Building Technology Research Institute
香港建築科技研究院

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香港建科院通訊
BTRi Newsletter

11.2026











01 香港建科院 封面故事
BTRI COVER STORY





共建建造業未來
Building the Future of Construction

推動標準提升、具高影響力的創新及人工智能應用，促進業界轉型
Advancing Standards, High-impact Innovation and AI for Industry Transformation

香港建造業的新篇章
A New Chapter for Hong Kong Construction

香港建造業在全球建造業界已佔領導地位，在推展日益複雜的建造項目時，仍維持高水平的品質、安全及可持續發展。然而，業界仍面對建造成本上升、人力資源限制及工作流程分散等挑戰，因此有必要推動行業全面轉型。

Hong Kong has earned its place in global leadership in the construction industry, delivering increasingly complex projects while maintaining high standards of quality, safety and sustainability. However, the industry continues to face different challenges such as rising construction costs, workforce constraints and fragmented workflows which call for the need for industry-wide transformation.

High Labour Costs
An aging workforce with low productivity

Contract Risk Premium on Construction Materials and Equipment
Materials are procured through multiple tendering processes along the supply chain

Stringent Design Standards and Specifications
Outdated design codes and conservative practices impose unnecessary constraints on concrete, imposed loads, steel reinforcement, bored pile capacity, rebar anchorage, fire resistance, etc.

Lengthy Approval Process
Difficult to meet regulatory, accreditation, technical, and operational requirements within planned timelines

Project Complexity
Challenges of urban landscape and environmental characteristics of Hong Kong

香港建造業正邁進轉型新階段
Hong Kong construction industry is entering a new phase of transformation

本地標準檢討
Local Standards Review

為應對上述挑戰，香港建築科技研究院 (香港建科院) 自2024年第四季起，與政府部門、業界持份者及學術機構緊密合作，對本地建造標準進行全面檢討。檢討工作涵蓋15項研究，包括標準統一、優化現有設計參數、制定區域性參數，以及為創新物料、設計和施工方法建立新標準。

15項研究中已有12項完成，取得令人鼓舞的成果，並展現為業界帶來廣泛裨益的潛力。主要研究成果包括：

- 透過測試及數據分析，全面檢視變質沉積岩的承載力，包括將岩石類別2(b) 中地基的假定容許承載壓力及膠結／摩擦力分別提高60%及130%。有關優化措施預計可為公共工程及私人發展項目每年分別節省**約7億港元**及**5億港元**的建造成本。
- 一項風壓研究發現，地面隔音屏障所承受的風壓可降低多達31%，估計每年可為公共隔音屏障工程節省**約2億港元**的建造成本。
- 另一項風力研究則因應北部都會區新發展地區獨特的區域地形，優化該區的風壓剖面。研究顯示，在80米以下高度，平均風壓可**降低約4%**。
- 在建築材料方面，一項研究探討引入600級高強度鋼筋，估計應用後每年可分別為公共工程及私人發展項目節省**約3.6億港元**的建造成本。

已完成的研究預計每年合共可節省**約35億港元**的建造成本，部分建造工程的特定工作流程更有望縮減多達33%。餘下三項研究預計於2026年底完成，屆時將進一步鞏固現有成果，擴大15項研究的整體效益。

To address these challenges, Building Technology Research Institute (BTRi) undertook a comprehensive review of local construction standards in close collaboration with government departments, industry stakeholders and academic institutions starting from the 4th quarter of 2024. The review consisted of 15 studies covering the alignment of standards, optimisation of existing design parameters, development of region-specific parameters, and establishment of new standards for innovative materials, designs and construction methods.

Twelve of the 15 studies are complete, showing encouraging results and potential benefits across the industry. Key findings include:

- A comprehensive review of the bearing capacity of meta-sedimentary rocks, supported by testing and data analysis, has raised the presumed allowable bearing pressures and bond/friction for foundations on Category 2(b) rock by 60% and 130%, respectively. This enhancement is estimated to reduce construction cost by **about $700 million** and **$500 million** annually for public works and private projects respectively.
- A wind pressure study found that wind pressures on at-grade noise barriers could be reduced by up to 31%, yielding construction cost savings of **about $200 million** annually for public noise barrier projects.
- Another wind study refined wind pressure profiles for the new development zone in Northern Metropolis with the consideration of its unique regional topography, yielding an average wind pressure **reduction of 4%** at height below 80m。
- On new materials, a study examined the introduction of Grade 600 high-strength reinforcement, whose adoption is estimated to deliver annual cost savings of **about $360 million** each for public works and private projects.

These completed studies are estimated to provide combined annual construction cost savings of **around $3.5 billion** and could potentially reduce specific work processes by up to 33% for certain types of construction works. Meanwhile, scheduled for completion by the end of 2026, the remaining three studies are expected to build on these achievements and further enhance the collective outcomes of all 15 studies.

建造業轉型革新：策略研究釋放生產力及提升競爭力
Transforming Construction - A Strategic Study to Unlock Productivity and Competitiveness

建基於上述成果，政府在《2026年財政預算案》中撥款予香港建科院，開展進一步檢討建造標準的研究，並探索人工智能在設計及施工工作流程中的應用，以降低建造成本及提升生產力。為此，香港建科院已開展了一項策略性研究，聚焦於標準提升、人工智能應用，以及採納具高影響力的創新技術，旨在發掘切實可行的機遇，以改善項目交付、釋放生產力，並鞏固香港建造業的長遠競爭力。

Building on this success, the Government has allocated funding in the 2026 Budget to BTRi to undertake studies including further review of construction standards and the exploration of AI applications across the design and construction workflows with a view to reduce construction cost and improve productivity. To this end, BTRi has launched a strategic study on standards enhancement, artificial intelligence applications as well as adoption of high-impact innovations, aiming to identify practical opportunities to improve project delivery, unlock productivity and strengthen the long-term competitiveness of Hong Kong's construction industry.

凝聚業界
Engaging the Industry

研究十分重視業界持份者參與，廣泛聽取業界不同界別的意見，至今已透過諮詢、工作坊及案例研究諮詢超過30個機構的代表，包括政府部門、半官方機構、專業團體、私人發展商、顧問及承建商等。此外，研究亦透過問卷調查收集前線人員的意見，以深入了解實際痛點，並汲取經驗、教訓及成功應用案例。這些業界相關見解將有助確保研究建議切合業界需要，並支持落實推行。

Stakeholder engagement is a dedicated part of the study, with representatives from over 30 parties, including government departments, quasi-government organizations, professional associations, private developers, consultants, and contractors, contributing their views through consultations, workshops, and case studies. In addition, the study also surveyed frontline practitioner to identify pain points and capture practical experience, lessons learned and successful use cases. These insights will help ensure that the recommendations respond to industry needs and support practical implementation.



與持份者會面，探討如何透過推進標準及科技轉型推動業界轉型
Meeting with stakeholders on transforming industry through standards advancement and technologies transformation

推動業界轉型的三大支柱
Three Pillars for Industry Transformation

研究已識別出推動業界轉型的三大關鍵支柱：
提升標準及工作流程、推廣高影響力的創新，以及推動人工智能賦能建造。 三者共同構成推動建造業邁向更高生產力、更可持續及前瞻性的框架。

The study has identified three key pillars critical for industry transformation:
Enhancing standards and workflows, promoting high-impact innovations, and advancing AI-enabled construction practices. Together, these areas provide a framework for supporting a more productive, sustainable and future-ready construction industry.

1. 提升標準及工作流程
Enhancing Standards and Workflows

建造標準及技術要求對確保品質和安全甚為重要；然而，過時的設計規範及既有作業模式可能對業界發展造成不必要的限制。本研究將探討標準現代化及精簡工作流程的機會，在維持品質與安全的同時，促進具成本效益的設計，以及更有效採用新物料、新施工方法和新科技。

While construction standards and technical requirements play a critical role in ensuring quality and safety, outdated design codes and existing established practices may impose unnecessary constraints that hinder the industry's developments. The study examines opportunities to modernise standards and streamline workflows, enabling cost-effective design and more efficient adoption of new materials, methods and technologies while upholding quality and safety.

2. 加快創新應用
Accelerating Innovation Adoption

全球各地的創新施工方法、先進物料及數碼科技正在重塑項目交付模式。本研究將評估相關方案在改善項目成本、工期、品質、安全及可持續發展方面的潛力，並重點探討其於香港實際應用的可行性。

Around the world, innovative construction methods, advanced materials and digital technologies are reshaping project delivery. The study assesses these solutions for their potential to improve cost, time, quality, safety and sustainability in projects, with emphasis on practical application in Hong Kong.

