



Foreword

I am pleased to present the report on *Building Information Modelling (BIM) Adoption Survey 2025*.

It has been a while since the Construction Industry Council (CIC) last published a comprehensive report on BIM adoption. Our first industry-wide scientific survey was conducted in 2019/20, engaging approximately 1,500 organisations. This year, we commissioned Arcadis Consultancy Hong Kong Limited to conduct the survey and have significantly expanded our reach, distributing it to over 3,600 companies, a reflection of the construction industry's healthy growth.

This report offers valuable insights into adoption rates, applications, drivers, and the challenges encountered in implementing BIM among key stakeholders. By comparing these findings with previous surveys, we can track our progress and identify areas that require further attention.

Importantly, the scope of this year's study has been broadened to include a range of construction digital solutions—technologies that complement BIM, unlock its full potential, and underpin the development of digital twins. This expanded perspective provides a more comprehensive view of digital transformation across the construction sector.

We witness the growing adoption of BIM and the increasingly diverse and sophisticated BIM uses within the industry. However, to address the evolving needs of the industry, there remain opportunities to further strengthen BIM competence among certain groups, while supporting more advanced adopters to leverage their experience and explore integrated BIM tools and broader digital solutions.

On behalf of the CIC, I wish to express my appreciation to everyone who contributed to the development of this report. In particular, I am grateful to the industry practitioners who completed the survey, and to the many stakeholders who provided valuable insights during our engagement activities. Special thanks are also due to my fellow working group members for their expert advice and guidance, which have been instrumental in shaping the direction and quality of this report.

I welcome your feedback and insights after reading this report, so that together, we can accelerate digital transformation and drive greater innovation throughout the construction industry.

Prof. Jack CHENG

Chairperson, Committee on Building Information Modelling and Construction Digitalisation (Com-BIM & CD),
Construction Industry Council

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Executive Summary

Between June and September 2025, the Construction Industry Council (CIC), in collaboration with its appointed consultant Arcadis Consultancy Hong Kong Limited, conducted the BIM Adoption Survey 2025 (BIM Adoption Survey). The primary objectives of this survey were to:

- Assess the current state of BIM and digital solution adoption across the industry;
- Identify gaps in the supply and demand of BIM personnel over the next five years; and
- Evaluate the performance of BIM personnel.

Out of more than 3,600 organisations reached, 422 valid questionnaire responses were collected. The survey provides a comprehensive overview of BIM adoption and digital transformation progress, highlights key challenges, and informs future recommendations.

BIM Adoption

Survey results revealed a significant increase in BIM adoption over the past five years across major stakeholder groups. Organisation-based adoption among main contractors rose from 47% in 2020 to 72% in 2025, representing the most notable growth of all stakeholder groups. Although sub-contractors still relatively lagged behind, adoption among these firms increased to over one-third. The data also reveal that BIM adoption rates are positively correlated with company size. Large firms (over 500 employees) have maintained full adoption since 2020, while mid-sized firms (50–500 employees) demonstrated the fastest growth in adoption rates.

Regarding BIM uses, there has been a marked increase in the current adoption of all 20 BIM uses across stakeholder groups. Visualisation and coordination-related BIM uses, such as 3D Coordination, Design Reviews, and Drawing Generation, remained the most popular uses. Notable growth was also seen in the adoption of Site Analysis, Facility Energy Analysis, Sustainability Evaluation, and Digital Fabrication by AEC and BIM consultants, reflecting rising sustainability requirements.

The main hurdles to BIM adoption have remained largely unchanged since 2020. The top three barriers identified were a lack of staff expertise, absence of client requirements, and insufficient

project experience. These findings suggested that successful BIM adoption continues to depend on organisational capability, client-driven mandates, and real-life practising experience gained through project execution.

On the other hand, the survey identified several key motivations for BIM adoption. Government policy, client requirements in Hong Kong, and the reduction of errors, omissions, and rework remained the top drivers.

Looking ahead, the investment trend across all seven stakeholder groups is expected to remain stable over the next three years. More than half of small and medium enterprises (SMEs) and sub-contractor respondents expressed interest in resource-sharing arrangements, such as expanded free BIM object library and plug-in, as well as greater access to online tutorials and learning resources.

Adoption of Digital Solutions

Government departments and statutory bodies have leveraged policy mandates to lead the way in the adoption of digital solutions. Real estate developers and BIM consultants also demonstrated high levels of adoption, positioning them to better integrate BIM with advanced technologies and plug-ins.

AEC consultants and main contractors showed moderate adoption, while sub-contractors remained the least engaged. This lower participation is primarily due to fewer regulatory mandates and the perception that digital solutions are less relevant to their work.

The adoption of AI technologies remains noticeably lower than that of government-mandated solutions such as DWSS, CDE, and Smart Site Safety System (4S), indicating that the industry is still at an early stage in exploring and identifying effective AI applications and use cases.

Overall, the adoption of digital solutions has resulted in the most significant benefits in terms of quality enhancement. Regarding safety enhancement, 75% of adopters agreed that 4S was helpful.

Executive Summary

Client bodies identified difficulties in changing mindsets and workflows as the greatest obstacles to adopting digital solutions. Among private companies, uncertainty about return on investment was considered as a recurring hurdle. Main contractors highlighted the challenges of shifting workflows and mindsets, a concern echoed by AEC and BIM consultants. Sub-contractors cited a lack of staff expertise, limited project experience, and the absence of client requirements as key barriers to broader adoption.

Regarding adoption drivers, client requirements and government policies were identified as the primary motivators for main contractors, sub-contractors, AEC consultants, and BIM consultants.

In terms of investment, client bodies will continue to be the primary investors in digital solutions, with government departments taking the lead.

Manpower Forecast Analysis

Our analysis indicates that between 2026 and 2030, market demand for BIM Managers cannot be fully met by CCBMs alone. However, when considering all sources of BIM Managers, overall market demand should be adequately satisfied. On the other hand, there will be a consistent but mild shortfall in the supply of BIM Coordinators over the next five years. Even when non-certified practitioners are included, this shortfall is projected to range between 3.7% and 11.1% from 2026 to 2030. In contrast, the overall future supply of local BIM Modellers is expected to meet the market demand during this period.

Performance Gap Analysis

BIM personnel at main contractors, AEC consultants, and BIM consultants were rated satisfactory overall, while those at sub-contractors lagged behind. Stakeholders highlighted the need for stronger construction knowledge among BIM Coordinators and Modellers and prioritised further training in BIM software, CDE, and advanced AI applications, particularly in generative design, planning, and statutory uses, to better meet industry needs and client requirements.

Recommendations

Three key strategic directions are proposed to accelerate progress:

Driving BIM Uptake Through Targeted Capacity Building

To drive BIM uptake, we recommend tailored, trade-specific, and modular training programmes to meet the diverse needs of industry participants, especially sub-contractors and SMEs in high-impact trades. Key actions include setting clear adoption targets, expanding BIM Viewer courses, hands-on workshops, and flexible learning options, and ensuring access to shared resources such as BIM object libraries. The CIC should support statutory submission training for AEC consultants, phased under the BIM Training Roadmap, and collaborate with software vendors to enhance submission tools. To meet market needs for BIM coordinators, the CIC should extend and regularly update certification programmes, promote relevant talent admission schemes, and align certification standards with evolving industry practices.

