bandaraya Seremban - No. Rujukan : MBS.S.KB1-08/24 (B) - Tarikh Dijangka Siap : Disember 2026 - Jenis RKDT - 56 Unit, RM 1,126,999 (Min) - RM 1,692,364 (Max) - Bukit Suria Rumah Teres (LH-P1) - No. Lesen Pemaju : 10613/11-2028/1282(A)- Tempoh Sah : 19/11/2023 – 18/11/2028 - No. Permit Iklan : 10613-62/12-2026/1135(N)-(L) - Tempoh Sah : 12/12/2024 – 11/12/2026 - Hakmilik Tanah : Kekal - Bebanan Tanah : Tiada - Pelan Bangunan Diluluskan oleh : Majlis Bandaraya Seremban - No. Rujukan : BIL(14)DLM.MBS.KB1-04/24(B) - Tarikh Dijangka Siap : November 2026 - RTDT Jenis A1 - 8 Unit, RM 1,087,834 (Min) - RM 1,221,723 (Max) - RTDT Jenis A2 - 8 Unit, RM 1,010,999 (Min) - RM 1,134,888 (Max) - RTDT Jenis A3 - 60 Unit, RM 806,999 (Min) - RM 930,888 (Max) - Bukit Suria Rumah Berkembar (CH-P1) - No. Lesen Pemaju : 10613/11-2028/1282(A)- Tempoh Sah : 19/11/2023 – 18/11/2028 - No. Permit Iklan : 10613-66/04-2027/0280(N)-(L) - Tempoh Sah : 14/04/2025 – 13/04/2027 - Hakmilik Tanah : Kekal - Bebanan Tanah : Tiada - Pelan Bangunan Diluluskan oleh : Majlis Bandaraya Seremban - No. Rujukan : BIL (6) DLM MBS.S.KB1-25/24(B) - Tarikh Dijangka Siap : Februari 2027 - RBDT Jenis A – 14 Unit, RM 1,620,999 (Min) – RM 2,078,568 (Max) - Sekatan-Sekatan Kepentingan : Tanah yang diberimilik ini tidak boleh dipindahmilik, dipajak, digadai melainkan dengan kebenaran bertulis daripada Pihak Berkuasa Negeri. - All renderings contained in this advertisement are artist's impressions only. The information contained herein is subject to change without notification as may be required by the relevant authorities or developer's project consultant. Whilst every care is taken in providing this information, the owner, developer and manager cannot be held responsible for any variations. This is not a gated and guarded development. For avoidance of doubt on the specifications and development status, please always refer to the Sale and Purchase Agreement. THIS ADVERTISEMENT HAS BEEN APPROVED BY THE NATIONAL HOUSING DEPARTMENT. THE DEVELOPMENT INFORMATION CAN BE CHECKED THROUGH THE PORTAL TEDUH.KPKT.GOV.MY.

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