HONG KONG MONETARY AUTHORITY
香港金融管理局

Fintech Promotion Blueprint

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FOREWORD

In today's rapidly evolving digital landscape, financial technology continues to reshape the very foundations of our financial system. Hong Kong's position as a global financial centre depends on its collective ability to embrace and harness these transformative technologies with confidence and purpose.

As part of its "Fintech 2030" strategy, the Hong Kong Monetary Authority (HKMA) is pleased to present this Blueprint, which outlines the tactical measures to further accelerate the adoption of more sophisticated financial technology within the financial industry. Our journey has evolved from raising awareness to enabling adoption, and now, this Blueprint has a clear focus on the advancement of financial technologies, integrating innovation into the future of finance.

Our research and industry engagement have revealed both tremendous opportunities and practical challenges in advancing financial technology. Financial institutions recognise the transformative potential of sophisticated technologies, yet they anticipate barriers to effective implementation, integration, and capability support. This Blueprint aims to address these challenges head-on through coordinated actions across three strategic dimensions: ecosystem collaboration, technological advancement, and talent development.

This Blueprint represents not merely a tactical plan, but a call to action. Through flagship initiatives, including the Quantum Preparedness Index, New Risk Data Strategy, Fintech Cybersecurity Baseline, and Competency Development Support, we are laying the groundwork for Hong Kong to lead in the next generation of financial innovation.

The future of finance will be defined by those who can harness sophisticated technology not only to improve existing processes, but also to reimagine what is possible. By bringing together financial institutions, technology providers, supervisors, and talent, we can create an ecosystem that adopts sophisticated fintech and pioneers its responsible and innovative application.

I invite all stakeholders to join us on this journey as we advance Hong Kong's financial technology capabilities – moving from foundational adoption to strategic advancement, and ultimately towards technological leadership that will strengthen our position as a premier international financial centre.

Arthur Yuen
Deputy Chief Executive
HKMA

EXECUTIVE SUMMARY

Background

The HKMA launched the "Fintech 2030" strategy to drive fintech integration across the Hong Kong Special Administrative Region (Hong Kong), with key objectives including the "All Banks Go Fintech" initiative to digitise banking operations. To support this initiative, the HKMA introduced a comprehensive Fintech Promotion Roadmap[1] in 2023, featuring initiatives such as the Fintech Knowledge Hub and the FiNETech series. These efforts have yielded significant results, with the Tech Maturity Stock-take[2] conducted in 2025 revealing that 95% of surveyed banks, including all retail banks, have adopted fintech to enable end-to-end digitalisation of banking operations.

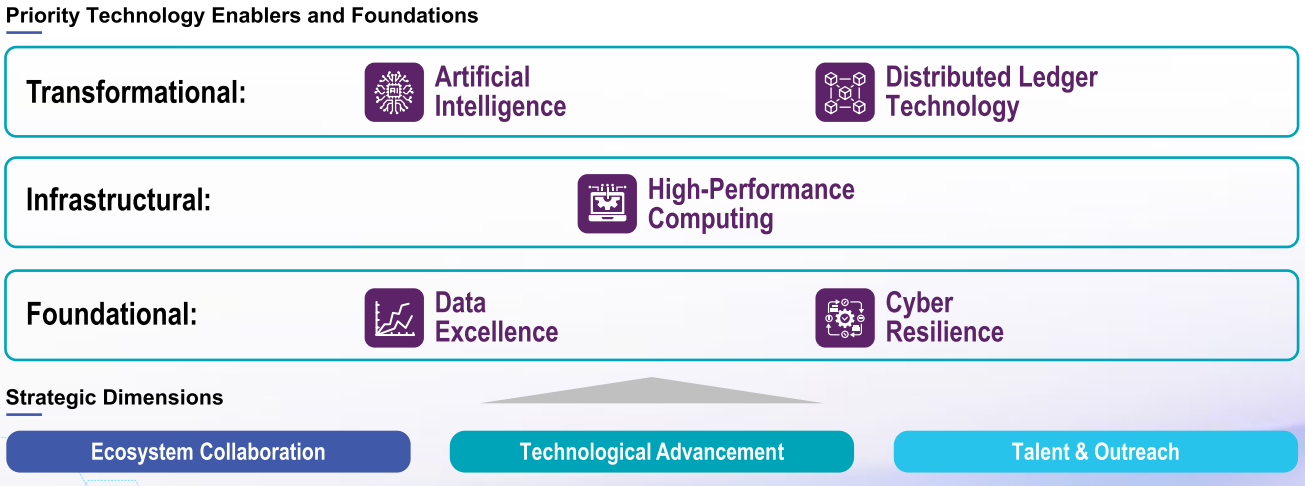
While the "All Banks Go Fintech" initiative successfully encouraged the sector to adopt fintech solutions across a wide spectrum, the HKMA sees an opportunity for banks to move beyond breadth to depth, fully integrating these technologies into their core operations to unlock transformative impact. A conclusion of the Tech Maturity Stock-take is the need for a comprehensive Fintech Promotion Blueprint to accelerate the implementation of more sophisticated fintech in Hong Kong's financial services industry. This Blueprint will guide the HKMA's promotional efforts over the next few years.