Advancing and Diversifying BIM Applications

To advance and diversify BIM applications, the industry should promote advanced BIM uses, address workflow challenges, and encourage adoption of diverse software and open standards. A comprehensive BIM Training Roadmap with upskilling in key tools and AI applications, alongside funding support, will broaden access. Wider adoption can be fostered by recognising innovative use cases and showcasing best practices. Expanding open standards and targeted training will lower barriers, particularly for SMEs. Prioritising early MEP integration and the use of MiMEP modules, supported by tailored training and free BIM object libraries, will further accelerate progress. Sharing insights and fostering collaboration will help realise BIM's full potential.

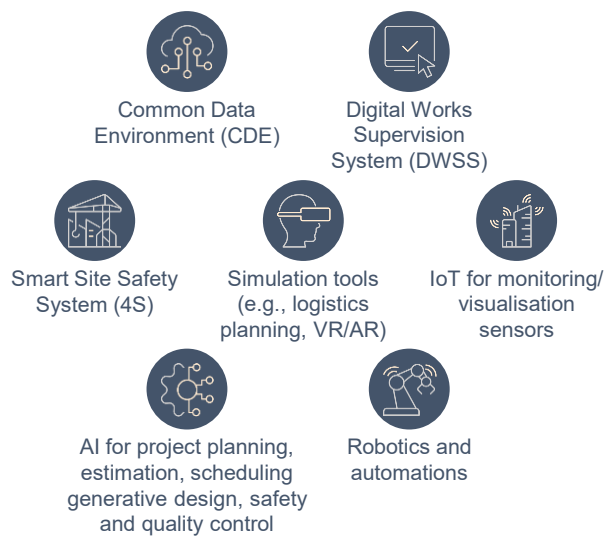
Unlocking Value Through Digital Solutions Adoption

We recommend accelerating AI integration by leveraging global best practices and policy requirements, while supporting research, pilot projects, and collaboration with solution providers to address industry-specific needs. The CIC should also drive broader adoption of construction robotics by promoting compliance with new policies, supporting sector-specific applications and R&D, and providing comprehensive training for frontline practitioners to ensure effective deployment and integration of advanced robotics technologies.

Methodology and Response

Questionnaire Design

The questionnaire for the BIM Adoption Survey was developed based on previous BIM Adoption Surveys and tailored to address the objectives outlined above. In selecting the digital solutions to feature in this study, we referenced the BIM evolution model, which demonstrates the progression from BIM to Digital Twins. This evolution is driven by the growing exchange of data and information between BIM and enabling technologies. For this survey, we focused on seven key digital solutions:



Sampling

Seven stakeholder groups, which comprise a total of over 3,600 organisations, have been identified as target respondents:

1. Government Departments
2. Statutory Bodies
3. Main Contractors
4. Sub-contractors
5. Architecture, Engineering and Construction (AEC) Consultants
6. BIM Consultants
7. Real Estate Developers and Asset Owners

We aimed to achieve a full response from government departments and statutory bodies. For other groups, we set a 90% confidence level with a 10% margin of error, consistent with the approach used in the BIM Adoption Survey 2020. This standard is widely accepted for industry surveys on technology adoption and workforce trends,

particularly when targeting broad and diverse populations such as construction professionals across various organisations.

A 10% margin of error enables us to draw valuable conclusions about overall trends and workforce needs, while remaining practical in terms of sample size requirements.

Given the diverse range of trades represented among sub-contractors, we have reduced the margin of error for this group to 5%. This increased sampling requirement will allow for more detailed and granular analysis across the different trades.

Survey Response

Data collection for both surveys was completed on 23 September 2025, by which we have generally achieved our targeted sample size under the confidence level at 90%. It is noted that responses from BIM consultants and real estate developers fell slightly below the set targets i.e., sampling error lower than 10. Nevertheless, the findings generated from the survey are considered representative and valuable.

Table 1: Survey response received

Stakeholder Group	Population	No. of response received	Sampling error
Government Department	9	9	0%
Statutory Bodies	8	8	0%
Main Contractors	330	69	8.8%
Sub-contractors	3,000	239	5.1%
AEC Consultants	180	60	8.7%
BIM Consultants	33	18	13.2%
Real Estate Developers and Asset Owners	50	19	15.0%
Total	3,610	422	-

Remark: All figures in this report are rounded to the nearest integer or decimal place.

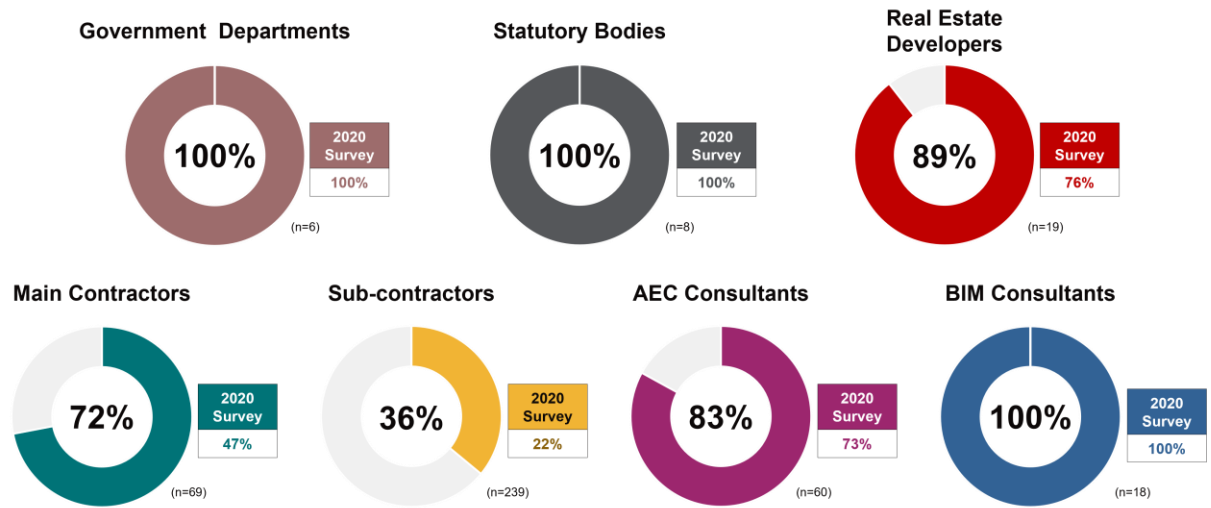
BIM Adoption

Organisation-based Adoption

Results indicated strong growth in BIM adoption across the construction industry. More than 70% of private developers, main contractors, and AEC consultants indicated that they have incorporated BIM into their project deliverables or workflows, either in current or past projects. However, adoption among sub-contractors remains the lowest, with only 36% reporting active use of BIM.

Compared to the BIM Adoption Survey 2020, significant progress has been made by private developers, main contractors, sub-contractors, and AEC consultants. The most notable improvement was among main contractors, whose adoption rate rose from 47% in 2020 to 72% in 2025. As the primary executing parties during the construction stage, this substantial increase signals highly encouraging progress in BIM adoption across the industry's most demanding phase.

Figure 1: Organisation-based BIM Adoption Rate



Expectedly, a positive correlation was found between company size and adoption rate, with larger companies demonstrating higher BIM adoption rates. This trend is consistent with findings from the 2020 survey across main contractors, sub-contractors, and AEC consultants.

