



# Gamuda Engineering enabling efficiency and innovation through digital construction for a resilient future with the BSI Kitemark™ for BIM design and construction



Gamuda Berhad is an engineering, property and infrastructure company based in Malaysia. It is one of the largest Malaysian infrastructure companies, with a proven track record of delivering innovative breakthrough solutions worldwide.

Gamuda Engineering (Gamuda), a subsidiary of Gamuda Berhad is proud to become the first main contractor in Malaysia to receive the prestigious BSI (British Standard Institution) Kitemark™ certificate for Design, Construction,

and Commissioning. This certification recognises Gamuda's remarkable progress in digital construction and demonstrates its exemplary compliance with global ISO 19650 standards in implementing Building Information Modelling (BIM) for construction. This milestone reflects Gamuda's commitment to embracing BIM and Next-Generation Digital Industrialised Building System (IBS) technologies, enabling sustainability through digital construction for a resilient future.

Find out more at [bsigroup.com](https://www.bsigroup.com)







## Leadership in Engineering Solutions

Gamuda's commitment to pioneering engineering solutions is evident through various industry breakthroughs and setting new benchmarks. The company's ambitious initiative, Gamuda Green Plan 2025 (GGP 2025), exemplifies its dedication to reducing direct and indirect corporate greenhouse gas emissions intensity. BIM and Next-Gen Digital IBS are crucial enablers in Gamuda's efforts to digitalise construction processes while minimising environmental footprints and upskilling the workforce with Industry 4.0 skills.

## Digital Integration for Holistic Coordination

Lim Hui Yan, Executive Director of Gamuda Engineering, emphasises the company's transformation into a data-driven organisation. With a Group-wide focus on upskilling data literacy among employees, BIM plays a pivotal role in digitally integrating critical processes. BIM facilitates holistic coordination of project design, costing, and programming data, allowing greater precision in the design and construction phases. Furthermore, it provides an increased "lifecycle view" during operations and maintenance, enhancing project sustainability and efficiency.



