Build for a Sustainable Digital Age

COMPANY
Hong Kong Cyberport Management Company Limited
isBIM Limited
Gammon Construction Limited

PROJECT
Cyberport Expansion Project

LOCATION
Cyberport, Southern District, HK

TYPE
Commercial Building

SCHEDULED TIME OF COMPLETION
Q4 2025

"Aligning with Cyberport vision as a next-generation Digital Tech Infrastructure to support and foster the growth of digital technology, project team are keen on exploring and adopting the use of different digital solutions and technology.

By integrating BIM with IoT, cloud platforms, and digital tools. It enables seamless collaboration, smart design coordination and data-driven decision-making throughout the whole project lifecycle."

–Pierre LIN
Director,
isBIM Limited

BIM PARTNERS
Rocco Design Architects Associates Limited
WSP (Asia) Limited
AECOM Asia Company Limited
Rider Levett Bucknall Limited
Ramboll Hong Kong Limited
DSCO Group Limited
Lighting Planners Associates (HK) Limited
Shen Milsom & Wilke Limited
OZZO Technology (HK) Limited
Aurecon Hong Kong Limited

AUTODESK PRODUCTS USED
Autodesk® 3ds Max®
Autodesk® AutoCAD®
Autodesk® BIM Collaborate Pro
Autodesk® Build
Autodesk® Civil 3D®
Autodesk Construction Cloud®
Autodesk® Docs
Autodesk® Dynamo for Revit
Autodesk® Navisworks® Manage
Autodesk Platform Services
Autodesk® ReCap® Pro

Cyberport 5 – Hong Kong's New I&T Landmark
Image Courtesy of Hong Kong Cyberport Management Company Limited

Project Background

Cyberport is Hong Kong's digital tech hub and AI accelerator, with a vision to empower industry digitalisation and intelligent transformation, to promote digital economy and AI development, and to foster Hong Kong to be an international AI, innovation and technology (I&T) hub.

The Cyberport Expansion Project involves the construction of Cyberport 5 building and rejuvenating the community-beloved Waterfront Park. Cyberport 5 is a new ten-storey office building on a 1.6-hectare waterfront site located northwest of the waterfront park and adjoined the existing Cyberport Arcade. The development will provide an additional gross floor area (GFA) of 66,000 square meters, among which 36,000 square meters was office and co-working space representing approximately 30% of the current total floor area. Equipped with advanced smart office facilities, Cyberport 5 will cater to the needs of next generation digital technology enterprises and support the growth of cutting-edge technologies such as artificial intelligence, big data, blockchain, and cybersecurity, while fostering collaboration within the Greater Bay Area.

Cyberport 5 will introduce smart living experiences showcasing innovative I&T applications, as well as retail spaces for food services and convenience stores to benefit the Cyberport community and local residents. Improvements to the existing waterfront park will include rejuvenating the promenade, enhanced landscaping, and pet-friendly facilities, creating an inviting environment for all visitors.

Innovation and Technology Driven Project Delivery

At Cyberport, we are committed to fostering a smarter and more sustainable future. Our Information Strategy delivers a transformative roadmap for embedding innovation and technology throughout

Cyberport's development lifecycle. By integrating a BIM-centric approach from design through construction into operations, we've established a data-driven ecosystem that fuels operational efficiency and visionary AI applications. Centralized by a connected Common Data Environment (CDE), this strategy enables real-time collaboration, minimizes errors, and ensures seamless data continuity which turning project information into actionable intelligence that powers smart facilities, predictive analytics, and sustainable infrastructure.

Systematic Approach for BIM Success

BIM is ultimately a tool that supports daily tasks throughout the project lifecycle. Achieving success requires embedding a BIM-centric culture across the organization. In Cyberport Expansion Project, this is driven by strong project leadership and contractual rigor, underpinned by a systematic implementation approach within the project's organizational structure. Clients play a pivotal role by championing full BIM deployment as part of their corporate ethos. Mandating BIM integration in every consultancy agreement enshrines requirements from the outset of design, while extending the same obligation to construction contracts ensures seamless execution. An independent BIM consultant oversees model governance and audits deliverables, enforcing accountability and closing process gaps with industry best practices.

Consistent BIM use across consultants and contractors creates a unified digital ecosystem that streamlines automated clash detection, precise quantity take-offs, and coordinated scheduling. Planning for a seamless BIM handover with fully populated as-built models and metadata equips facility managers with a single source of truth, unlocking operational efficiencies and maximizing ROI throughout the asset's entire lifecycle.

Full BIM Design Authoring and Output Process

A systematic approach to BIM success during the design and tender stage hinges on full BIM authoring and output integration. This involves developing parametric 3D models using authoring tools like Revit, embedding data for geometry, quantities and scheduling. All disciplinary design consultants in Cyberport Expansion Project are responsible for BIM on their own disciplines, design consultants are required to author the design directly in BIM with 2D drawings created directly from BIM to maintain the single source of truth and hence a reliable federated model for coordination and other BIM uses.

The approach with an independent BIM consultant to manage, review and audit design consultants BIM input was also adopted to ensure the consistency of data input referring to BEP setup based on ISO 19650, industry standards and project specific requirements and to ensure the model quality with assistance of automation tools. BIM models are fully utilized to prepare for statutory submission and tender drawings directly. This workflow driven the use of BIM by QS on QTO, 5D and cost management with no dispute. The success in Design and Tender stage changed the culture of whole consultant team to collaborate through digital tools laying the success for BIM Implementation at construction stage in next phase.