The most significant progress was seen among companies with 50 to 500 employees, indicating that mid-sized organisations have accelerated BIM adoption, likely driven by increased resources, market pressures, economies of scale, and higher returns on investment.

Figure 2: BIM Adoption Rates among Main Contractors by Company Size



BIM Use & Benefits

We invited respondents with BIM adoption experience to indicate their adoption status against each of the 20 identified BIM uses. Across all the stakeholder groups, there has been a significant increase in the current adoption of all 20 BIM uses specified in Technical Circular (Works) No. 1/2025. Visualisation and coordination-related BIM uses, including 3D Coordination, Design Reviews, Drawing Generation, and Design Authoring, were the most popular.

The most notable increase among AEC consultants was seen in Site Analysis, where adoption rates rose from 28% in 2020 to 50% in 2025. Significant growth was also reported in the adoption of Sustainability Evaluation and Digital Fabrication. For main contractors, the greatest increases were observed in Sustainability Evaluation, Digital Fabrication, Cost Estimation, and Space Programming. This trend reflects growing client expectations for sustainability and digital deliverables, which have prompted main contractors to adopt more advanced construction techniques.

Sub-contractors reported the lowest adoption rates, with none exceeding 50% currently. Limited resources and restricted access to advanced BIM functionalities constrained their uptake. In contrast, BIM consultants demonstrated the most comprehensive adoption, with 18 out of 20 BIM uses showing current adoption rates above 50%.

Table 2: Current Adoption of BIM Uses by Stakeholder Groups (Top 5)

BIM Uses	Current Adoption Rate				
	Client Bodies	AEC Consultants	Main Contractors	Sub-contractors	BIM Consultants
3D Coordination	94%	76%	85%	36%	78%
Design Reviews	91%	74%	75%	39%	83%
Drawing Generation (Drawing Production)	88%	74%	69%	48%	83%
Design Authoring	88%	68%	71%	36%	83%
As-Built Modelling	88%	44%	79%	36%	78%
Existing Conditions Modelling	78%	56%	81%	31%	78%
3D Control and Planning	72%	34%	75%	26%	61%
Digital Fabrication	72%	34%	60%	20%	61%
Site Analysis	69%	50%	73%	28%	78%
Space Programming	69%	44%	54%	21%	67%
Phase Planning (4D Modelling)	69%	36%	71%	18%	78%
Site Utilisation Planning	63%	20%	73%	25%	56%
Engineering Analysis	56%	36%	63%	38%	56%
Space Management and Tracking	50%	10%	35%	20%	50%
Cost Estimation	47%	36%	56%	25%	61%
Asset Management	47%	20%	33%	15%	61%
Maintenance Scheduling	41%	16%	25%	15%	50%
Project Systems Analysis	38%	16%	35%	16%	28%
Sustainability Evaluation	34%	36%	42%	13%	56%
Facility Energy Analysis	28%	22%	35%	9%	44%

Respondents agreed that the use of BIM has contributed most significantly to quality enhancement, followed by time savings. The results also indicated that BIM tended to play a more indirect role in improving safety, as reflected by lower ratings for this benefit.

Among the 20 BIM uses, 3D Coordination was consistently recognised for delivering positive outcomes across quality, cost, and time savings. Design Reviews also received high ratings in these areas, underscoring its value in early issue identification and informed decision-making. Respondents noted that these features help individuals with limited spatial awareness better understand design concepts and method statements. Clear visual representations also facilitates the approval-seeking process.

BIM Adoption Hurdles & Motivations

Adoption Hurdles

For real estate developers, AEC consultants, and main contractors, transitioning to BIM has presented significant challenges, especially in changing established workflows and enabling effective multi-stakeholder collaboration. Integrating BIM into existing project management processes and ensuring smooth coordination across disciplines often proves difficult, leading to inefficiencies and resistance to change. The persistence of these issues since the last survey indicates that BIM is still widely seen as an optional enhancement rather than a core requirement, and motivating broader industry adoption remains a challenge.

For sub-contractors, the main barriers to BIM adoption have been similar from 2020 through 2025. These include the absence of client requirements for BIM deliverables, a lack of exposure to BIM-enabled projects, and limited internal expertise in BIM technologies. Without strong demand from clients, sub-contractors are less incentivised to invest in BIM capabilities, and their opportunities to develop practical skills remain limited.

Table 3: Top Hurdles of BIM Adoption

Top Hurdles	Real Estate Developers	AEC Consultants	Main Contractors	Sub-contractors
1	Difficulties of changing workflow and multi-party collaboration	Difficulties of changing workflow and multi-party collaboration	Difficulties of changing mindset and culture	Absence of requirement by the client
2	Lack of expertise	Uncertain return on investment	Difficulties of changing workflow and multi-party collaboration	Lack of project experience
3	Difficulties of changing current practices for professionals	Difficulties of changing current practices for professionals	Uncertain return on investment	Lack of expertise

Adoption Motivations

The leading motivations for BIM adoption remained consistent with findings from 2020. Three key drivers are regularly cited: government policy mandates, specific requirements from Hong Kong clients, and the desire to reduce errors, omissions, and the need for rework or abortive works. Government regulations and client expectations play a pivotal role in shaping industry practices by setting clear standards and requirements for BIM integration. Meanwhile, the operational benefits of BIM, including improved project accuracy, fewer mistakes, and enhanced efficiency, offer compelling incentives for organisations to embrace BIM.

Table 4: Top Motivators of BIM Adoption

Top Motivators	Real Estate Developers	AEC Consultants	Main Contractors	Sub-contractors
1	Enhancement of quality management	Government policy	Government policy	Hong Kong client requirements
2	Reduction of errors, omissions, rework or abortive work	Hong Kong client requirements	Hong Kong client requirements	Reduction of errors, omissions, rework or abortive work
3	Enhancement of informed decision making	Reduction of errors, omissions, rework or abortive work	Reduction of errors, omissions, rework or abortive work	Government policy