In November 2025, the HKMA unveiled the "Fintech 2030", focusing on four key pillars, collectively known as "DART":

- Creating Next-generation **D**ata and Payment Infrastructure
- A New Holistic "**A**rtificial Intelligence x Authorized Institutions" Strategy
- Enhancing Business, Technology and Quantum **R**esilience
- **T**okenisation of Finance

"Fintech 2030" articulates a clear North Star vision and provides direction for the successful implementation of the Fintech Promotion Blueprint (hereafter referred to as "the Blueprint").

Figure 1: Fintech Promotion Blueprint Key Focus



Source: HKMA

[1] HKMA. 2023. A Bridge to the Future: Hong Kong Fintech Promotion Roadmap (https://brdr.hkma.gov.hk/eng/doc-ldg/docId/getPdf/20230825-2-EN/20230825-2-EN.pdf).
[2] HKMA. 2025. Fintech Adoption: Progress and Future Directions (https://brdr.hkma.gov.hk/eng/doc-ldg/docId/getPdf/20250716-3-EN/20250716-3-EN.pdf).

Fintech Promotion Blueprint

The Blueprint focuses on five key technology enablers and foundations, namely Artificial Intelligence (A.I.), Distributed Ledger Technology (DLT), and High-Performance Computing (HPC), along with Data Excellence and Cyber Resilience.

- **Artificial Intelligence:** Accelerate A.I. adoption in Hong Kong's financial services industry by promoting practical, advanced applications that enhance risk management, competitiveness, and efficiency.
- **Distributed Ledger Technology:** Advance DLT adoption in Hong Kong's financial services Industry through innovation, incubation, and best practice sharing to boost transparency, efficiency, and security.
- **High-Performance Computing:** Promote HPC in Hong Kong's financial services industry to boost resilience, ensure safety, and enable advanced modelling such as for risk management and portfolio applications.
- **Data Excellence:** Strengthen data capabilities and governance in Hong Kong's financial services industry to enable secure, high-quality foundations for A.I., DLT, and risk management innovation.
- **Cyber Resilience:** Enhance Hong Kong's financial services industry resilience by embedding advanced cybersecurity into new technologies and boosting collaborative defences against evolving threats.

To support this, the HKMA will focus on three strategic dimensions:

- **Technological Advancement:** Promoting the development and integration of advanced technologies.
- **Ecosystem Collaboration:** Encouraging partnerships and collaborative efforts within the fintech community and beyond.
- **Talent & Outreach:** Building skills, raising awareness, and nurturing a robust fintech workforce.

The Blueprint aims to strengthen Hong Kong's leadership in emerging technologies through practical and tactical initiatives, supporting the ambitious goals of "Fintech 2030" and establishing a strong foundation for future progress.

Through technological advancement, ecosystem collaboration, and talent development, this Blueprint aims to drive the implementation of more sophisticated fintech solutions, thereby enhancing the risk management capabilities of the industry and providing future-ready customer experiences.

Ms Carmen Chu,
Executive Director (Banking Supervision), HKMA

Understanding the Five Pillars

To develop the Blueprint, primary and secondary research was conducted on the three key technology enablers as well as the two foundational capabilities. The research aimed to understand current and emerging advancements in fintech within the financial services industry, identify barriers to adoption and establish promotional priorities essential to supporting and advancing the sector.