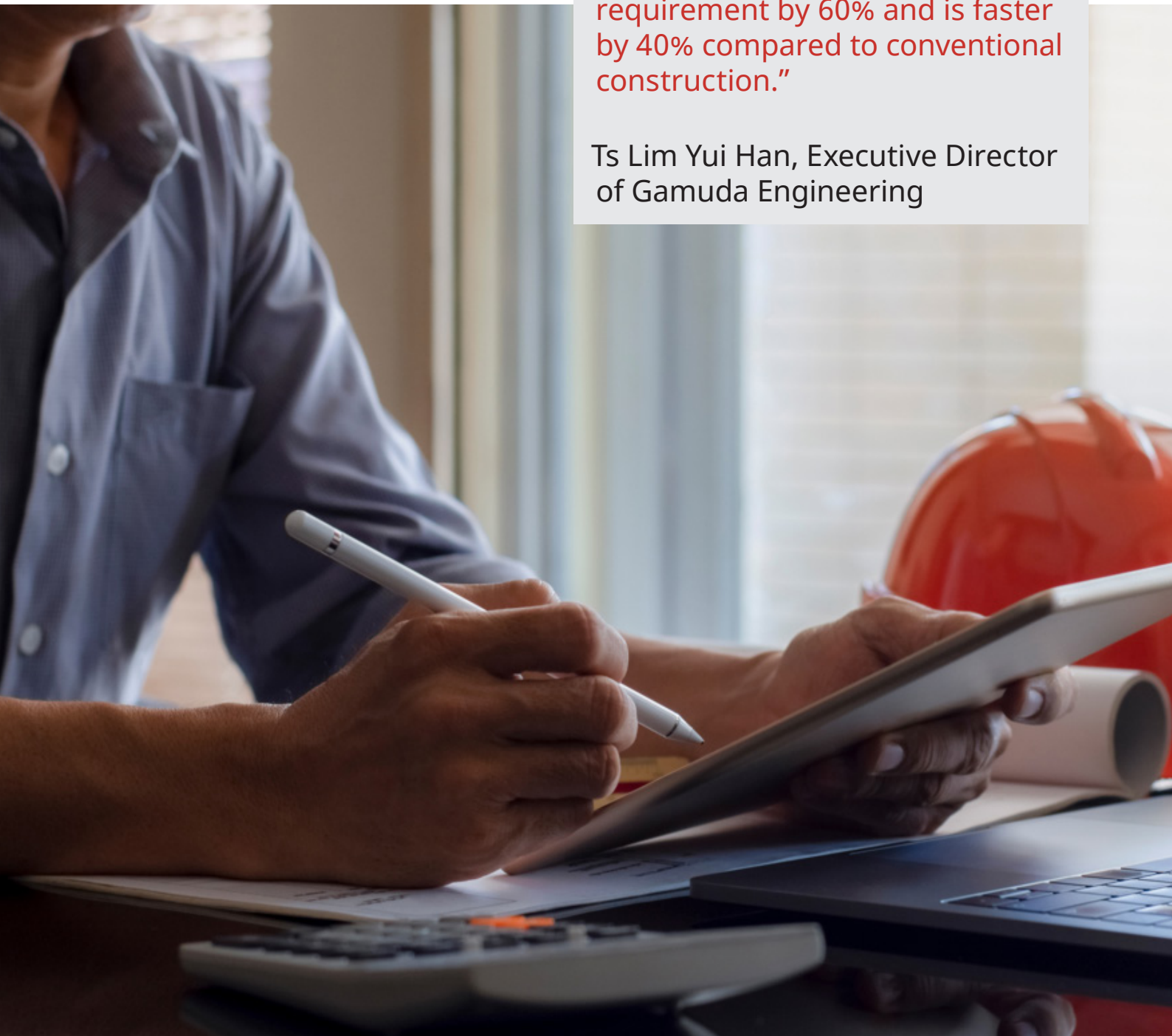


## Challenges and Solution

Gamuda faced challenges in information exchanges between various stakeholders, including Gamuda Engineering and Gamuda IBS. To address this, BIM integration became critical to realise a robust digital ecosystem for construction projects. By implementing cloud-based BIM integrated with highly automated precision robotic production (Digital IBS), Gamuda achieved value engineering from a digital ecosystem perspective. As a result, reliance on foreign workforce decreased by up to 60 percent, and construction became 40 percent faster.

“BIM integration is critical to realise Digital Industrialised Building System (IBS) alongside cloud-based digital design, high-level automation and precision robotic production. All these bring about value engineering from a digital ecosystem perspective to produce various precast products suitable for residential, commercial and infrastructure projects. Gamuda has envisioned BIM and Digital IBS to be the future of construction as robotic automation reduce manpower requirement by 60% and is faster by 40% compared to conventional construction.”

Ts Lim Yui Han, Executive Director of Gamuda Engineering







## The ISO 19650 Framework

ISO 19650 provided the framework for standardised processes and procedures, further enhanced by third-party body audits to identify potential gaps in the system. The BSI Kitemark™ for Design, Construction, and Commissioning became a quality hallmark differentiator for leading industry players to validate their successful BIM implementations in projects' life cycles. BSI has been leading in the built environment sector since 1903, adding credibility to Gamuda's achievement.

## BSI solution

Gamuda Engineering's attainment of the BSI Kitemark™ for Design, Construction, and Commissioning showcases its dedication to excellence in digital construction and adherence to global BIM standards. The company's commitment to sustainability through digitalisation, innovative engineering solutions, and workforce upskilling has set

new industry benchmarks. The certification acknowledges Gamuda's outstanding achievements and reinforces its position as a leader in the construction industry, driving the adoption of BIM and digital technologies toward a more efficient, sustainable, and resilient future.

## Why BSI?

**Ts Lim Hui Yan comments:** "In a competitive market, the BSI Kitemark enables Gamuda to differentiate their BIM projects and prove their credentials in relation to the industry recognised standard for the design and construction phase through successful implementation in projects. This allows smoother delivery of projects to contract requirements, measurement and monitoring of client satisfaction against the delivery of a project, and the management of supply chain, or Gamuda's role within it."