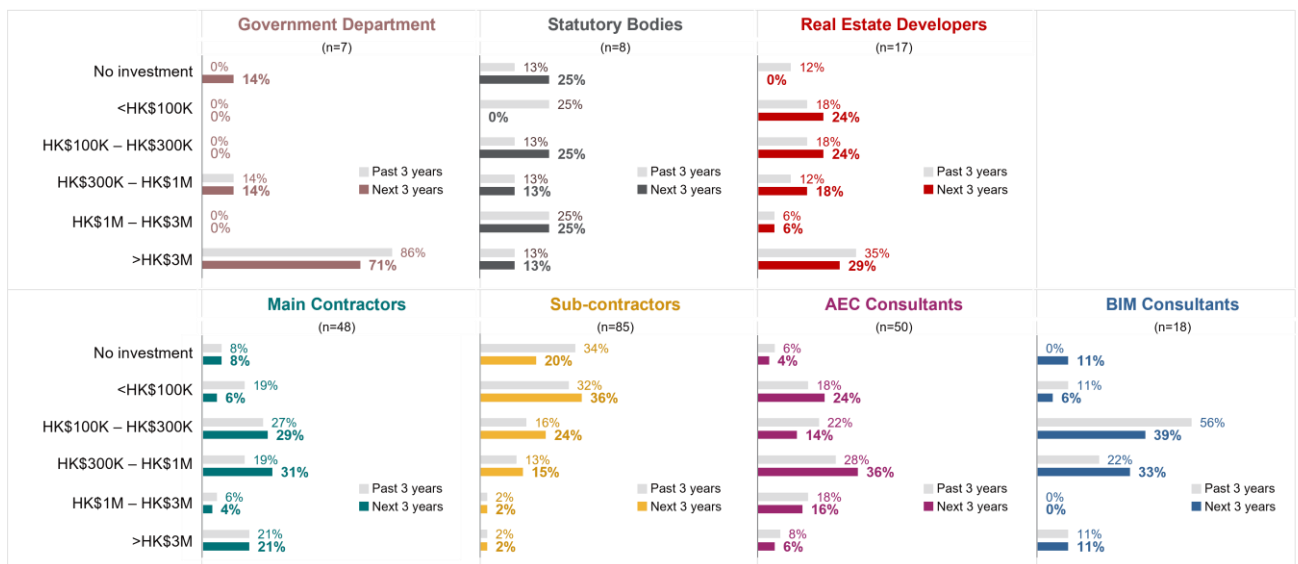
BIM Investment Trend

Investment Trend

Overall, the investment trend across all seven stakeholder groups is expected to remain broadly similar over the next three years. The number of organisations making major investments (over HK\$1 million) will either stay the same or experience a slight decline, with the bulk of new spending continuing to originate from works departments, private developers, and main contractors. Sub-contractors will remain the least likely to make large investments. Most companies anticipated maintaining their BIM investments at a relatively modest level.

Stakeholders anticipate that future investments in BIM will focus on achieving higher levels of automation and integrating advanced AI capabilities. The industry is eager to leverage AI to enhance BIM by enabling predictive analytics, intelligent decision-making, and automated quality checks using both historical data and real-time project inputs.

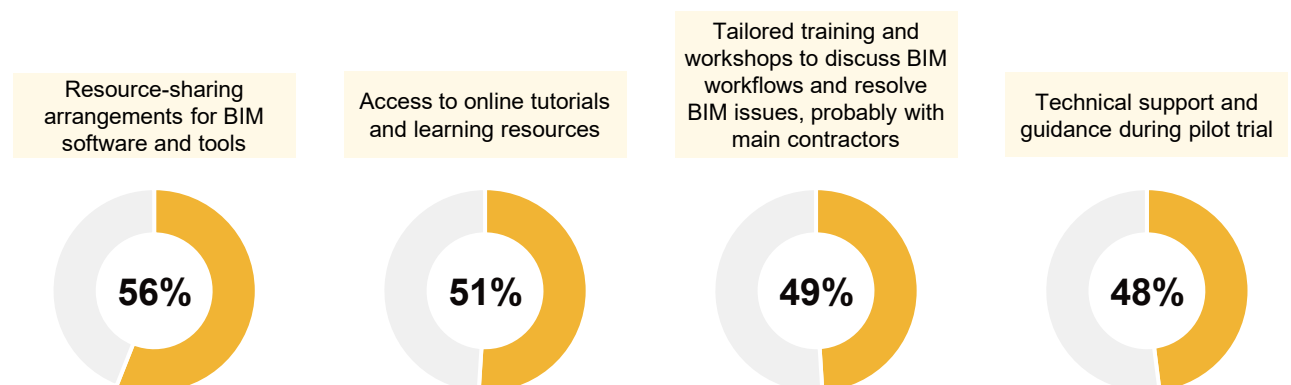
Figure 3: Investment in BIM in the past and next three years



Support for SMEs and Sub-contractors

Over half of respondents expressed interest in resource-sharing arrangements for BIM software and tools, as well as access to online tutorials and learning resources. Approximately half of respondents requested tailored training and workshops focused on BIM workflows and issue resolution. There was particular interest in sessions that included main contractors and provided technical support during pilot trials.

Figure 4: Support for SMEs and Sub-contractors

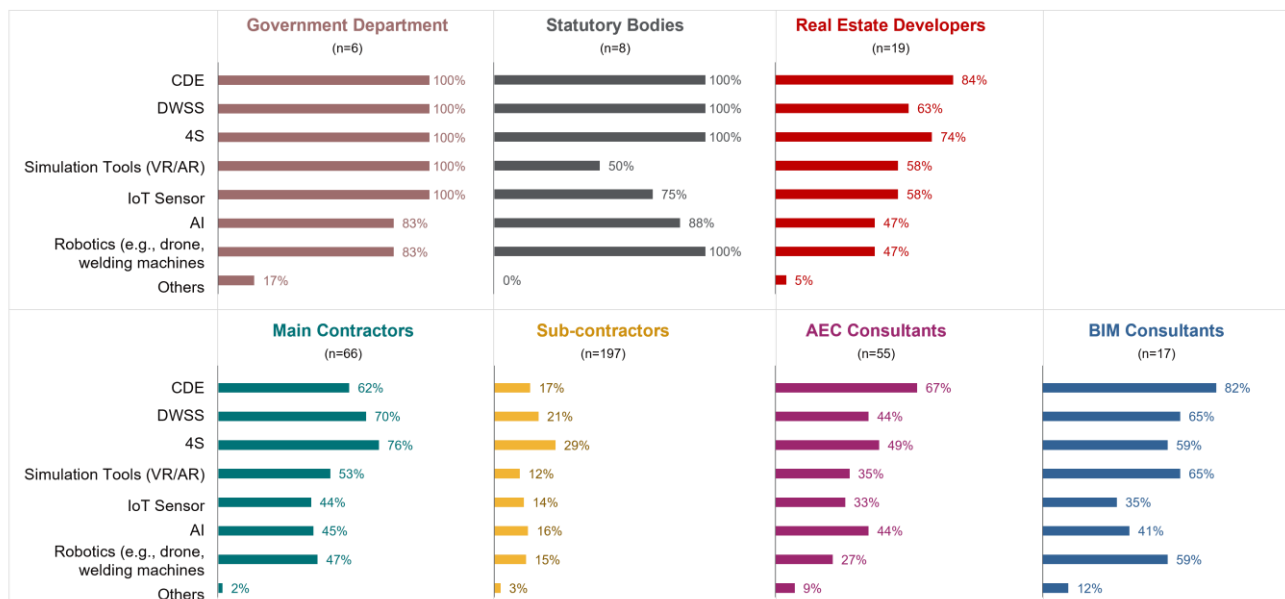


Adoption of Digital Solutions

Organisation-based Adoption

Results showed that government departments and statutory bodies have led the adoption of digital solutions, driven largely by policy mandates. Real estate developers and BIM consultants also demonstrated a high level of adoption. These stakeholders were better positioned to integrate BIM with advanced technologies and plug-ins. AEC consultants and main contractors demonstrated moderate adoption. Sub-contractors remained the least engaged, primarily due to fewer mandates and perceived lower relevance of digital solutions to their work. The adoption of AI technologies was apparently lower than government-mandated solutions such as DWSS, CDE, and 4S. This indicates that the industry is still in the early stages of exploring and identifying effective AI applications and use cases.