3. 推進人工智能應用
Advancing AI Applications

人工智能正成為貫穿建造項目生命週期的重要工具。由項目規劃、設計優化，以至施工管理及資產營運，人工智能均有潛力改善決策及營運效率。本研究將探討人工智能如何應用於規劃、設計、施工及資產管理，並審視推動廣泛應用所需的可信數據基礎、評估機制及管治框架。

AI is emerging as a powerful tool across the construction lifecycle. From project planning and design optimisation to construction management and asset operation, AI has the potential to improve decision-making and operational efficiency. The study explores how AI can support planning, design, construction and asset management, together with the trusted data, assessment and governance arrangements needed for wider adoption.

初步研究結果
Initial Findings

三大策略支柱下的重點
Emerging Priorities Across the Three Strategic Pillars

標準及工作流程 Standards and Workflows	具高影響力的創新 High-impact Innovations	人工智能應用 AI Applications
以證據為本，對設計規範及標準作出針對性更新 Targeted, evidence-based updates in design codes and standards	在更廣闊的創新路徑下推動組裝合成建築法及機電裝備合成法，並推動突破性的創新應用 MiC and MiMEP within a broader innovation pathway along with application of game changing innovations	可信數據及具規模的應用 Trusted data and scalable applications

初步研究結果與研究三大策略支柱互相呼應。
The initial findings mirror the study's three strategic pillars.

1. 推進標準及工作流程 Advancing Standards and Workflows

研究已識別多項具提升潛力的本地標準、守則、規範及相關工作流程，涵蓋主要設計要求，並按潛在效益釐定優先次序。研究將採用實證為本的方法，參照國際獲廣泛認可的做法進行評估，在確保品質和安全的前提下，提出切實可行且具成效的改進方案。

The study has identified specific review opportunities to enhance local standards, codes and specifications across key design requirements and workflows. These opportunities have been prioritised based on their potential benefits and will be assessed against recognised practices using an evidence-based approach to develop practical and impactful advancement without compromising quality or safety.

2. 加快高影響力創新應用 Accelerating High-impact Innovations

A) 推進組裝合成建築法及機電裝備合成法 Advancing MiC and MiMEP

度身訂造式的項目交付模式、較遲引入整合規劃，以及標準化程度不足，均限制項目交付的可重複應用及規模化發展。研究建議建立一個更完善的組裝合成建築知識平台，提供切合需要的解決方案及建議，以促進更早開展規劃、推動規模化應用，並改善知識共享、測試、認證及供應鏈協調。

Bespoke delivery, late integration and limited standardisation create constraints on repeatability and scaling in project delivery. The proposed establishment of an enhanced modular construction knowledge space with tailored solutions and recommendations would enable earlier planning, allow scalable adoption, and improve knowledge sharing, testing, certification and supply-chain coordination.

B) 創新科技 Innovative Technologies

冗長的審批及驗收程序，加上現場試驗機會有限，往往令具潛力的創新技術難以加快擴大應用，延緩其在業界廣泛普及。研究發現，業界需要一個更完善的創新樞紐，為創新方案的評估、驗證、試行、標準化以至規模化應用建立更清晰的路徑，加快成熟方案在業界廣泛採用。

Lengthy approval and acceptance processes, together with limited opportunities for site trials, can delay promising technologies to upscale into mainstream adoption. The findings highlight the need for an enhanced innovation nexus to facilitate clearer pathways to assess, validate, pilot, codify and scale proven solutions to accelerate the adoption.

3. 釋放人工智能潛力 Unleashing AI Potential

研究的初步發現顯示，系統分散、數據結構不一致，以及有限的經驗證應用案例，是人工智能更廣泛應用的主要障礙。初步方向聚焦以下三項優先工作，透過建議設立中央化人工智能平台，加快人工智能在香港建造業的應用：

The study's initial findings highlighted fragmented systems, inconsistent data structures and limited validated use cases to be the key barriers to wider AI adoption. The emerging direction focuses on three priorities to accelerate AI adoption in Hong Kong through a proposed centralized AI platform:

- **可信數據 Trusted Data**
  建立互聯、標準化及適用於人工智能的數據基礎。
  Establish connected, standardised, AI-ready data foundations.
- **穩健管治 Robust Governance**
  為人工智能工具的驗證及監督訂立清晰框架。
  Create clear frameworks for validation and oversight on AI tools.
- **高價值人工智能應用 High-value AI Applications**
  優先推動最具潛力的建造業應用場景。
  Prioritise construction use cases with the greatest potential.



02 應用研發項目成果 ACHIEVEMENTS OF APPLIED R&D PROJECTS

塑造建造業未來：香港建科院建立MiC卓越創新中心的願景與角色
Shaping the Future of Construction: BTRi's Vision and Role in Establishing a MiC Centre of Excellence

「組裝合成」建築法（MiC）是推動香港建造業轉型的重要動力。自2018年起，發展局在「建造業2.0」的框架下積極推廣MiC，並已廣泛應用於公私營建築項目。透過將建造工序轉移至環境受控的廠房內進行，MiC有助提升生產力、建造質素、工地安全及可持續發展表現，同時紓緩業界長遠的人手短缺問題。

Modular Integrated Construction (MiC) is a strategic enabler for transforming Hong Kong's construction industry. Since 2018, the Development Bureau has advanced MiC under Construction 2.0, achieving significant adoption across public and private sector projects. By shifting construction activities to controlled manufacturing environments, MiC improves productivity, quality, safety and sustainability while helping to address long-term workforce challenges.



為鞏固現有成果，業界須進一步突破發展瓶頸，促進MiC產業生態圈持續發展，當中包括進一步精簡流程，以及應用先進製造技術和自動化，提升建造質素及成本效益。與此同時，全球對MiC的需求日益殷切，為相關技術及解決方案開拓國際市場帶來龐大機遇。

Building on this progress, further work is needed to overcome existing barriers and support the sustained growth of the MiC ecosystem. This requires further streamlining of processes and improvements in quality and cost-effectiveness through advanced manufacturing and automation. At the same time, growing global demand for modular construction presents significant opportunities to expand the reach of MiC solutions into international markets.

作為發展局在技術及落實相關措施方面的執行機構，香港建科院將發揮策略引領作用，凝聚各持份者的力量，推動MiC發展，並加快相關技術在香港及其他地區的應用。香港建科院計劃就MiC的整體價值鏈進行全面研究，以制訂策略性措施，並在項目全生命週期推廣良好作業模式，重點涵蓋先進技術應用、優化供應鏈及制訂標準。

As the Development Bureau (DEVB)'s technical and implementation arm, BTRi will provide strategic leadership to advance MiC, align stakeholders and accelerate the adoption of modular construction technologies in Hong Kong and beyond. BTRi plans to undertake comprehensive studies of the MiC value chain to devise strategic initiatives and promote best practices throughout the project life cycle, with a focus on the application of advanced technologies, supply chain enhancement and the formulation of standards.

香港建科院致力設立世界級的MiC卓越創新中心，推動香港成為匯聚相關專業知識的樞紐。中心將建立協作平台，連繫政府、業界、學術界及製造商，並以四大範疇為工作重點，分別為質素保證及認可、知識交流及能力提升、科研創新，以及國際合作及對外聯繫。中心將結合科研成果與業界專業知識，轉化為切實可行的解決方案，提升業界整體能力，推動持續改進。

BTRi aspires to position Hong Kong as a knowledge hub for MiC through a world-class Centre of Excellence in MiC expertise. The Centre will connect government, industry, academia and manufacturers through a collaborative platform. Its work will be guided by four pillars: quality assurance and accreditation; knowledge and capability development; research and innovation; and international collaboration and outreach. By translating research and industry expertise into practical solutions, the Centre will strengthen industry capabilities and drive continuous improvement.

展望未來，香港建科院期待進一步發揮香港作為策略性門戶的作用，對接全球市場需求與粵港澳大灣區的製造實力及建造創新優勢，讓香港成為推動MiC的國際樞紐。

Looking ahead, BTRi aims to strengthen Hong Kong's role as a strategic gateway connecting global demand with Greater Bay Area (GBA) manufacturing capabilities and construction innovation, positioning the city as an international hub for MiC solutions.

提升「組裝合成」建築法項目交付質量及成本效益的研究
Study on the Advancement of MiC Practices to Improve Quality and Cost Effectiveness of MiC Delivery

香港建科院受建築署委託進行研究，探討更多「組裝合成」建築法應用場景，以提升項目交付的質素及成本效益。 研究檢視了MiC項目在設計統籌、場外預製、跨境運輸及現場安裝等環節所面對的主要挑戰，並提出三項相輔相成的優化措施，包括採用先進科技、優化設計及連接細節，以及採用直接供應的採購模式。上述措施旨在加強可追溯性、提升關鍵連接細節的質素，並更清晰界定合約各方在整個項目生命周期內的責任。

Commissioned by the Architectural Services Department (ArchSD), BTRi conducted a study to explore opportunities to advance MiC practices and enhance the quality and cost-effectiveness of project delivery. The study reviewed key challenges of MiC delivery across design coordination, off-site manufacturing, cross-boundary transportation, and on-site installation, and proposed three complementary enhancement measures: the adoption of advanced technologies, the optimization of design and connection details, and the adoption of a direct-supply procurement model. Together, these measures aim to strengthen traceability, enhance the quality of critical interfaces, and establish clearer responsibilities for contracting parties across the whole life cycle.