Artificial Intelligence

The financial services industry is entering a new phase of A.I., shifting from using traditional A.I. for fraud detection and credit scoring toward Generative A.I. (GenA.I.) and, more recently, agentic A.I.

GenA.I. enables the synthesis of unstructured data, unlocking advanced applications, including more sophisticated anti-money laundering tools and autonomous customer service. This transition is being supported by responsible innovation platforms, such as the HKMA's GenA.I. Sandbox. Agentic A.I., which emerged in 2025, offers autonomous monitoring, decision-making, and execution, making it particularly appealing to smaller banks seeking rapid return on investment (ROI) through the automation of repetitive, low-risk tasks.

Adoption challenges remain significant, including a limited number of revenue-generating use cases, concerns over accuracy, difficulties integrating with legacy systems, decentralised data, limited access to resources, and a critical shortage of talent possessing a blend of technical expertise, regulatory knowledge, and business acumen. To progress from cautious internal deployments to sophisticated, customer-facing applications, key priorities must include fostering knowledge sharing, building targeted capabilities, establishing collaborative ecosystems, developing shared infrastructure, and expanding sandbox environments to enable safe, scalable, and impactful A.I. adoption.

Distributed Ledger Technology

DLT is transforming finance by enabling secure, synchronised ledgers, accelerating payments, and supporting asset tokenisation, converting real-world assets into cryptographically verified tokens that enhance liquidity, reduce costs, and increase transparency. There is also an expansion of use cases in tokenisation, powering innovations such as the HKSAR Government's tokenised Green Bonds, and the HKMA's e-HKD+. To support the development of DLT-based banking solutions, the HKMA also introduced the Supervisory Incubator for DLT, while collaborative efforts like Project Ensemble explore cross-boundary settlement using tokenised deposits.

However, widespread adoption faces several challenges: integration with legacy systems, substantial migration costs, interoperability and scalability limitations, technical risks like smart contract vulnerabilities, private key loss, and uncertainty over asset classifications. Overcoming these barriers requires industry-wide coordination, including sharing integration strategies and ROI-driven use cases, building production-level skills, and establishing clear standards for asset classification, governance framework, and preferred DLT network architectures. These strategic steps would enable scalable, interoperable deployments that deliver tangible business value.

High-Performance Computing

HPC significantly enhances computational capabilities, allowing complex calculations at unprecedented speeds. Supercomputing improves risk modelling and quantitative trading strategies, while quantum computing offers transformative potential for advanced portfolio optimisation, scenario simulation, and product pricing. Some institutions in Hong Kong, particularly more established banks with resources, are actively exploring quantum computing to revolutionise areas like fraud detection and financial analysis, while preparing for potential security threats associated with quantum capabilities.

However, HPC adoption is challenged by high costs of deployment, lack of compatible supporting infrastructure, and a shortage of skilled personnel. Establishing shared infrastructure facilities and industry-wide training can reduce financial barriers and equip institutions with the necessary skills. Focused efforts to integrate post-quantum cryptography (PQC) within cybersecurity frameworks are essential to mitigate emerging quantum-related risks and ensure comprehensive data protection and operational resilience.

Data Excellence

Achieving data excellence represents a fundamental challenge for numerous financial institutions in Hong Kong. Data availability and quality not only form the

foundation for advanced fintech solutions, but also underpin effective risk management and supervision. However, persistent issues including incomplete datasets and legacy system integration continue to impede progress. Many banks contend with fragmented data architectures, inconsistent formatting, and insufficient infrastructure for secure data sharing, all of which limit the development of accurate A.I. models and actionable insights. Legacy systems, often batch-oriented, pose further challenges to data integration, preventing continuous quality monitoring crucial for real-time fintech applications such as fraud detection.

The promotion of data excellence should prioritise structured collaboration across the fintech ecosystem. Establishing programmes to disseminate best practices, technical insights, and governance frameworks can support institutions resolve data quality gaps and integration issues.