Figure 4: Organisation-based Adoption Rate of Digital Solutions



(Remark: AI includes tools for Project Planning, Estimation, Scheduling, Generative Design and Safety and Quality Control;
Only organisations that adopted the solution in active projects are counted)

Adoption Benefits

Overall, the adoption of digital solutions has brought the most noticeable benefits in quality enhancement. CDE, DWSS, and simulation tools received the highest ratings for improving quality, demonstrating their effectiveness in enhancing project deliverables.

Table 5: Benefits Experienced by Adopters (Top 3)

Digital Solutions	Cost Savings	Quality Enhancement	Safety Enhancement	Time Savings
CDE	42%	79%	21%	68%
DWSS	29%	71%	46%	42%
4S	19%	49%	75%	25%
Simulation Tools	41%	71%	42%	46%
IoT Sensor	31%	64%	58%	42%
AI in Safety and Quality Control	37%	45%	69%	41%
AI in Generative Design	50%	56%	13%	63%
AI in Project Planning, Estimation, Scheduling	47%	47%	23%	55%
Robotics	43%	56%	57%	51%

Adoption Hurdles & Motivations

Adoption Hurdles

Government departments and statutory bodies identified difficulties in changing mindset and workflows as their greatest obstacles to adopting digital solutions. Real estate developers also recognised these challenges but placed additional emphasis on the uncertainty of return on investment and the difficulty of changing established practices among professionals.

Among other stakeholder groups, uncertainty about return on investment emerged as a common hurdle. Main contractors highlighted the challenges associated with shifting workflows and mindsets, a perspective shared by AEC and BIM consultants. Sub-contractors cited a lack of expertise, limited project experience, and the absence of client requirements as key barriers to broader adoption. These observations align with our broader findings that sub-contractors face resource constraints and require external drivers to support change.

Table 6: Top Hurdles of Adopting Digital Solutions

Top Hurdles	Real Estate Developers	AEC Consultants	Main Contractors	Sub-contractors
1	Uncertain return on investment	Uncertain return on investment	Difficulties of changing workflow and multi-party collaboration	Lack of expertise
2	Difficulties of changing workflow and multi-party collaboration	Lack of expertise	Uncertain return on investment	Lack of project experience
3	Difficulties of changing current practices for professionals	Difficulties of changing workflow and multi-party collaboration	Difficulties of changing mindset and culture	Absence of requirement by the client

Adoption Motivations

For government departments and statutory bodies, policy requirements have remained the primary driver for adopting digital solutions. In contrast, real estate developers were motivated by the desire to enhance quality management and to reduce errors and risks in their projects.

Among main contractors, sub-contractors, AEC consultants, and BIM consultants, Hong Kong client requirements and government policies were the leading motivators, with the benefits of error and risk reduction also playing a significant role. Main contractors uniquely rated safety enhancement as an important motivation for adoption.

Table 7: Top Motivators of Adopting Digital Solutions

Top Motivators	Real Estate Developers	AEC Consultants	Main Contractors	Sub-contractors
1	Enhancement of quality management	Hong Kong client requirements	Reduction of risks or improvement of predictability	Hong Kong client requirements
2	Reduction of risks or improvement of predictability	Government policy	Government policy	Reduction of errors, omissions, rework or abortive work
3	Reduction of errors, omissions, rework or abortive work	Reduction of errors, omissions, rework or abortive work	Hong Kong client requirements	Government policy

Manpower Analysis on BIM Personnel

Methodology to Forecast Supply

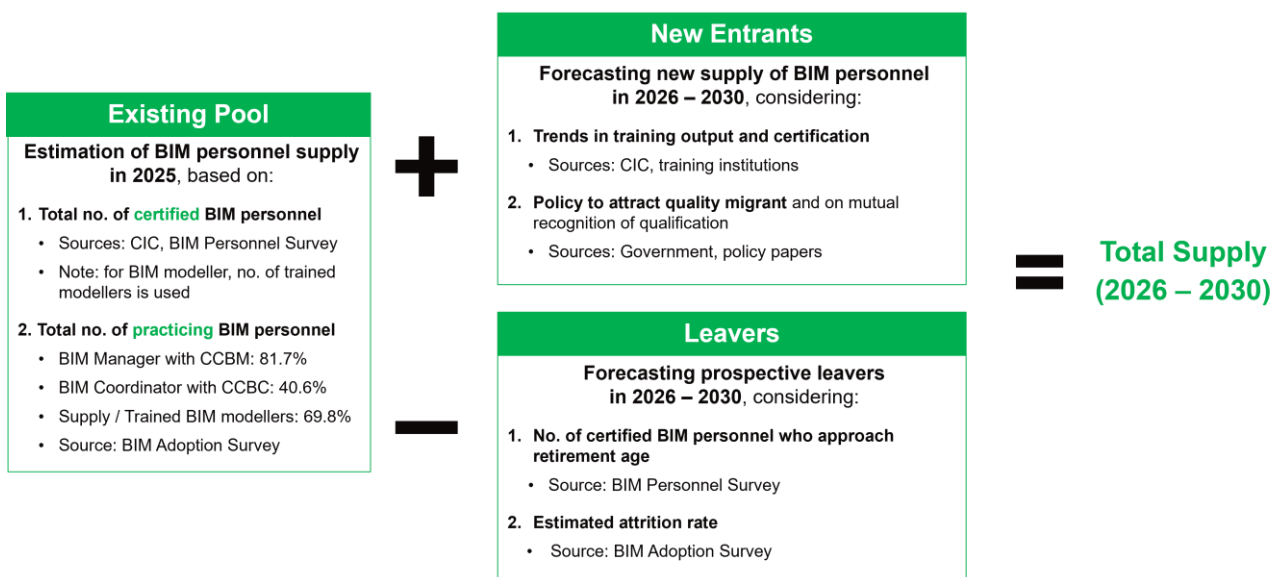
A stock-flow approach was adopted to estimate the future supply of BIM personnel in three main categories i.e. BIM Managers, BIM Coordinators, and BIM Modellers in the industry. This methodology calculates the net annual supply by adding the current stock of BIM professionals to the projected number of new entrants, and subtracting estimated potential leavers.

The latest figures of BIM personnel from the CIC database, including the total number of certified individuals, served as the basis for our supply forecast. To estimate the number of active practitioners – regardless of certification status – we consulted various stakeholder groups and referenced findings from previous CIC studies.

To estimate future entrants, we analysed recent trends of training outputs and number of certified BIM personnel over the past three years. We also considered the impact of government policies related to attracting migrant workers and the mutual recognition of qualifications, which may encourage BIM professionals from Chinese Mainland and overseas to enter the local workforce.

For leavers, we used the attrition rate collected from the BIM Adoption Survey. We also analysed the age and experience profiles of surveyed BIM personnel to project exits due to retirement and other factors. By leveraging multiple data sources, this approach enables us to generate the 5-year supply forecast of the BIM practitioners.

Figure 5: Stock-flow Approach for Supply Forecast



Methodology to Forecast Demand

We adopted a gap analysis approach to estimate the demand for BIM personnel over the next five years. The methodology involves several key steps. First, we will determine the total demand for BIM personnel in 2025 as the baseline year. This requires an understanding of i) total active BIM personnel; ii) total practicing personnel; and iii) current shortage or surplus of BIM personnel.