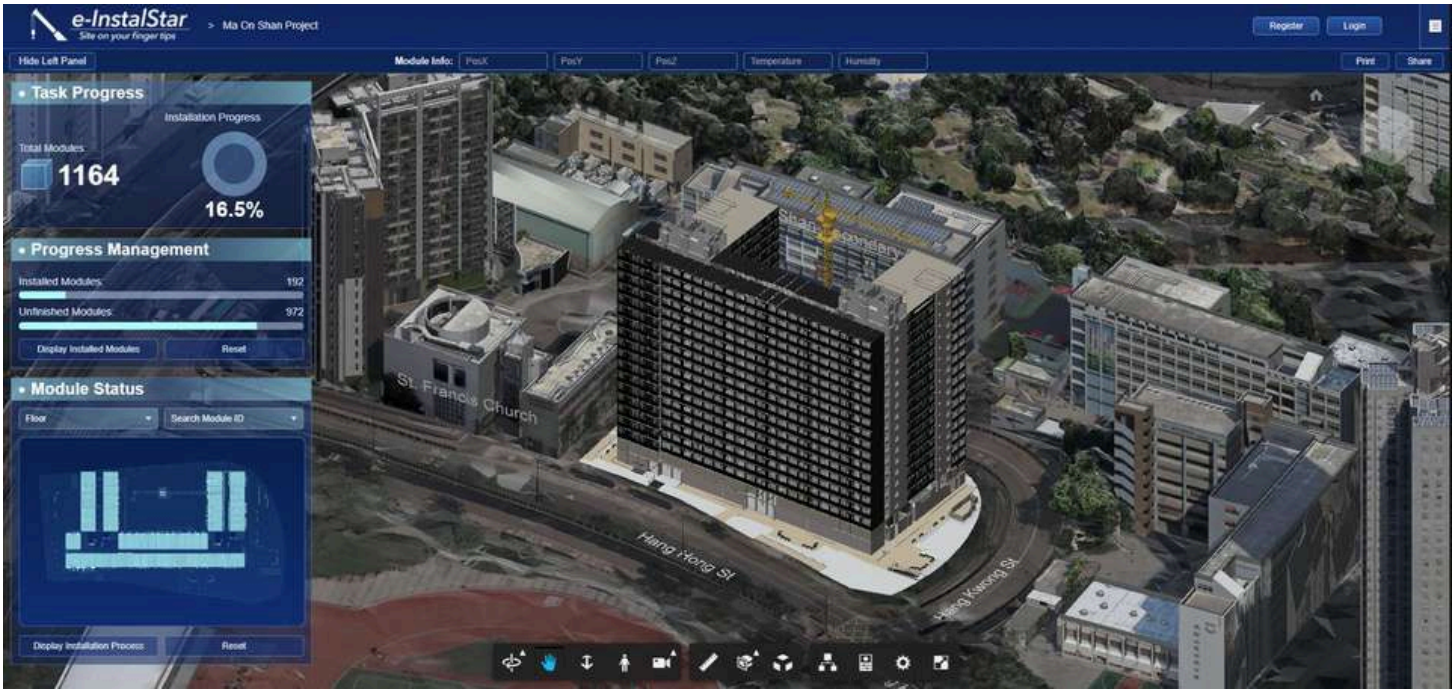
研究為MiC項目團隊提供切實可行的建議及參考工具。透過加強項目生命周期各階段的統籌、透明度及問責，研究為MiC項目交付訂立一套良好作業模式，推動香港以更可靠、高效及具成本效益的方式推展MiC項目。

The study provided practical recommendations and reference toolkits for adoption by MiC project teams. By enhancing coordination, transparency, and accountability across the project life cycle, the study redefines best practices for MiC delivery and supports more reliable, efficient, and cost-effective MiC projects in Hong Kong.

「組裝合成」建築法區塊鏈數碼工程監督系統技術規格
Technical Specification for a Blockchain-enabled MiC e-Inspection Platform

受建築署委託，香港建科院正與香港大學合作制訂《「組裝合成」建築法區塊鏈數碼工程監督系統之技術規格》。項目旨在建立一套通用技術規格，以支援 MiC 項目的全流程質量保證，加強合約管治及問責機制，並推動區塊鏈技術在 MiC 工程項目中的應用。

Commissioned by the ArchSD, BTRi is working with the University of Hong Kong to develop the technical specification for a blockchain-enabled MiC e-Inspection platform. The project aims to establish a generic technical specification to support full-chain quality assurance, enhance contractual governance and accountability, and facilitate the wider adoption of blockchain technology in MiC projects.



該技術規格將涵蓋 MiC 工程監督及檢驗流程的核心要求，利用區塊鏈技術支援模組於工廠生產、物流運輸及工地安裝等階段的全程追溯，建立可靠、透明且不可篡改的工程紀錄。技術規格將訂立統一的基準要求，同時容許因應不同項目需要作出適當調整，以配合未來各類 MiC 項目的實際應用。

The technical specification will cover the key requirements for the MiC supervision and inspection workflow, supporting traceability and reliable, immutable records during factory production, transportation and on-site installation through blockchain technology. The specification will establish a common baseline while allowing project-specific requirements to be incorporated, enabling its adaptation to future MiC projects.

為確保技術規格切合業界需要，項目團隊將舉辦技術工作坊及持份者諮詢活動，廣泛收集業界意見，並持續優化相關內容。項目成果將為業界推動區塊鏈技術於 MiC 質量管理及工程監督的應用奠定基礎，並有助將相關技術規格納入香港及粵港澳大灣區 MiC 標準體系，促進建築業數碼化及高質量發展。

To ensure that the specification fulfils industry needs, technical workshops and stakeholder consultations will be conducted to gather feedback and refine the proposed specification. This development will provide a foundation for the wider industry adoption of blockchain-enabled MiC e-Inspection and enable the specification to serve as an integrated component of MiC standards for Hong Kong and the Greater Bay Area (GBA).

人工智能效能驗證機制
AI Performance Verification

香港建科院正與建盛（亞洲工程）顧問有限公司合作，為香港建造業制定人工智能（AI）效能驗證機制。該計劃旨在建立一個標準化框架，以評估AI方案的效能，確保其符合以人為本、可信及安全的原則，同時滿足發展局就工務工程相關AI應用所訂定的基本要求。

BTRi is engaging Asia Infrastructure Solutions (AIS) to develop an AI performance verification programme for construction-related AI solutions in Hong Kong. The programme aims to establish a standardised framework for assessing the performance of AI solutions, ensuring they are human-centric, trustworthy and safe, while meeting the baseline requirements of the corresponding DEVB-mandated AI use cases for public works.

本項目首先從全球不同地區就AI應用的管控模式進行研究及盤點，研究團隊已參考多項國際及本地的重要框架及指引，包括OECD人工智能原則、NIST人工智能風險管理框架、ISO 42001:2023、新加坡AI Verify測試框架、數字政策辦公室的本地人工智能指引以及個人資料私隱專員公署的人工智能模型個人資料保障框架等。基於上述參考框架所提出的核心原則，制定了一套包含兩個主要組成部分的驗證框架，即**基本保障及加強版 FARE**。

- **基本保障**作為通用基準，旨在確保AI方案在多個關鍵範疇符合要求，包括AI供應商的身份及問責機制、透明度及可解釋性、數據及知識治理、安全及資料保障、人為監督及升級處理機制，以及審計與全生命周期管控等。

- **加強版 FARE**涵蓋24個細分維度，從功能性（Functional）、準確性（Accuracy）、穩健性（Robustness）及邊界情況（Edge Cases）等四大角度出發，為不同AI應用場景制定專屬的評估流程，以配合相關基本要求進行針對性評估。為了在驗證成本與所需信心水平之間取得平衡，實施前須仔細考慮評估問題及檢查點的數量，以及通過相關的標準。

The project begins with a global stocktaking of AI Governance Practice. Core references from OECD AI Principles, NIST AI Risk Management Framework, ISO 42001:2023, AI Verify Testing Framework (Singapore), local AI Guideline (DPO) and AI Model Personal Data Protection Framework (Office of the Privacy Commissioner for Personal Data), etc., have been studied. Based on the common principles underlined in these references, a framework comprising two major components, ie. **Essential Assurance and Enhanced FARE** has been derived.