Cyber Resilience

Cybersecurity concerns continue to grow as sophisticated fintech solutions demand extensive datasets, amplifying risks related to data privacy and security. Challenges arise from A.I., DLT, and HPC implementations, which heavily depend on external platforms and third parties. Vulnerabilities include adversarial manipulation of A.I. systems, smart contract risks in DLT, and potential threats posed by emerging quantum computing capabilities. Insecure third-party services and weak governance mechanisms can further amplify these risks.

To strengthen cyber resilience, promotional priorities will focus on advancing robust governance, capability development, and shared knowledge resources. Developing a cybersecurity baseline for fintech services can help banks streamline their due diligence processes for technology service providers. Collaborative programmes for sharing cyber risk intelligence and defensive practices will enable institutions to anticipate and counteract emerging threats. These initiatives will support the financial sector to deploy advanced technologies while maintaining robust security postures and operational integrity.

Addressing Barriers and Looking Ahead

It is evident that fintech adoption continues to face significant challenges, including high implementation costs, security risks, and evolving regulations. Smaller institutions find these barriers particularly difficult to overcome. Additionally, the need for skilled personnel, coupled with concerns surrounding data privacy and cybersecurity, necessitates comprehensive strategies that address both the technical and organisational dimensions of technology adoption.

To accelerate fintech adoption among Hong Kong's banks, the HKMA has synthesised insights from its analysis into a structured strategy. Key priorities include advancing A.I. use cases beyond internal deployments to deliver measurable ROI and integrating DLT through tokenisation and real-time transactions into business models. Highlighting successful deployments will drive scalable, revenue-generating operations. Raising awareness of HPC's potential for data analytics is critical to preparing institutions for the post-quantum era. Data Excellence underpins these initiatives, with a focus on improving data quality and accessibility. Strengthening cyber resilience is essential, with an emphasis on governance for third-party risks and creating shared knowledge to address technology-specific threats linked to A.I., DLT, and HPC adoption.

Recommendations

To address these key priorities, the HKMA has designed a suite of initiatives structured around the three dimensions:

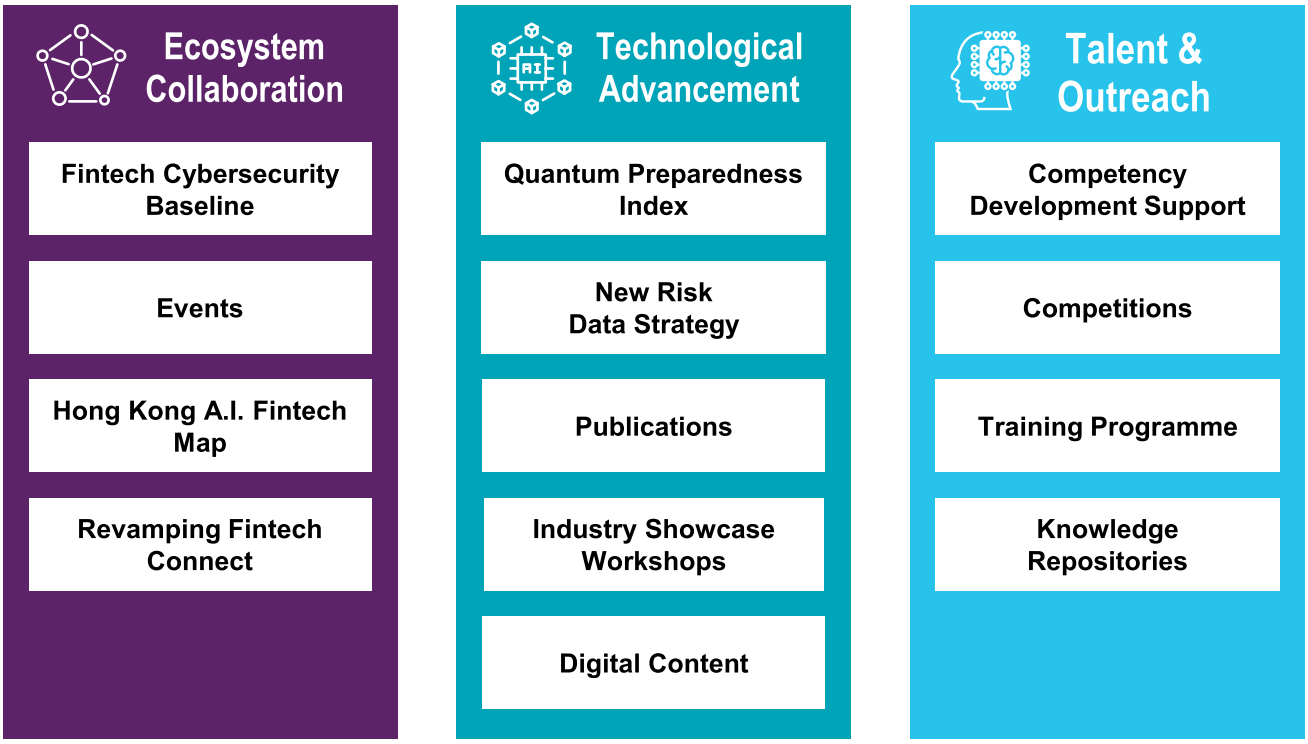
- Ecosystem Collaboration: These initiatives will focus on strengthening partnerships that enable industry-wide transformation and coordinated advancement across A.I., DLT, HPC, Data Excellence, and Cyber Resilience.