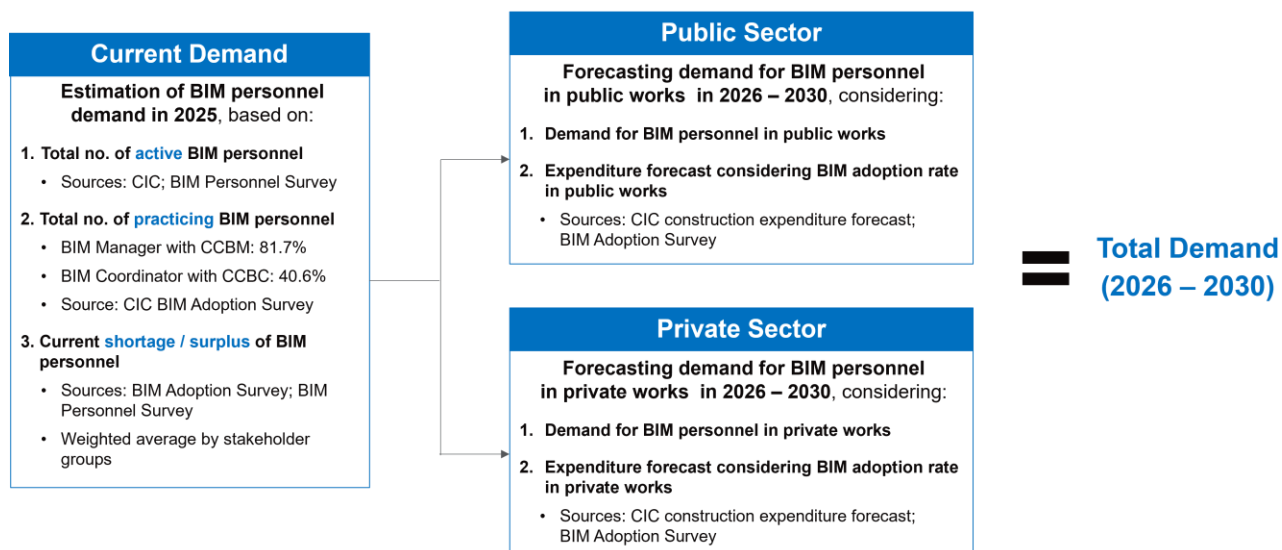
To estimate the number of active personnel, we again used the registration figures from the CIC but only considered those actively involved in the industry as indicated through the BIM Personnel Survey. Subsequently, we extracted relevant data from the BIM Adoption Survey to calculate the current shortage or surplus rate for specific BIM personnel groups i.e. BIM Managers, BIM Coordinators, and BIM Modellers.

Manpower Analysis on BIM Personnel

Once we have established the baseline demand, we then used CIC's construction expenditure forecasts for public and private works separately from 2026 to 2030 to estimate future demand for BIM personnel in both sectors. The rationale for splitting the demand forecast into these two sectors is twofold: i) the anticipated construction volume in both sectors varies, resulting in differing demands for BIM personnel; and ii) BIM adoption in the private sector is expected to increase driven by the mandatory e-submission of BIM generated plans and BIM model by 2029.

This demand forecast represents a hybrid approach, combining shortage-based data with expenditure multipliers to generate a robust and reliable demand forecast.

Figure 5: Gap Analysis Approach for Demand Forecast

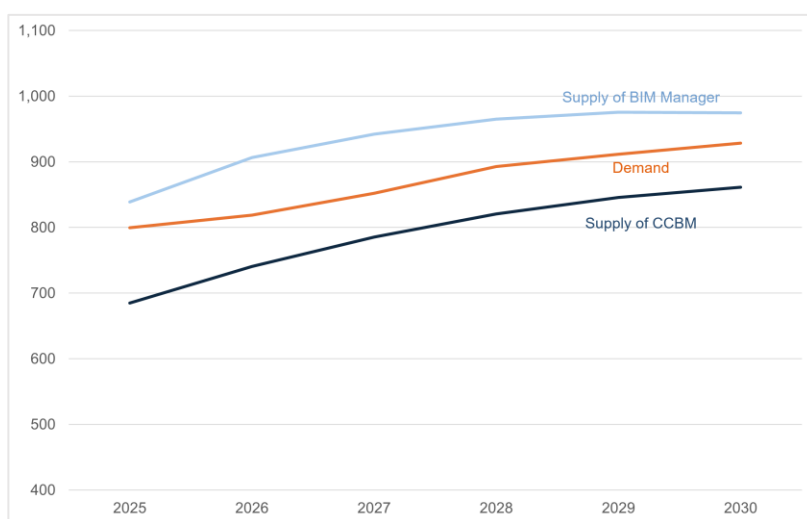


Supply and Demand of BIM Managers

Using the approaches outlined above, we estimate that the supply of both CCBMs and BIM Managers and the demand for BIM Managers will experience modest growth between 2026 and 2030.

The demand for BIM Managers cannot be fully met by CCBMs alone. However, when considering the total supply of BIM Managers, the overall market demand should have been adequately satisfied throughout this period.

Figure 6: Supply and Demand of BIM Managers



Manpower Analysis on BIM Personnel

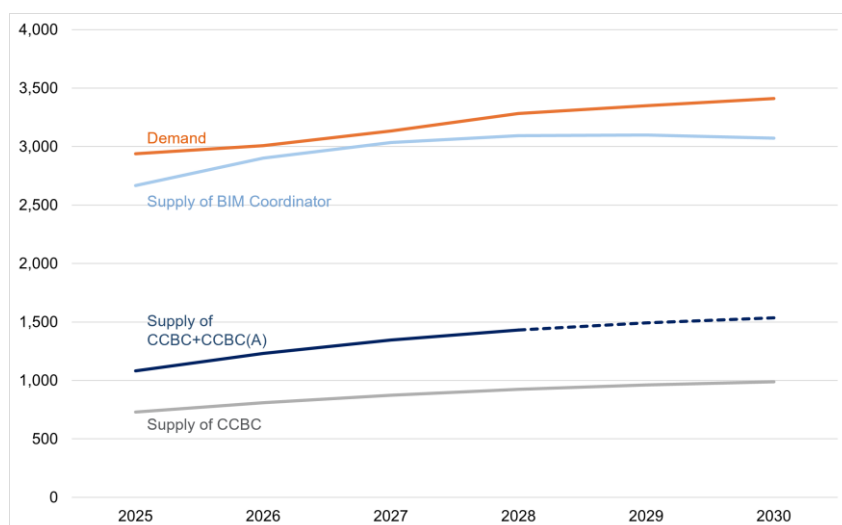
Supply and Demand of BIM Coordinators

Our forecast indicates that the total supply will show mild growth over the next five years. Combined CCBC and CCBC(A) supply is expected to increase gradually from 2025 to 2030. Total BIM Coordinators (including non-certified personnel) are projected to exceed 3,000 in 2030.

Based on CIC's construction expenditure forecast and the expected uptake of BIM adoption in the private sector, the demand for BIM Coordinators is expected to grow steadily from around 3,000 in 2025 to under 3,500 in 2030.

We estimate a persistent but modest shortfall in the supply of BIM Coordinators over the next five years. Including non-certified practitioners, the shortfall is projected to range from approximately 3.5% to 11% between 2026 and 2030, based on current construction volume forecasts. This projection will be reviewed and updated as market conditions evolve.