Connected CDE Driven Construction Collaboration and Management

The full CDE driven approach on collaboration and management was adopted in construction stage starting from foundation contract to the continuous implementation at main contract. Site quality is maintained through standardized workflows, issue tracking, and coordinated updates. Models are well coordinated before construction with management and verification flow ensuring site works to follow approved construction drawings generated from BIM for a seamless transition for as-built BIM Handover. With seamless handover achieved by embedding asset data and digital twins into the CDE, BIM enable facility management team to access validated information. This approach minimizes errors, boosts productivity and ensured that every phase of the project is informed, connected, and quality-assured.

Digital Twin Development Optimizing Future Operations

The Cyberport Expansion Project advanced BIM implementation into a comprehensive digital twin development through its integrated Smart Building Platform, transcending traditional design/construction boundaries. This platform bridges the asset information model with facility management via real-time data and intelligent automation. Linked to IoT sensors, the digital twin enables dynamic monitoring of HVAC, lighting, indoor air quality, and security systems. This synergy supports predictive maintenance, energy optimization, and space utilization. These achievements earned the project WiredScore and SmartScore Platinum certifications, validating its commitment to best-in-class digital connectivity and occupant experience.

BIM Adoption to Overcome Challenges

Cyberport's commitment to digital transformation was exemplified by its pioneering use of BIM for statutory submissions, aligning with the Buildings Department's initiatives. From pre-contract to tendering stages, the project team fully leveraged BIM to streamline design coordination and enhance submission accuracy. This approach ensured 100% alignment between statutory drawings and the BIM model, significantly reducing errors and rework.

To support Cyberport's ESG commitment and initiatives such as the Journey to Zero Carbon and FinTech for ESG Conference, BIM for Engineering Analysis was strategically deployed to achieve sustainable design outcomes while ensuring occupant comfort. Through advanced modeling, we conducted solar shading and irradiance studies to optimize façade performance, air ventilation analysis considering surrounding conditions, and view studies to preserve scenic sea views at key locations like the Multi-function Hall. Functional design was seamlessly integrated, and a BIM-enabled smart platform leveraging AI analytics, Digital Twins, and IoT was adopted to enhance energy and resource management.

Through model-based clash detection with time parameters, spatial conflicts were resolved early, ensuring smooth sequencing. Safety planning was enhanced by visualizing danger zones and briefing frontline workers. BIM simulations also optimized crane usage and storage logistics, while streamlining delivery and installation workflows. This strategic use of BIM led to reduction in rework, Demonstrated outstanding milestone compliance and significantly enhanced schedule reliability. The integration of safety, logistics, and sequencing into a unified BIM environment not only mitigated risks but also maximized resource efficiency, demonstrating BIM's value as a planning and execution tool in complex construction scenarios.

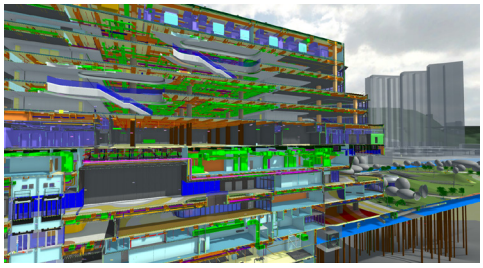
.Whole Lifecycle Cost Management

5D integration, 3D models connect cost data with schedules for real-time budget tracking, cutting overruns. A cloud-based CDE centralizes collaboration and automates compliance. Automated QTOs generate the contract sum, slashing measurement time and reducing errors. Cost visualization ensures transparency, while model comparisons accelerate change-order validation, reducing disputes and speeding approvals. The site progress itself is reflected in BIM Model for prompt interim payment assessment.

By leveraging Autodesk Construction Cloud's Cost Management module, all project cost data—estimates, budgets, commitments, invoices, and change orders—are centralized within a secure CDE. This unified platform streamlines workflows: cost plans are created, reviewed, and approved online, eliminating fragmented spreadsheets and ensuring every stakeholder accesses the latest figures.

The streamlined workflow at centralized ACC cloud accelerating the approval process. Role-based permissions govern each step, while real-time dashboards and custom reports deliver instant visibility into cost performance. Together, these capabilities enable proactive cost control, enhance collaboration across teams, and provide transparent, up-to-date insights that keep projects on budget.

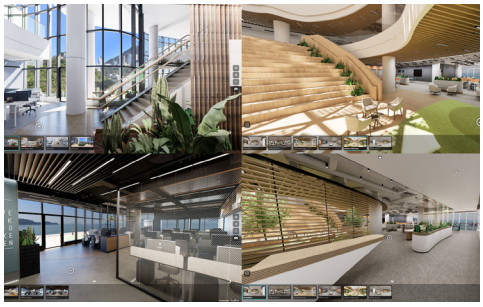
Project Rendering
Image Courtesy of Hong Kong Cyberport Management Company Limited



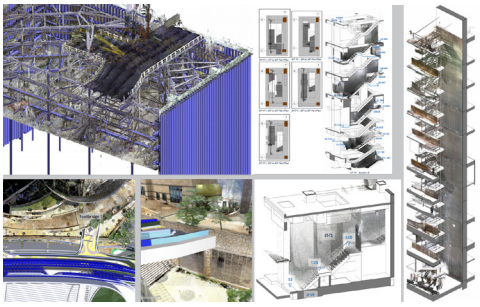
Sectional View of BIM
Image Courtesy of Hong Kong Cyberport Management Company Limited

Site Image
Image Courtesy of Hong Kong Cyberport Management Company Limited

Data Services Platform (DSP)
Image Courtesy of Hong Kong Cyberport Management Company Limited



Visualization and Virtual Tour in Game Engine
Image Courtesy of Hong Kong Cyberport Management Company Limited



BIM Integration with 3D Scanning
Image Courtesy of Hong Kong Cyberport Management Company Limited

Smart Building Platform for Facility Management
Image Courtesy of Hong Kong Cyberport Management Company Limited

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