- Technological Advancement: These initiatives will support the development and seamless integration of advanced technologies into existing banking operating models.

- Talent & Outreach: These initiatives will build the necessary skills, awareness, and organisational readiness to enable the safe and effective implementation of advanced fintech solutions.

Together, these dimensions form a cohesive framework that transforms the sector's identified challenges and opportunities into targeted, actionable programmes. This approach will foster sustainable growth and reinforce Hong Kong's position as a global leader in fintech innovation.

Figure 2: Strategic Dimensions and Initiatives



Source: HKMA

Fintech Cybersecurity Baseline

To enhance the efficiency of due diligence processes undertaken by financial institutions when evaluating and onboarding fintech partners, the HKMA intends to establish a standardised, industry-led fintech cybersecurity baseline for fintech solution providers and enable them to demonstrate their technological capabilities, operational readiness, and compliance with the expectations of banks.

Events

The HKMA will host a series of events aimed at driving industry-led knowledge sharing, showcasing global fintech innovations, and fostering collaboration across the ecosystem. These events will build on previous successful formats, such as conferences and FiNETech events, each crafted to address various aspects of engagement, connection-building, and market access.

Hong Kong A.I. Fintech Map

To accelerate A.I. adoption in fintech, the HKMA will launch the Hong Kong A.I. Fintech Map, offering a structured overview of Hong Kong's A.I. ecosystem. This centralised, publicly accessible directory will feature A.I. and GenA.I. firms in Hong Kong's financial services industry, outlining their specialisations, practical use cases, and adoption trends, providing stakeholders with market insights and relevant solutions at a glance to facilitate fintech partnerships.

Revamping Fintech Connect

Launched in 2024, the HKMA's Fintech Connect is Hong Kong's first cross-sectoral sourcing platform linking financial institutions with fintech solution providers. To boost awareness, exposure, and matching rates, the HKMA will revamp the platform to enhance capabilities and foster ongoing ecosystem collaboration. The new functionalities will aim at enhancing matching precision through the use of A.I.

Quantum Preparedness Index

To address security risks and provide a maturity pathway for the banking sector in the post-quantum era, the HKMA plans to launch a Quantum Preparedness Index to assess the banking sector's maturity in adopting PQC and Quantum Computing. The initiative will begin with a baseline Quantum

Preparedness Assessment, which will measure strategic awareness and operational readiness, followed by the development of a "target index" and a corresponding transition roadmap that outlines potential PQC and quantum computing projects and pilot initiatives.

New Risk Data Strategy

Recognising that high-quality, well-managed data is essential for fully leveraging A.I., DLT, and HPC, the HKMA proposes a New Risk Data Strategy to foster collaboration, gather feedback, and share best practices in data management. The strategy aims to enhance data infrastructure, enabling smarter risk management, proactive insights, and innovation, while building a collaborative data ecosystem among financial institutions, service providers, and the HKMA.