Figure 7: Supply and Demand of BIM Coordinators

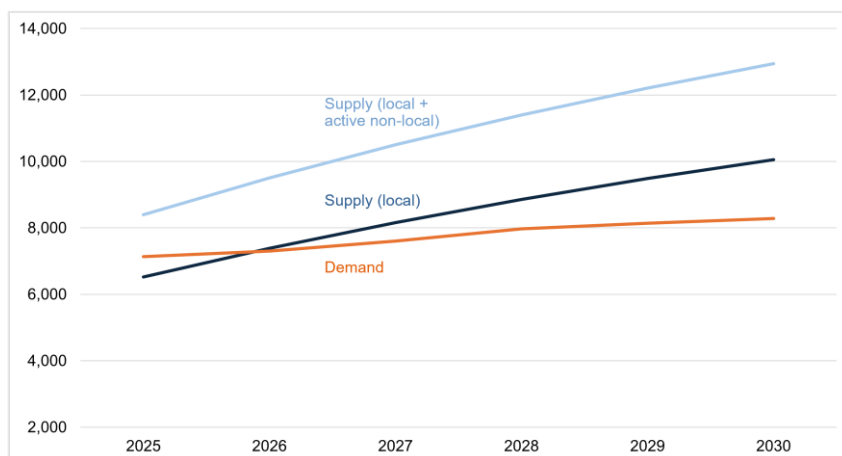


Supply and Demand of BIM Modellers

As there is currently no certification available for BIM Modellers, our supply estimates were based on the cumulative number of graduates from modeller courses offered by accredited institutions. Considering the common practice of subcontracting modelling work to offshore modellers, we prepared an alternative supply forecast that includes both local and non-local practitioners likely to be in active practice.

Despite the declining number of new entrants, the overall supply of local BIM Modellers is projected to exceed demand. When including both local and non-local BIM Modellers, the supply of BIM Modellers in the market would be adequate to meet the industry need.

Figure 8: Supply and Demand of BIM Modellers



Performance and Training

Performance Analysis

Using Arcadis UK's BIM Maturity Assessment framework, we identified three major skill areas essential for evaluating BIM personnel in the BIM Adoption Survey:

- Technical Knowledge – engineering knowledge and sense, familiarity with local regulations.
- BIM Knowledge – software or modelling skills.
- Soft Skills – collaboration skills, communication skills, project management skills.

This framework provides a robust and consistent method to assess BIM personnel, enabling organisations to identify gaps and implement targeted training strategies.

BIM personnel generally received satisfactory ratings in the three areas in the BIM Adoption Survey. However, some stakeholders expressed concerns about the construction knowledge of BIM Coordinators and Modellers, stressing the need for a stronger understanding of disciplines such as quantity surveying, structural or E&M engineering, and architectural design to effectively develop and use BIM models. There were also concerns about the modelling quality of some offshore Modellers, highlighting the importance of thorough quality checks by local BIM teams.

Training Needs

Across all stakeholder groups, BIM software training and CDE training were identified as the most essential areas for development.

Government departments and statutory bodies also considered training on the 20 BIM uses to be critical for their teams.

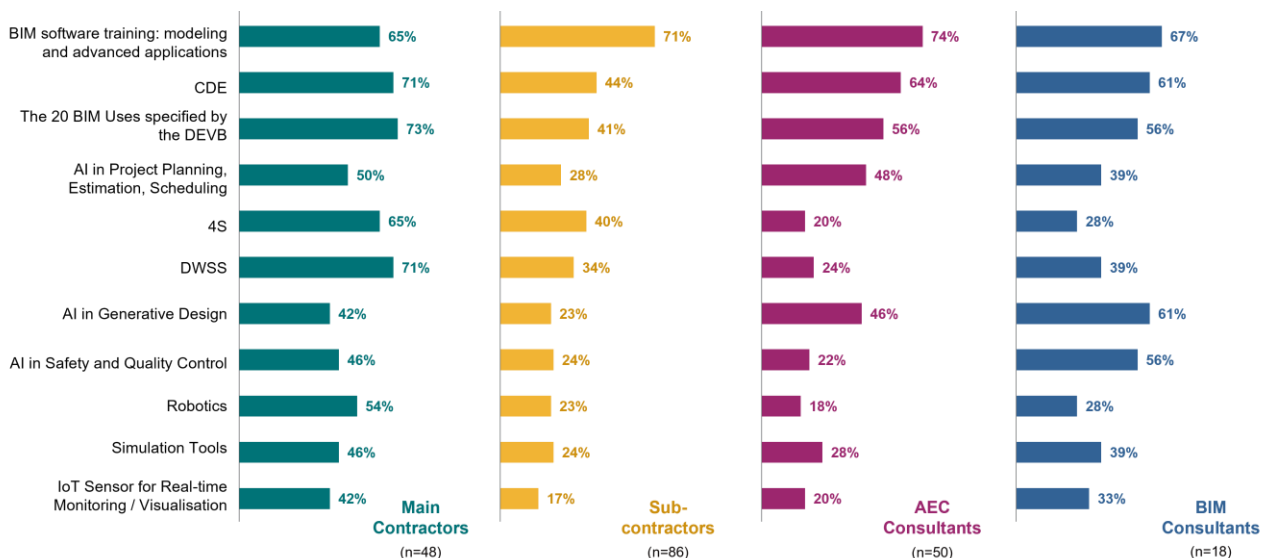
Real estate developers highlighted the importance of training in AI for generative design and project planning, as well as in 4S.

Main contractors echoed the priorities of public developers, stressing the importance of mastering the 20 BIM uses. In response to client mandates, they also expressed a strong preference for additional training in DWSS and 4S.

AEC consultants showed interest in training on the 20 BIM uses and prioritised AI in project planning, estimation, and scheduling, as well as AI in generative design. These areas reflect their focus on leveraging advanced technologies to improve project delivery and design outcomes.

BIM consultants welcomed training in AI for generative design and expressed a preference for training in AI applications for safety and quality control tools. This indicated a progressive approach to integrating AI into BIM workflows.

Figure 9: Training Needs Proposed by Stakeholders Groups



Recommendations

Strategic Direction I: Driving BIM Uptake Through Targeted Capacity Building

To promote effective BIM adoption, training programmes should be tailored to participants' specific roles, experience levels, and project contexts. Implementing a trade-specific, modular training framework will enhance relevance and accessibility, encouraging greater participation.

Offering Support for Sub-contractors and SMEs

To accelerate BIM uptake among sub-contractors and SMEs, the industry should prioritise trades with the greatest potential for cost, time, safety, and quality benefits. These may include plumbing, drainage, electrical works, façade, curtain wall, suspended ceiling, rebar fixing, and foundation or piling. Clear adoption targets should be set, such as achieving a 50% company-based adoption rate in the near term and 70% within three years, with guidance from the CIC.

Key strategies include promoting BIM Viewer courses, organising hands-on workshops, and providing flexible learning options. The CIC will develop trade-specific BIM courses, collaborate with associations to reach low-adoption groups, and promote enhanced CITF training support.

To reduce financial barriers, access to shared resources like BIM object libraries and cloud tools should be expanded. Adoption can be further boosted by advocating for BIM requirements in client contracts and showcasing best practices through talks and workshops.