- The **Essential Assurance** forms the common baseline to ensure compliance in various aspects such as identity and accountability of the AI vendor, transparency and explainability, data and knowledge governance, safety and data security, human oversight and escalation, as well as audit and lifecycle control.

- The **Enhanced FARE**, comprising 24 sub-dimensions from Functional, Accuracy, Robustness and Edge Cases perspectives, is tailored for Use Case-Specific assessment workflows that are to be developed based on the baseline requirements. To strike a balance between the cost of verification and the intended level of confidence, the number of questions and checkpoints, as well as the passing criteria, are to be carefully considered before implementation.

基本保障：所有AI方案的共同基準
Essential Assurance: A Common Baseline for All Construction-related AI Solutions



加強版 FARE：按應用場景作針對性評估
Enhanced FARE: Targeted Assessment for Specific Use Cases



項目將以試點形式，為發展局強制採用的三項 AI 應用場景建立標準化的 AI 效能驗證機制，包括：利用AI／RPA進行設計優化、招標文件檢查，以及從 DWSS 進行資訊檢索及報告。項目團隊將制定相關評估準則，並利用市場上合適的AI解決方案進行概念驗證（PoC）測試，為建造業安全及有效地採用人工智能技術建立實際基礎。

Building on an evidence-based approach and as a pilot start, the project will establish a standardised AI performance verification mechanism for the three AI use cases mandated by DEVB: Design Optimisation by AI/RPA, Tender Document Checking, and Information Retrieval and Reporting from DWSS. Assessment criteria will be developed and PoC tests conducted using selected market AI solutions, providing a practical foundation for the safe and effective adoption of AI in the construction industry.

新田科技城的數字孿生規範製作與實施方案
Digital Twin Specification and Implementation at San Tin Technopole

由土木工程拓展署北拓展處委託，香港建科院正為新田科技城項目制定數字孿生技術規範及相關實施策略。目的是為了建立一套項目規範，涵蓋數字孿生在新田科技城項目發展的功能及實用性，以及相關應用科技，例如物聯網感測器和IT相關的要求。另一方面，實施策略就實際層面提供指引，例如大型數字孿生模型需要的雲端方案，從而促進數字孿生於項目落地應用。

Commissioned by the North Development Office of Civil Engineering and Development Department (CEDD), the BTRi is developing a digital twin technical specification and a digital twin implementation strategy for the San Tin Technopole (STT) development. This project aims to establish a specification that outlines the functionality of digital twin during the project development of STT and the technical requirements associated with the enabling technologies e.g. IoT sensors and system architecture. On the other hand, the implementation strategy provides directions on practical aspects such as cloud hosting options for large-scale digital twin models, which will facilitate the project team in adopting digital twin successfully.



隨著香港建造業持續數碼化及數字化，項目已經從建築信息模型 (BIM) 技術漸漸邁向更能實時反映實體的數字孿生技術。透過為新田科技城項目建立數字孿生規範及實施方案，我們不單會構建數字孿生運用的框架，亦會就數字孿生如何有效應用於不同項目提供實務指引。

As Hong Kong construction industry continues to digitalise projects, the progression from BIM towards more real-time reflection of the physical asset becomes imminent. By establishing the digital twin specification and implementation plan for STT Development, we will not only create a framework for future digital twin adoption at a project level, but we will also provide practical guidance on how digital twin can effectively be integrated into different projects.

以標準化框架推動機電裝備合成法（MiMEP）產業發展
Advancing MiMEP through Standardisation

機電裝備合成法（MiMEP）已成為提升香港建築機電工程生產力、安全及建造質素的重要推動力。儘管 MiMEP 在公營工程項目中的應用日益普及，業界經驗顯示，不一致的做法及以項目為本的解決方案，往往限制了 MiMEP 的整體潛能。有見及此，香港建科院剛完成一項有關 MiMEP 標準化的研究，旨在為業界建立更一致、可擴展及以價值為導向的應用模式。

本研究由建築署委託進行，以配合政府推動建造業轉型及工業化發展的整體政策方向。

Multi-trade Integrated Mechanical, Electrical and Plumbing (MiMEP) has become an important driver for productivity, safety and quality improvement in Hong Kong's building services delivery. While MiMEP has been increasingly adopted across public works projects, industry experience has highlighted that inconsistent practices and project-specific solutions limit its full potential. In response, BTRi has completed a study on MiMEP standardisation to establish a more consistent, scalable and value-driven approach for the industry.

The study is commissioned by the ArchSD, aligning with the Government's broader construction transformation and industrialisation agenda.

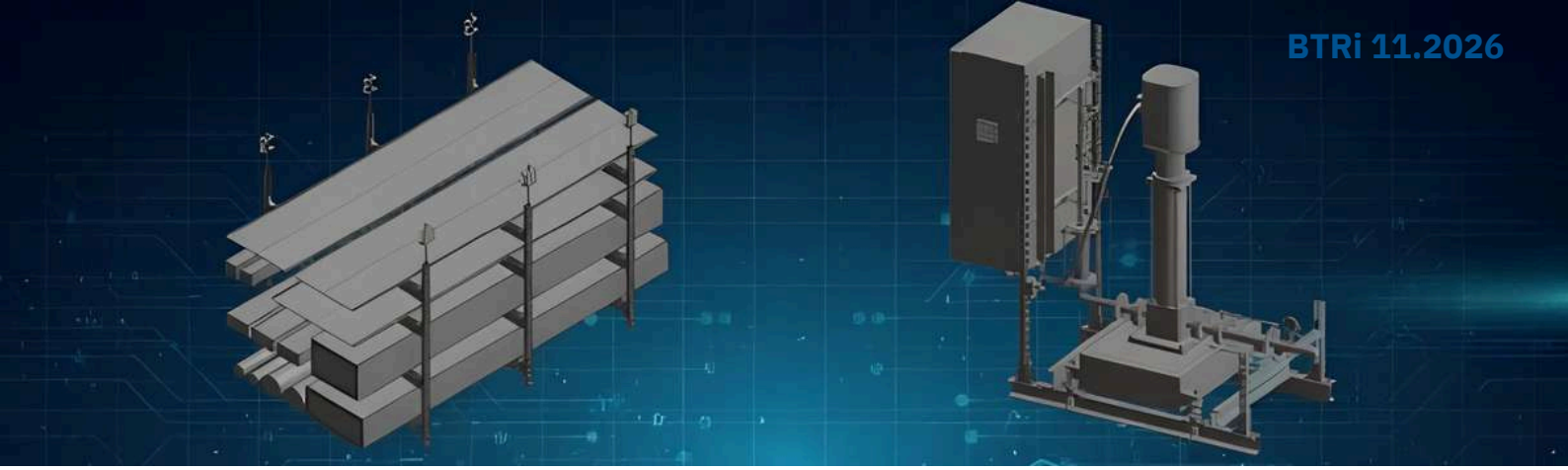
MiMEP 的優勢及發展趨勢
Merits and Trends of MiMEP

MiMEP 將多個建築機電專業整合成協調一致的模組，於工廠進行預製，並於工地進行組裝。與傳統施工方式相比，此做法具備多方面優勢，包括透過受控的生產環境提升生產力及施工品質、減少浪費及重複工序情況，並藉着減少高勞動強度及高風險的現場工序以提升施工安全。配合數碼化工具的早期協調，亦有助改善空間規劃、物流安排及整體可建造性。

MiMEP 的應用在香港業界正逐步擴展至更多不同類型的建築項目。然而，現時不少項目仍屬度身訂造，模組設計、介面及支承系統存在差異，從而降低了方案的可重複性，限制成熟方案的再用，亦局限了規模效益。這進一步突顯以標準化為主導的 MiMEP 應用模式的必要性。

MiMEP integrates multiple building services trades into coordinated modules fabricated off-site and assembled on-site. Compared with conventional construction practices, this approach delivers multiple benefits, including the enhancement in productivity through off-site fabrication , the improved quality through better-controlled working environments, reduction in waste and rework, and enhancement in construction safety by minimising labour-intensive and high-risk on-site activities. Early coordination using digital tools also supports improved spatial planning, logistics and buildability.

Industry trends in Hong Kong show a steady expansion of MiMEP applications across a wider range of building types. However, many implementations remain bespoke, with variations in module design, interfaces and support systems. These inconsistencies reduce repeatability, limit reuse of proven solutions and undermine economies of scale. This has reinforced the need for a standardisation-led approach to MiMEP adoption.