Publications

Building on the success of the practice guides and research papers under the "All Banks Go Fintech" initiative and recognising the challenges financial institutions face in scaling the adoption of advanced fintech, the HKMA will collaborate with leading industry practitioners and academic institutions to develop a new series of in-depth publications. These publications will not only showcase cutting-edge use cases, but also provide strategies for integrating these technologies into existing systems and operating models.

Industry Showcase Workshops

The HKMA aims to empower the banking sector to adopt advanced fintech applications that deliver tangible business value and can be embedded into existing operating models while addressing industry challenges. To this end, it will host a series of in-person showcase workshops featuring local subject matter experts and fintech firms, who will share their knowledge, showcase proven applications, and exchange best practices.

Digital Content

To promote knowledge sharing and help address the challenges financial institutions face in adopting fintech, the HKMA will launch a new series of educational podcasts and video spotlights. Each episode will feature in-depth interviews, expert-led discussions, and sharing of case studies addressing specific adoption challenges and exploring solutions across A.I., DLT, and HPC.

Competency Development Support

To establish a clear view on the skills required and address capacity-building needs in A.I. and DLT, the HKMA plans to explore the competency needs of fintech users in the banking sector. This initiative serves to support industry practitioners in attaining the skill sets and also outline the required competencies so that targeted talent development programmes can be designed to build these skills effectively.

Competitions

To encourage innovation and showcase sophisticated use cases of A.I. and DLT for financial institutions to move from basic to advanced applications, the HKMA plans to organise competitions focusing on responsible innovation with GenA.I. and DLT within the financial services industry. Participants from around the world will be invited to take part in the competitions, expanding the scope of innovative idea generation.

Training Programme

To build on the success of the training sessions under the "All Banks Go Fintech" initiative and further address the talent and skills gap challenges in adopting fintech, the HKMA plans to implement a talent-building training programme that offers hands-on workshops to industry practitioners. The training sessions will be led by expert trainers with specialised knowledge in their fields, offering practical fintech skills to promote more effective adoption and utilisation.

Knowledge Repositories

Building on the foundation of the Fintech Knowledge Hub, the HKMA aims to establish a dedicated knowledge repository within the hub to facilitate the sharing of specialised technical know-how. This repository will provide financial institutions and fintech solution providers with practical, ready-to-use resources and real-world examples to accelerate the adoption of advanced technologies.

1. Context: The Next Phase of Fintech Maturity

1.1 Journey So Far

The "All Banks Go Fintech" initiative aimed to transform the banking sector through the comprehensive digitalisation of operations, extending from front-end to back-end processes. To advance this initiative, the HKMA has spearheaded efforts to encourage banks to embrace fintech across various domains.[3] To facilitate the adoption of fintech by all banks, the HKMA launched a comprehensive Hong Kong Fintech Promotion Roadmap in 2023.

Figure 3: Hong Kong Fintech Promotion Roadmap Vision

VISION

To bolster Hong Kong's position as a leading global financial centre that offers world-class digitally-enabled products, services and experiences to all consumers and businesses through fully embracing fintech solutions, facilitated by active cross-sectoral collaboration

SFC ⟷ HKMA ⟷ IA

FINTECH VERTICALS

WEALTHTECH
Deliver wide-ranging, hyper-personalised and low-cost wealth solutions across the entire wealth curve

INSURTECH
Digitalise the end-to-end insurance value chain to offer a superior omnichannel experience for both existing and prospective policyholders

GREENTECH
Embrace new data and technologies to accelerate Hong Kong's transition to a net-zero economy

TECHNOLOGY OVERLAYS

ARTIFICIAL INTELLIGENCE
Harness the transformative power of A.I. to supercharge the impact of fintech solutions across the end-to-end customer journey

DISTRIBUTED LEDGER TECHNOLOGY
Reimagine traditional operating models and processes by proactively exploring the adoption of DLT-enabled solutions

Source: HKMA

[3] HKMA. 2017. A New Era of Smart Banking. (https://www.hkma.gov.hk/eng/news-and-media/press-releases/2017/09/20170929-3/).