Launching Focused Trainings on BIM-based Submissions

We recommend allocating resources to train private sector stakeholders, particularly AEC consultants, in BIM-based statutory submissions and workflows. Training should cover architectural, structural, ground investigation, foundation, and drainage submissions. Through the BIM Training Roadmap, the CIC will implement phased training programmes, starting with architectural and structural openBIM in 2026, followed by other disciplines in 2027. The CIC will also expand online self-learning kits to include statutory submission training and automation tools, such as GFA calculation and fire safety checking.

We further recommend developing tailored plug-ins and enhanced software features to meet statutory requirements. The CIC should collaborate with software vendors to create and update these tools based on industry needs.

Meeting the Market Needs for BIM Coordinators

To address the market demand for BIM Coordinators, we recommend extending the CCBC(A) programme and conducting a review to determine its future continuation. The General Employment Policy and the Admission Scheme for Mainland Talents and Professionals (Technical Professionals Stream) should also be promoted through greater engagement with industry stakeholders to help alleviate local shortages.

Regular updates to the CCBC and CCBM certifications are essential to ensure they reflect current industry practices, including trends such as BIM automation and diversification. The CIC should work with the BIM Certification and Accreditation Board to support the industrial development of these certifications, including reviewing certification pathways and contract requirements. This may involve advocating for CCBM and CCBC certification requirements in private projects through engagement with key industry stakeholders.

Strategic Direction II: Advancing and Diversifying BIM Applications

With significant progress already achieved in industry-wide BIM adoption, the next step is to promote more advanced BIM use among mature adopters. Efforts should focus on addressing workflow pain points and encouraging the diversification and interoperability of BIM software and digital solutions.

Promoting Advanced BIM Training and Diversified BIM Software

The BIM Training Roadmap devised by CIC aims to upskill the industry in diverse BIM software, CDE platforms, and AI-driven applications. It envisions targeted training courses, workshops, and online self-learning kits covering data exchange standards, workflow management, and security protocols.

Recommendations

The CIC can organise events and competitions that reward the use of diversified BIM software, advocate for its inclusion in pilot projects, and showcase successful trial cases to highlight practical benefits like reduced time and cost.

The CIC should also broaden industry awareness and accessibility by publishing reference materials and expanding CITF support to include diversified BIM software and training programmes in pre-approved lists.

Advocating Open Standards and Interoperability

We recommend strengthening industry capacity in open standards and interoperability through targeted training on IFC export, open collaboration, and model validation. The CIC should enhance the BIM Training Roadmap with self-learning kits and require openBIM materials in existing programmes. In addition, management-level training should be organised to highlight the importance and benefits of openBIM for leadership.

To further promote openBIM adoption, the CIC should develop and share openBIM guidelines, expand the free BIM object library, and actively promote resources like the openBIM Beginners Guide to raise industry awareness.

The adoption of openBIM standards and cost-effective, interoperable software should be encouraged among SMEs and sub-contractors. The CIC should demonstrate the value of openBIM through case studies and pilot projects, advocate for openBIM trials in private projects, and highlight success stories at industry events to promote widespread adoption.

Integrating MEP BIM Coordination

We recommend piloting early BIM integration with MEP trades that show high BIM readiness, such as fire services, plumbing, and drainage. The industry should also encourage the use of MiMEP modules, which require early and accurate BIM data to support effective coordination.

The CIC should strengthen BIM training programmes for MEP trades by focusing on trade-specific modelling, coordination skills, use of CIC BIM object libraries, and sharing best practices.

In addition, we recommend launching demonstration projects to showcase best practices in early MEP coordination, especially in high-impact areas such as MEP-congested zones.

Strategic Direction III: Unlocking Value Through Digital Solutions Adoption

Exploring and Advancing AI-Powered BIM Application

We recommend accelerating AI integration by exploring global best practices, collecting use cases, and organising innovation competitions and forums to foster collaboration and proof-of-concept development. The CIC should leverage the latest policy requirements to drive AI adoption in key areas such as automated document tagging, predictive analytics, intelligent workflow routing, and natural language processing.

To support research and implementation, the CIC should allocate resources, identify pilot projects, and showcase AI applications. The CIC should also engage emerging solution providers and BIM software vendors to develop tailored, localised AI solutions that address industry needs.

Advancing the Adoption of Construction Robotics

We recommend leveraging the latest policy guidelines to drive broader adoption of advanced construction robotics, including remote-controlled tower cranes, drilling and welding robots, and drones for progress monitoring. The CIC should promote compliance with technical circulars and support the exploration of new application scenarios across various sectors.

To ensure seamless integration, further studies should address barriers related to exporting BIM models for robotic use, with a focus on workflow and data compatibility. The CIC should also enhance support for research projects through the CIC R&D Fund, covering applications such as digital road surface detection, mobile robots for material delivery and site inspection, robotic dogs, and teleoperated tower cranes.

Lastly, we recommend providing targeted training programmes for frontline practitioners to equip them with the latest skills in robotic operations.

Way Forward

The significant progress made in recent years in the adoption of BIM and digital solutions within Hong Kong's construction industry is highly encouraging. This momentum highlights the importance of maintaining continuous monitoring and dedicated research to track advancements and systematically identify areas for further improvement. To accelerate adoption quality and effectiveness, future research should focus on targeted areas that can deliver substantial impact.

A key priority is to benchmark Hong Kong's investments in construction digitalisation against leading international peers. Such benchmarking is vital for understanding Hong Kong's position within the global digital transformation landscape and for identifying opportunities to enhance competitiveness. Comparative studies should assess relative metrics, including the proportion of construction project value dedicated to digital technologies, prevailing policy frameworks, regulatory incentives, and industry best practices that drive digital success in other regions. Research should also track the latest trends in digital solutions and how they are adopted elsewhere.

This benchmarking exercise should cover regions recognised for their digital construction maturity, such as Singapore, the Organisation for Economic Co-operation and Development (OECD) countries, and major cities in Mainland China. The analysis should go beyond investment volumes to evaluate the effectiveness of digitalisation initiatives, using indicators such as project outcomes, productivity gains, sustainability improvements, and other qualitative impacts. By drawing on proven strategies from these leading regions, Hong Kong can tailor interventions to strengthen its own digital ecosystem and ensure sustained advancement in digital adoption.

Another research direction involves exploring the feasibility of establishing a unified BIM standard across the Greater Bay Area (GBA). With increasing integration in the region and a rising number of cross-border infrastructure and building projects, harmonising BIM standards would facilitate more efficient collaboration and project delivery. This process should begin with a comprehensive mapping of existing BIM standards and practices across Hong Kong and major GBA cities, such as Shenzhen and Guangzhou. The objective is to identify both areas of alignment and

key differences in data formats, interoperability, regulatory frameworks, and language requirements. Active stakeholder engagement is essential to understand practical challenges and on-the-ground needs, particularly those arising from recent megaprojects involving international partners and varying levels of BIM maturity. The goal should be to formulate a set of core principles and minimum requirements for a GBA-wide BIM standard, ideally aligned with international benchmarks like ISO 19650 to ensure both regional compatibility and global competitiveness.

Integrating these research directions into Hong Kong's broader BIM development strategy will not only consolidate the city's leadership in construction digitalisation but also enable seamless cross-border collaboration and position Hong Kong at the forefront of innovation within the GBA and beyond.

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