標準化研究的進展
Progress of MiMEP Standardisation

香港建科院的研究在系統、產品及組裝三個層面建立 MiMEP 標準化框架，並以整個資產生命周期中的空間及重量管理作為實務重點。在系統層面，研究制定了 MiMEP 在建築物內的整體規劃原則，有助於在早期階段明確界定設備區域、通道要求及跨專業協調邊界。框架亦着重於在項目初期清晰界定設計顧問、承建商及 MiMEP 製造商的角色與責任，以促進各方協作，並簡化後續的實施及審批流程。在產品層面，研究着重對模組尺寸、空間界限及重量作出一致控制，以支援安全吊運、安裝，以及與建築結構及工地進出條件的配合。在組裝層面，研究認為，因應不同項目條件而調整製造及安裝方式的靈活性應予保留，但必須同時確保各項安排均在既定的空間及重量框架內進行，以提升施工安全、便利維修保養，並提高項目成果的可預測性。

除了技術框架外，本研究亦探討如何透過合約條文，例如《特別規格》（Particular Specifications），適切地支持及強化標準化 MiMEP 的一致實施，從而簡化審批流程，並促進其在公營工程項目中更廣泛及更有效的應用。

BTRi's study has established a MiMEP standardisation framework across system, product and assembly levels, with a practical focus on space and weight management throughout the asset lifecycle. At the system level, the study sets common planning principles for how MiMEP should be accommodated within buildings, helping to define service zones, access requirements and coordination boundaries at an early stage. The framework also seeks to define clear roles and responsibilities for designers, contractors and MiMEP manufacturers early in the project lifecycle, facilitating more effective coordination and streamlining subsequent implementation and approval processes. At the product level, consistent control of module dimensions, spatial envelopes and weight limits are emphasised to support safe lifting, installation and compatibility with structural and access constraints. At the assembly level, flexibility in fabrication and installation should be retained, while operating within defined spatial and weight boundaries to ensure safer construction, easier maintenance and more predictable outcomes.

Besides the technical framework, the study has also examined how contract provisions, e.g. Particular Specifications, can be aptly applied to support and reinforce the consistent implementation of standardised MiMEP, helping to streamline the approval processes and facilitate wider and more effective application across public works projects.



業界參與
Industry Engagement

香港建科院深明有效的標準化必須切合實際並具備市場可行性，因此在研究過程中積極與業界持份者保持交流。當中包括分別於 2026 年 5 月及 6 月舉辦持份者交流工作坊諮詢承建商、顧問及政府部門等，就建議的標準化框架進行討論及收集意見。諮詢結果顯示，業界普遍支持於項目早期規劃及設計階段引入 MiMEP 設計考量，認為及早整合 MiMEP 有助加強跨專業協調、優化空間配置、提升可建造性，以及促進更高效的項目交付。相關交流亦有助識別推行過程中的挑戰，以及標準化框架可進一步完善的方向。

本研究亦有探討如何於合約文件層面充分涵蓋和反映 MiMEP 的標準化原則。業界普遍認為，建立一套清晰和務實的設計原則長遠有助於不同項目一致應用。因此，研究目前着重於制定高層次框架，而相關細節將根據業界意見及未來試點項目的應用經驗逐步深化。透過此協作及循序漸進的方式，研究將為 MiMEP 在香港更廣泛及有效的應用奠定穩固基礎，長遠提升建造業的生產力、安全、質量及項目交付確定性。

Recognising that effective standardisation must be practical and market-ready, BTRi has actively engaged industry stakeholders throughout the study. In particular, stakeholder engagement workshops were conducted in May and June 2026 with contractors, consultants and government departments, providing good opportunities to discuss the proposed standardisation framework and gather industry feedback. The consultations indicated broad support for introducing MiMEP design considerations at the early planning and design stages of projects, recognising that early integration can facilitate better coordination, optimise space allocation, enhance buildability and support more efficient project delivery. The engagements also helped identify implementation challenges and areas for further refinement of the proposed framework.

The study has also explored how standardised MiMEP principles can be well covered and reflected in contract documentation. Stakeholders generally considered it important to establish clear and practical design principles so that they can be consistently applied across projects in long run. At this stage, the focus therefore remains on developing a high-level framework, with detailed provisions to be progressively refined based on industry feedback and future pilot applications. Through this collaborative and iterative process, the study aims to establish a solid foundation for wider and more effective adoption of MiMEP in Hong Kong, supporting long-term improvements in productivity, safety, quality and project certainty across the built environment.





03 標準優化的成果
ACHIEVEMENTS OF STANDARDS ADVANCEMENT



粵港工程建設標準化協同機制正式建立

Guangdong-Hong Kong Construction Standardisation Collaboration Mechanism Formally Established

粵港簽署合作協議 推進工程建設標準化協同發展

Guangdong and Hong Kong Sign Cooperation Agreement Cooperation Agreement to Advance Collaboration on Construction Standardisation

2026年6月2日，香港特別行政區政府發展局與廣東省住房和城鄉建設廳正式簽署《粵港工程建設標準化協同合作協議書》，共同建立粵港工程建設標準化協同工作機制，推動兩地工程建設標準合作，並統籌和引領粵港建築工程領域相關標準的制定。

根據合作協議，粵港雙方將推進指定工程建設領域的標準互通互認，逐步建立具系統性、創新性及適用性的工程建設標準體系，促進兩地技術交流、規則銜接及產業協同。

On 2 June 2026, DEVB of HKSAR and the Department of Housing and Urban-Rural Development of Guangdong Province (DHURDGP) signed the Cooperation Agreement on Guangdong-Hong Kong Construction Standardisation (Agreement). The Agreement establishes a collaborative mechanism for construction standardisation between Guangdong and Hong Kong to promote collaboration on construction standards and jointly co-ordinate and steer the development of relevant standards for the construction sectors of the two places.

Under the Agreement, Guangdong and Hong Kong will promote the alignment and mutual recognition of standards in designated construction areas and progressively establish a systematic, innovative and applicable construction standards framework. The initiative will also foster technical exchange, regulatory alignment and industry collaboration between the two places.



建立工標委及專委會機制 香港建科院擔任香港秘書處

Establishment of the Collaborative Technical Committee and Expert Committees, with BTRi Serving as Hong Kong Secretariat



粵港兩地政府將共同成立粵港工程建設標準化協同工作組、粵港工程建設標準化協同技術委員會（「粵港工標委」），並按工作需要成立專業技術委員會（「專委會」），共同推動粵港工程建設標準的規劃、編制、技術審查及相關交流工作。

香港建科院擔任首屆粵港工標委香港秘書處，廣東省建築科學研究院集團股份有限公司擔任廣東秘書處。兩地秘書處將共同支援粵港工標委及相關專委會的日常運作，協調標準制修訂及相關技術工作。

2026年9月4日，粵港工標委成功召開首次會議，為後續推進粵港工程建設標準化協同工作奠定基礎。香港建科院將發揮香港秘書處的協調及聯絡角色，聯繫政府部門、業界及專業機構，共同推動相關標準制定工作。

Under the mechanism, the Guangdong and Hong Kong governments will jointly set up a Working Group and a Technical Committee. Expert Committees will also be formed as required to support the planning, development and technical review of Guangdong-Hong Kong Construction Standards, as well as related exchange activities.

BTRi serves as the inaugural Hong Kong Secretariat of the Technical Committee, while the Guangdong Provincial Academy of Building Research Group Co., Ltd. serves as the Guangdong Secretariat. The two Secretariats will jointly support the operation of the Technical Committee and the relevant Expert Committees, including coordinating the development and revision of Guangdong-Hong Kong Construction Standards and related technical work.

The inaugural meeting of the Technical Committee was successfully held on 4 September 2026, laying the foundation for the further advancement of collaboration on construction standardisation between Guangdong and Hong Kong. In its capacity as the Hong Kong Secretariat, BTRi will play a coordination and liaison role by maintaining liaison with government departments, industry stakeholders and professional organisations, and facilitating the development of relevant standards.

推動具公信力的粵港工程建設標準體系建設

Developing a Credible Framework for Guangdong-Hong Kong Construction Standards

是次粵港工程建設標準化協同工作由香港特別行政區政府發展局與廣東省住房和城鄉建設廳共同推動，並按照正式協同機制開展。相關粵港標準將依照既定程序完成立項、編制、徵求意見、技術審查及報批，並由兩地政府相關部門按程序發布，以提升標準的公信力、認受性及參考價值。

展望未來，香港建科院將繼續與香港特別行政區政府發展局、廣東省住房和城鄉建設廳、廣東省建築科學研究院集團股份有限公司及兩地業界持份者緊密協作，共同推動建立具粵港通用並與國際接軌的工程建設標準。

The collaboration is jointly promoted by DEVB of HKSAR and DHURDGP under the formal collaboration mechanism. Guangdong-Hong Kong Construction Standards will undergo the established processes for project initiation, drafting, consultation, technical review and approval, and will be published by the relevant government authorities of the two places in accordance with their respective procedures. This will enhance the credibility, recognition and reference value of the standards.