Figure 4: Hong Kong Fintech Promotion Roadmap Initiatives

2023

Dec

Hybrid Seminar – Wealthtech
Featured key market updates and the sharing of successful Wealthtech initiatives

2024

Mar

Video Series – Insurtech
Showed how two partnerships transformed Insurtech challenges into opportunities

Hybrid Seminar – DLT
Spoke about how to move from theory to practice to utilise DLT

Apr

Training – Business Case
Training effectively improved the audiences' understanding of how to take their organisations business to the next level

FiNETech – General Fintech
Event showcased current and future fintech

May

Training – PoC
Provided training for the proof of concept process and its implementation considerations

Jul

Training – A.I. & Integration
Provided training on use cases and types of A.I.

Aug

FiNETech – A.I.
A platform to interact with new A.I. solution providers and learn about latest developments

Publication – Fintech Promotion Roadmap
Release of the Fintech Promotion Roadmap

Sep

Publication – GenA.I. Research paper
Shared insights on the state of GenA.I. adoption

Oct

Video Series – A.I.
Shows how A.I. accelerates innovation in fintech

Fintech Connect Directory
Release of a collaboration platform for fintech users and solution providers

Fintech Knowledge Hub
Revamp of the Regtech Knowledge Hub to provide a one stop platform for fintech solutions

Nov

FiNETech – Greentech
Provided valuable insights of the future of banking focusing on Greentech

Training – Greentech
Increased understanding on latest developments and applications of Greentech

Dec

Video Series – Greentech
Industry leaders talked about Greentech in action

2025

Jan

FiNETech – DLT
Showcased the latest developments in DLT within the financial services

Training – DLT Solution
Taught participants how to successfully activate DLT solutions in the financial sector

Feb

Publication – Greentech APG
Provided a practice guide on how to implement sustainable tech into institutions

Mar

Publication – DLT research paper
Shared insights on the current state of DLT adoption

Video Series – Wealthtech
Industry leaders talked about Wealthtech in action

Apr

FiNETech – Next Epoch of GenA.I. Sandbox
Showcased the new GenA.I. sandbox in action

Jul

FiNETech – Data Excellence and Cyber Resilience
Provided valuable insights on the future of cyber resilience and data excellence from solution providers

Publication – Results of Tech Maturity Stock-take
Presented the observations from the Stock-take and outlined the way forward

Oct

GenA.I. Symposium
Shared insights from the first cohort of GenA.I. Sandbox

Publication – GenA.I. Insights Report
Presented findings from the GenA.I. Sandbox trials, concluding the inaugural cohort

Source: HKMA

The roadmap delivered on seven key initiatives: Fintech Knowledge Hub; Fintech transformation videos; the "FiNETech" series; best practice guidance; research projects; seminars; and training sessions over the course of two years, all of which yielded promising results.

1.2 The Results

1.2.1 Significant Growth in Fintech Adoption

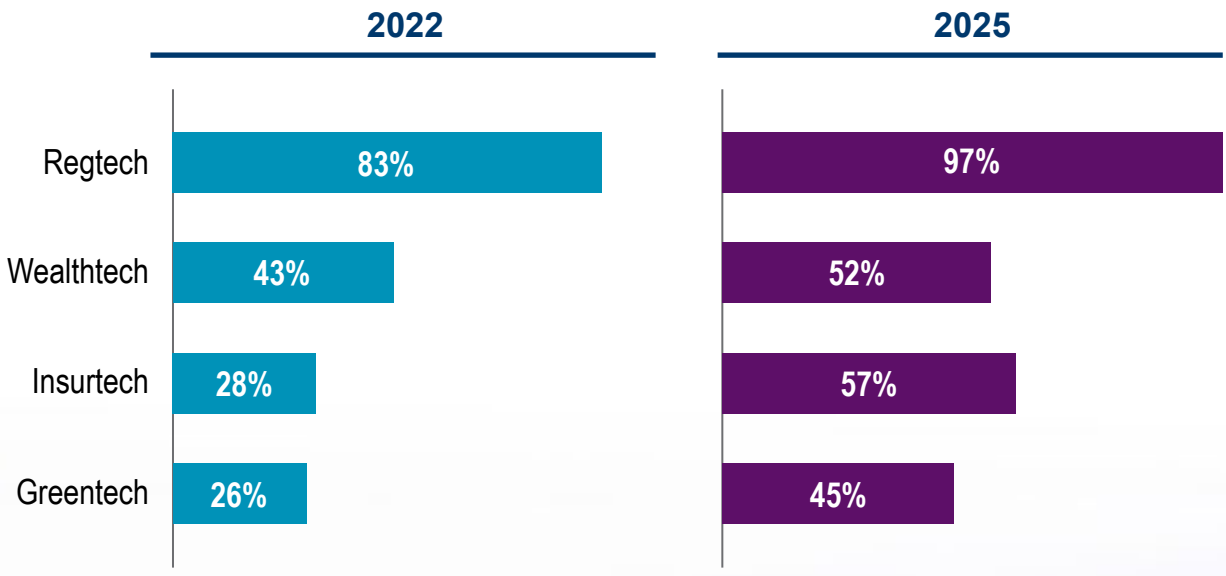
The Tech Maturity Stock-take revealed that 95% of surveyed banks in Hong Kong, including all retail banks, have adopted some form of fintech, showing notable progress in adoption across various aspects. The highest adoption rate of fintech has been witnessed in the Regtech space. The Stock-take revealed a 14 percentage point increase in Regtech adoption, rising from 83% to 97%. This indicates that Regtech has been effectively integrated, particularly in areas such as cyber risk management, customer onboarding, and product due diligence.