Looking ahead, BTRi will continue to work closely with DEVB of HKSAR, DHURDGP, Guangdong Provincial Academy of Building Research Group Co. and industry stakeholders from both places to develop construction standards applicable in both Guangdong and Hong Kong and aligned with international practices.

引領智能建造機械人發展 打造香港品牌
Building a Hong Kong Brand for Smart Construction Robotics

香港建科院將建造機械人定位為推動香港建造業轉型的其中一個策略方向。香港建科院正積極配合政府政策方向，透過有系統地制定一系列建造機械人技術規範，為業界建立可信賴的應用框架，並建立香港在智能建造領域的領導地位。經廣泛的業界諮詢，香港建科院於2026年5月發布首份遙控天秤系統技術規範。該規範不僅為本地應用確立操作及安全要求，亦往後大灣區相關標準奠定基礎，進一步鞏固香港於區內推動建造創新的角色。



BTRi has identified construction robotics as a strategic priority for transforming Hong Kong's construction industry. In line with government policy, BTRi is systematically developing technical specifications for construction robots to provide the industry with a trusted framework for adoption and strengthen Hong Kong's leadership in smart construction. Following extensive industry consultation, BTRi published its first technical specification for the Remote Control Tower Crane System in May 2026. The specification establishes operational and safety requirements for local use, lays the groundwork for related standards in the GBA, and reinforces Hong Kong's role in advancing regional construction innovation.

建基於此項成果，香港建科院正制定鑽孔、焊接、油漆噴塗機械人及遙控壓路機的技術規範，並於今年10月就「噴漆、膩子噴塗及打磨機械人」和「鑽孔機械人」兩項技術規格舉辦工作坊，匯聚政府、業界、學術界、專業團體及行業協會代表，共同制訂切合實際需要的基準要求與安全標準，推動相關技術由試點走向更廣泛應用，促進建造業安全、高效及數碼化發展。

Building on this achievement, BTRi is developing technical specifications for drilling, welding and painting robots, as well as remote-controlled rollers. In October, BTRi organised workshops on two specifications under development: Painting, Putty Spraying and Grinding Robots, and Drilling Robots. Representatives from government, industry, academia, professional bodies and trade associations contributed to baseline requirements and safety standards grounded in practical needs, helping move these technologies from pilot applications towards wider adoption and supporting a safer, more efficient and digitally enabled construction industry.





展望未來，香港建科院將深化與政府、業界及學術界的協作，建立可信賴的建造機械人「香港品牌」，並將其影響力拓展至區域及國際市場。透過涵蓋技術標準、測試、驗證及認證的一體化框架，香港建科院會致力加快市場應用、增強業界信心，鞏固香港作為創新建造科技樞紐的地位。

Looking ahead, BTRi will deepen collaboration with the government, industry and academia to establish a trusted "Hong Kong Brand" for construction robotics and extend its influence to regional and international markets. Through an integrated framework encompassing technical standards, testing, verification and accreditation, BTRi seeks to accelerate market adoption, strengthen industry confidence and position Hong Kong as a recognised hub for innovative construction technologies.

04 認可、認證與測試的成果
ACHIEVEMENTS OF ACCREDITATION, CERTIFICATION & TESTING



Certify once Fast PASs for all
Simple, Transparent, Fully Online Application

CPAS 拓展認受性及提升業界影響力
CPAS Expands Recognition and Strengthens Industry Impact

建築產品認可計劃（CPAS）持續加強品質保證、簡化產品審批流程、拓闊建築產品市場，並促進優質且具成本效益的建築產品在香港建造業的應用。透過技術評估及持續產品監察，CPAS讓工程團隊、政府部門及用戶對認可產品的品質更具信心。

The Construction Product Accreditation Scheme (CPAS) continues to strengthen quality assurance, streamline product approval processes, widen the construction product market and facilitate the adoption of high quality and cost-effective construction products across Hong Kong's construction industry. Through technical assessment and ongoing product surveillance, CPAS gives project teams, authorities, and end users confidence in the quality of accredited products.

政府部門認受性持續提升
Growing Recognition among Authorities

CPAS持續獲得政府部門及公營機構的認可。2026年7月，路政署更新《作業備考BSTR/PN/003》，接納在政府工程中使用CPAS認可的隔音屏障透明板。2026年8月，發展局向各部門發出備忘錄，並在網上公布有關認可CPAS產品的標準合約條文，供新工務工程項目納入使用。這些發展反映CPAS正加強融入工務工程的審批機制。

CPAS continues to gain recognition from government departments and authorities. In July 2026, the Highways Department updated their Practice Note BSTR/PN/003 and recognize CPAS-approved transparent panels for noise barriers for use in government projects. In August 2026, the DEVB issued a memorandum to departments and published online standard contract provisions for the recognition of CPAS-approved products, enabling their incorporation into new capital works projects. These developments demonstrate the growing integration of CPAS into public works approval mechanisms.

推動產品追溯管理
Advancing Product Traceability

香港建科院亦正試行CPAS 認可建築產品的數碼產品追溯平台。平台利用數碼識別技術，讓持份者能夠驗證產品真偽並查閱相關產品資料。其中，一款獲 CPAS 認可的裝甲電纜已應用於渠務署工程，成為首個試點。這標誌着在提升建築產品透明度、供應鏈完整性及品質保證方面，邁出了重要一步。

BTRi is also piloting a digital product traceability platform for CPAS-approved products. Using digital identification technology, the platform enables stakeholders to verify product authenticity and access relevant product information. The first pilot application, involving CPAS-approved armoured cables, was carried out in a Drainage Services Department project. This marks an important step towards greater transparency, supply-chain integrity, and quality assurance for construction products.

推進CPAS於醫院發展項目及更廣泛公共用途的應用
Advancing CPAS for Hospital Development and Wider Public Authority Adoption

香港建科院正與醫院管理局、機電工程署及建築署合作，為醫院項目制定專門的CPAS，並檢視相關技術規格。是次合作旨在加強品質保證、精簡產品預先審批流程，並支持創新優質產品在香港醫療基建中的更廣泛應用的分析框架，為《一般規格》日後的持續修訂及優化提供有力支援，標誌着推動香港建築標準持續發展的重要一步。

BTRi, in collaboration with the Hospital Authority, the Electrical and Mechanical Services Department and the ArchSD, has commenced a joint initiative to develop a hospital-specific CPAS and conduct a review on relevant technical specifications. The collaboration aims to strengthen quality assurance, streamline product pre-approval process and support wider adoption of innovative quality products in Hong Kong's healthcare infrastructure.

擴展CPAS以支援醫院項目的品質保證
Expanding CPAS to Support Quality Assurance in Hospital Projects

在香港建科院現有CPAS框架的基礎上，我們將探討如何把認可原則應用於醫院發展項目，當中的屋宇裝備系統及專門設備，對安全、可靠性、可維修性及長遠運作表現的要求尤為關鍵。研究將檢視選定產品類別、認可安排及認證機制，以評估其在醫院項目中的實際應用。

Building on BTRi's existing CPAS framework, the initiative explores how accreditation principles can be adapted to hospital developments, where building services systems and specialist equipment are critically concerned with safety, reliability, maintainability and long-term performance. The study will review selected product categories, accreditation arrangements and certification mechanisms for practical hospital applications.

透過規格檢視推動醫療科技應用
Reviewing Product Specifications to Enable Adoption of Latest Hospital Equipment

另一項重點工作，是檢視特定的《醫院屋宇裝備專用規格》及其與現行《一般規格》的銜接。藉着香港建科院在產品認可框架及國際基準研究方面所得的經驗，以支持醫院工程項目所需。研究的結果將有助優化規格、推動標準化，並識別未來認可需要。項目亦會研究CPAS如何與現有物料提交及審批程序配合，以減少重複評審、提升合規保證，並建立更高效的審批途徑，從而促進市場有效的預備、提升供應鏈的韌性及增強對醫院認可產品的信心。

Another key focus is the review of selected Building Services Particular Specifications in hospital projects and their interface with prevailing General Specifications. BTRi will contribute expertise in accreditation frameworks and benchmarking to support the needs of hospital projects. The findings will support specification enhancement, standardisation and future accreditation needs. The project will also examine how CPAS can align with existing material submission and vetting procedures to reduce duplicated efforts in assessments, improve compliance assurance and create a more efficient approval-to-use pathway. This will promote market readiness, enhance supply-chain resilience and strengthen confidence in accredited products for hospital use.

CPAS發展的新一頁
A New Chapter for CPAS Development

除醫療項目外，是次合作亦標誌着CPAS發展的重要一步。CPAS過往主要支援政府工務工程中的預先認可建築產品，而本研究則探索其延伸至由主要公共機構採購、具專門營運要求的產品及設備。

此潛在擴展展示了CPAS作為透明、一致及實用認可平台的靈活性。若能成功應用於醫院場景，將可展示產品認可如何支援不同界別的特定需要，同時維持對品質、安全及可靠性的嚴謹要求。

透過連繫產品認可、技術規格及項目交付，是項工作有助建立更整合的品質保證生態系統，並為CPAS日後應用於其他公共機構項目及專門基建領域提供實用參考。

香港建科院歡迎與公共機構、業界伙伴及持份者進一步合作，共同探索CPAS更廣泛及更深入的應用。透過持續協作，CPAS可進一步支持創新、提升產品信心，並為香港建造環境的高質量項目交付作出貢獻。



Beyond healthcare projects, the initiative marks an important step in the evolution of CPAS. While CPAS has mainly supported pre-approved construction products in government-funded public works, this study explores its extension to products and equipment procured by a major public authority client.

This potential expansion demonstrates the versatility of CPAS as a transparent, consistent and practical accreditation platform. Adapting CPAS to hospital applications would show how accreditation can support sector-specific needs while maintaining robust demands for quality, safety and reliability.

By linking product accreditation, technical specifications and project delivery, the initiative can help establish a more integrated quality assurance ecosystem. It may also provide useful reference for applying CPAS to other public authority programmes and specialised infrastructure sectors.

BTRi welcomes further collaboration with public authorities, industry partners and stakeholders to explore broader and more extensive use of CPAS. Through continued partnership, CPAS can further support innovation, confidence in products and higher-quality project delivery across Hong Kong's built environment.

推動CPAS創新、合作及市場拓展
Driving CPAS Innovation, Collaboration and Market Growth

建立區域策略夥伴關係
Building Strategic Regional Partnerships

香港建科院於2026年7月與大灣區五個機構建立策略夥伴關係，以鼓勵區內供應商了解並參與CPAS。這些合作旨在推廣香港的優質建築產品、為供應商創造商務配對機會，並協助創新及可持續建築產品進入市場。展望未來，香港建科院期望將CPAS建立為建築產品的品質標誌，協助產品進軍全球市場。

BTRi established strategic partnerships with five organisations in the GBA in July 2026 , to encourage suppliers across the region to understand and participate in CPAS. These partnerships aim to promote quality construction products in Hong Kong, create business-matching opportunities for suppliers, and help bring innovative and sustainable construction products to market. Looking ahead, BTRi aspires to establish CPAS as a trusted mark of quality for construction products entering global markets.



推動業界更廣泛參與
Promoting Wider Industry Participation

為鼓勵業界更廣泛參與CPAS，香港建科院於2026年10月推出限時CPAS推廣優惠計劃。合資格申請人可就過去三年內曾獲香港政府資助工程項目採用的產品享有一折優惠（即減免90%），或於推廣期內每提交三項CPAS申請後，享有第四項合資格申請免費優惠。推廣期至2027年6月30日，為製造商及供應商提供額外誘因申請CPAS認可，進一步提升市場對其產品的信心。

To encourage wider industry participation in CPAS, BTRi launched a limited-time CPAS Promotional Discount Programme in October 2026. Eligible applicants can enjoy a 90% discount for products adopted in Hong Kong Government-funded projects within the past three years, or a free fourth eligible application after every three CPAS applications submitted during the promotion period. The programme runs until 30 June 2027, providing manufacturers and suppliers with an additional incentive to obtain CPAS accreditation and strengthen market confidence in their products.

01

過去三年於香港政府資助工程獲採納的產品
for products adopted in HK Government-funded projects within past 3 years

申請費減免 90%
90% OFF

02

推廣期內進行第四項CPAS 申請
submission of every 4th case by a single applicant within the promotion period

申請三項，第四項免費
Apply 3, get the 4th FREE

推廣期： 即日起至2027年6月30日
Promotion Period: from now till 30 Jun 2027

推進「組裝合成」製造商認可計劃：強化品質保證 促進全球協作
Advancing MiC-MAS: Strengthening Supply Chain Quality and Global Collaboration

香港建科院透過「組裝合成」製造商認可計劃（MiC-MAS），持續加強MiC供應鏈的品質保證。

2026年7月，再有兩家製造商獲得認可，令獲認可的MiC製造商總數增至十家，另有多宗申請正在評審中。這反映業界對MiC-MAS的信心持續提升，亦突顯該計劃在加強MiC供應鏈品質、合規性和可靠性方面的重要性。

香港建科院持續向內地有關部門及海外持份者推廣MiC-MAS。2026年5月，香港建科院與深圳、廣州及上海有關部門的代表交流，就MiC發展交換意見，並介紹計劃的最新進展。2026年6月，香港建科院亦與沙特承包商管理局會面，分享MiC-MAS的品質保證架構。

香港建科院於2026年7月率領代表團訪問澳洲維多利亞州，與當地政府及業界代表交流MiC經驗，並推廣MiC-MAS。此行提升了國際社會對MiC-MAS的認識，促進獲認可製造商與海外持份者建立聯繫，並為計劃爭取更廣泛的國際認可。香港建科院將繼續發揮香港的橋樑作用，連繫中國MiC供應鏈與國際市場。

BTRi continued to strengthen quality assurance across the MiC supply chain through the Modular Integrated Construction Manufacturer Accreditation Scheme (MiC-MAS).

Following the accreditation of two additional manufacturers in July 2026, the total number of accredited MiC manufacturers reached ten, with further applications progressing through the assessment pipeline. This momentum demonstrates growing industry confidence in MiC-MAS and reinforces the Scheme's strategic role in strengthening quality, compliance, and reliability across the MiC supply chain.

BTRi continued to promote MiC-MAS among Mainland authorities and overseas stakeholders. In May 2026, BTRi engaged representatives from Shenzhen, Guangzhou, and Shanghai authorities to exchange views on MiC development and share the latest progress of the Scheme. In June 2026, BTRi also met with the Saudi Contractors Authority to discuss the quality assurance practices under MiC-MAS.

Building on these efforts, BTRi led a delegation to the State of Victoria, Australia in July 2026. The delegation met with local government and industry representatives to exchange experience on MiC and promote MiC-MAS. Collectively, these initiatives have enhanced the international visibility of MiC-MAS, fostered connections between accredited manufacturers and overseas stakeholders, and laid the groundwork for broader global recognition. BTRi aspires to reinforce Hong Kong's role as a bridge between China's MiC supply chain and international markets.



於香港建科院策略發布會上舉行MiC-MAS認可證書頒發儀式
MiC-MAS Certificate Presentation at BTRi Strategic Dialogue



香港建科院率領代表團訪問澳洲維多利亞州
BTRi led a delegation to the State of Victoria, Australia

香港MiC技術走向國際 與澳洲夥伴簽署合作備忘錄
Hong Kong MiC Technology Goes Global with Australian MoUs

香港建科院於2026年7月率團訪問澳洲維多利亞州後，2026年9月10日，鋁遊家（AluHouse）與 建盛（亞洲工程）顧問有限公司（AIS）於香港舉行的第11屆「一帶一路高峰論壇」期間，與澳洲夥伴簽署戰略合作備忘錄。鋁遊家與DCF Property Group、Northland Group Pty Ltd及Up Modular Pty Ltd合作，標誌著該公司將其成熟的MiC技術引進澳洲市場的重要里程碑。AIS與DCF Property Group的合作則開拓新的業務發展機遇，並推動適用於澳洲市場的MiC研發。香港建科院將繼續協助本地MiC業界連繫海外持份者，鞏固香港作為「超級聯繫人」及「超級增值人」的角色，連接內地MiC供應鏈與國際市場。

Following BTRi's delegation visit to Victoria, Australia in July 2026, AluHouse and AIS signed strategic Memorandums of Understanding (MoUs) with Australian partners at the 11th Belt and Road Summit in Hong Kong. AluHouse partnered with DCF Property Group, Northland Group Pty Ltd and Up Modular Pty Ltd, marking a major milestone in AluHouse's strategy to introduce its proven modular technology to the Australian market. AIS's collaboration with DCF Property Group unlocks new business development opportunities and advances MiC R&D for the Australian market. BTRi will keep connecting Hong Kong's MiC sector with overseas stakeholders, strengthening the city's role as a "super-connector" and "super value-adder" bridging the Mainland MiC supply chain and international markets.



鋁遊家與DCF Property Group、Northland Group Pty Ltd及Up Modular Pty Ltd簽署合作備忘錄
MoU signing between AluHouse, DCF Property Group, Northland Group Pty Ltd and Up Modular Pty Ltd



AIS 與DCF Property Group簽署合作備忘錄
MoU signing between AIS and DCF Property Group

香港建科院與LRQA簽署合作備忘錄　共建香港 MiC 國際門戶
BTRi and LRQA Sign MoU to Shape Hong Kong's Global Gateway with MiC

2026年10月30日，香港建科院與LRQA簽署合作備忘錄。LRQA為國際認可的場外及模塊化建築保證計劃「樓宇物業保障計劃」（BOPAS）的營運機構。雙方攜手合作，標誌著推動MiC的品質保證邁向國際的重要一步。合作備忘錄由香港建科院主席韓志強工程師與LRQA顧問Terry Mundy先生代表雙方簽署。香港建科院領導層及英國政府與業界代表團成員亦蒞臨見證。

On 30 October 2026, BTRi was pleased to sign a MoU with LRQA. LRQA operates BOPAS, the internationally recognised assurance scheme for offsite and modular construction. The partnership marks an important step in advancing MiC assurance on the international stage. The MoU was signed by BTRi Chairperson Ir HON Chi-keung, and LRQA Consultant Mr Terry MUNDY, with BTRi's leadership and a UK delegation of government and industry representatives present.

是次合作結合香港在MiC方面的專長，以及LRQA在國際質量保證方面的經驗。雙方將進行技術知識交流，探討提升「組裝合成」建築法評核及認可機制，以接軌國際市場，並攜手推展合作項目，促進行業創新與可持續發展。是次合作備忘錄體現香港建科院致力將香港打造為MiC卓越中心及國際門戶的使命。香港建科院將繼續推動供應鏈發展，建立跨境合作夥伴關係，帶領業界邁向更高質量、更可持續的未來。

The collaboration brings together Hong Kong's MiC expertise and LRQA's international assurance experience. The two organisations will exchange technical knowledge, explore ways to enhance MiC assessment and accreditation for the global market, and pursue joint initiatives that foster innovation and sustainable practices. This MoU reflects BTRi's ongoing mission to establish Hong Kong as a MiC Centre of Excellence and a global gateway for MiC. BTRi will continue to drive integrated supply chain development, build cross-border partnerships and lead the industry towards a higher-quality, more sustainable future.





05 香港建科院活動
BTRI EVENTS



香港建科院活動
BTRi Events

2026年7月
Jul 2026

香港建科院帶領代表團赴澳洲考察
BTRi Delegation Visit to Australia

促進跨地區對話，與澳洲業界持份者探討合作機遇
Fostering cross-border dialogue and exploring collaborative opportunities with Australian industry stakeholders.





2026年7月
Jul 2026

香港建築科技研究院策略發布會:
連繫創新・共創成果
BTRi Strategic Dialogue:
Connecting Innovation to Impact

匯聚逾200名來自政府、學界及業界的代表，將創新轉化為對香港建造業具體並可量化的成果
Unifying over 200 representatives from government, academia and industry to turn breakthrough innovations into tangible and measurable outcomes for Hong Kong's construction industry



2026年9月
Sep 2026

香港建科院召開「建造創新專責小組」成立大會暨第一次會議
BTRi Convenes Inaugural Meeting of the Construction Innovation Task Force

匯集香港建築環境領域的翹楚，共同開創建造業的嶄新未來
Uniting leaders from across Hong Kong's built environment sector to shape the future of construction



2026年9月
Sep 2026

香港建科院透過東莞—深圳技術考察深化大灣區建造創新交流
BTRi Strengthens GBA Construction Innovation Exchange Through Dongguan–Shenzhen Technical Visit

率領由會員及業界人士組成的代表團親身接觸多項創新建造技術
Leading a delegation of members and industry representatives to gain first-hand exposure to a range of innovative construction technologies



2026年10月
Oct 2026

業界網上研討會 - 建築產品認可計劃 (CPAS)
Industry Online Webinar - Construction Product Accreditation Scheme (CPAS)

鼓勵更多業界持份者為建築產品申請認可，展示產品的卓越質量及性能
Encouraging more industry stakeholders to pursue accredited product certification and demonstrate their commitment to quality and performance excellence



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2027 最新活動 Upcoming Events in 2027

香港建科院交流酒會
BTRi Cocktail Reception



香港建科院交流酒會將匯聚政府部門、業界及學術界的重要代表，共同探討行業的核心挑戰與未來機遇。
僅限尊尚會員參加。
With key representatives from government, industry and academia, BTRi Cocktail Reception provides an excellent opportunity to network and exchange insights on the industry's key challenges and opportunities.
Exclusive to Patron Members only.

香港建科院研討會
BTRi Seminar



香港建科院研討會將就新興建築科技、行業趨勢及實際應用交流見解，推動創新科技在香港建造業的應用及普及。
The BTRi Seminar will facilitate the exchange of insights on emerging construction technologies, industry trends, and practical applications, promoting the adoption and wider use of innovative technologies in Hong Kong's construction industry.

香港建科院代表團海外考察
BTRi Overseas Delegation Visit



香港建科院代表團考察旨在促進國際交流與合作，讓業界代表親身了解海外先進建築科技、創新實踐及最新發展，同時加強香港與國際業界夥伴的聯繫。
BTRi delegation visit aim to promote international exchange and collaboration, enabling industry representatives to gain first-hand insights into advanced construction technologies, innovative practices and the latest overseas developments, while strengthening connections between Hong Kong and international industry partners.

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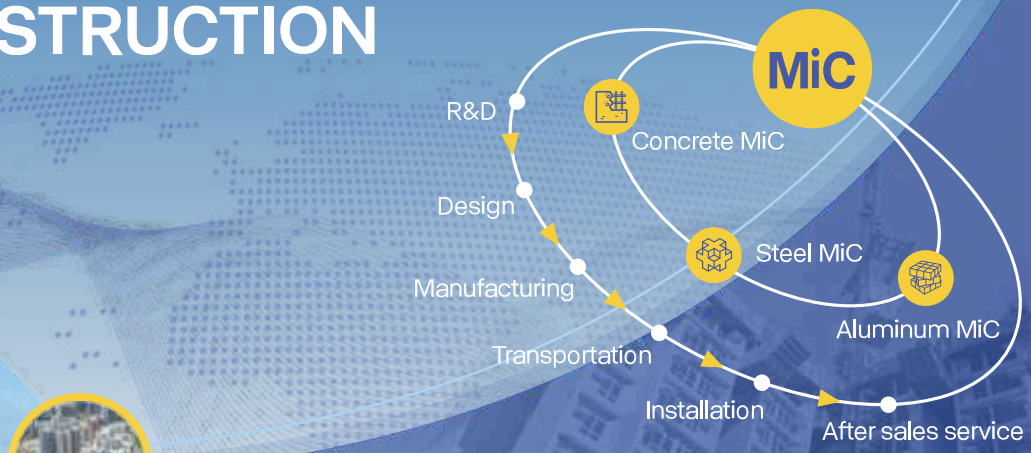
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中國海龍建築科技有限公司（簡稱「中國海龍」）於1993年在深圳註冊成立，是中國建築國際旗下提供**新型建造方式全產業鏈解決方案的科技公司**。作為新型建築工業化引領者，中國海龍始終以科技創新驅動發展，推動建築行業向工業化、數位化、綠色化高品質發展。

公司建立涵盖研發、投資、設計、生產、建造、運維的全產業鏈一站式服務模式，在**全國佈局12個房屋智造基地與3所建築科技研究院**。公司獲得首批「國家住宅產業化基地」和「國家裝配式建築產業基地」稱號，並被評為「國家高新技術企業」、「專精特新『小巨人』企業」和「博士後創新實踐基地」，同時入選國務院國資委「科改企業」。其持有建築工程設計甲級資質、房建特級、地基基礎一級資質，自主研發的智能建造-MiC（「組裝合成」建築法）技術，開闢了國內裝配式4.0時代，並成為該領域「十四五」國家重點研發計畫牽頭單位





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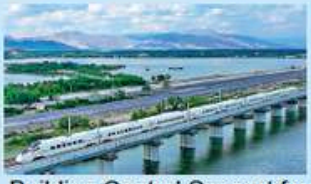
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A one-stop, government-recognised accreditation mechanism that introduces high-quality, innovative and cost-effective construction products to Hong Kong's construction industry. Accredited products are listed in a centralised repository, so they no longer need to be vetted project by project.

How CPAS works

- Submissions from product suppliers in Hong Kong, the Chinese Mainland and around the world
- Technical vetting based on the BTRi Product Specifications (BPS), which are derived from the Hong Kong Government General Specifications and particular specifications from major public works projects
- Accredited products are issued a CPAS certificate and listed in the centralised repository on the CPAS Portal
- Regular audits and checks on certified products to ensure ongoing compliance and quality



CPAS Scheme Handbook







BTRi Product Specifications

掃描了解更多CPAS
SCAN TO LEARN MORE ABOUT CPAS

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