In addition to Regtech, other fintech categories have also experienced growth. Greentech, which refers to green fintech that is fintech with eco-friendly initiatives, saw its adoption rise from 26% to 45%. This increase reflects institutions' growing recognition of the significance of sustainable finance and climate risk management.

Furthermore, Insurtech which is designed to modernise and improve the traditional insurance industry had its adoption rise from 28% to 57% among banks, showing a clear upward trend, and helping increase efficiency in the insurance industry.

Lastly, Wealthtech has demonstrated increased adoption since 2022, climbing in usage from 43% to 52%, as institutes enhanced their wealth management proposition through digital tools and platforms. This growth is driven by the proliferation of digital platforms and automated advisory solutions.

Figure 5: Fintech Adoption Rates 2022 vs 2025



Source: HKMA

1.2.2 Increased use of Artificial Intelligence, Distributed Ledger Technology and High-Performance Computing

Figure 6: A.I. and DLT Adoption Rates 2022 vs 2025

Source: HKMA

With A.I. consistently evolving and taking centre stage in fintech, it is imperative for banks to adapt and embrace this transformative technology to maintain competitive edge and reduce operational burden. Numerous institutions are transitioning from exploratory phases to operational implementation of A.I. Consequently, the adoption rate for A.I. has grown from 59% to 75%. For example, a financial institution has developed a multilingual speech model and sentiment analysis tool that enhances trade surveillance processes. The export of this tool to other jurisdictions illustrates the potential of leveraging technology to overcome language barriers and expand into new markets.

Alongside A.I., DLT is also gaining traction, particularly within the financial services industry, as it serves as the foundation for DLT-based digital payments. The adoption rate for DLT has increased from 30% in 2022 to 45% in 2025. One financial institution surveyed is leveraging DLT to provide services including tokenisation, issuance, distribution, and custody of digital assets. DLT has also delivered valuable insights into the development of Central Bank Digital Currencies (CBDC) and the tokenisation of traditional and alternative financial asset classes.

A.I. and DLT are not evolving in isolation; they are also enabling advancements across other fintech sectors. In Wealthtech and Regtech, 80% of anticipated use cases are expected to reach Advanced[4] maturity levels or higher by 2028 and will be supported by A.I. and DLT. For Greentech, this figure stands at approximately 70%, while for Insurtech, it is 60%.

[4] Definition of the six maturity levels:
- No Adoption: The bank has neither implemented nor made plans to adopt fintech in this area.
- Planning: The bank has developed concrete plans for adopting fintech solutions or technologies but has yet to advance these to the pilot or production phase.
- Pilot: The bank has conducted proof-of-concepts (PoCs) for fintech solutions or technologies.
- Basic: The bank has implemented fintech solutions or technologies to a minimal degree, without significant change or impact on existing processes.
- Advanced: The bank has extensively applied fintech solutions or technologies to enhance operations, leading to significant and impactful process re-engineering.
- Pioneer: The bank has applied novel and pioneering fintech solutions or technologies, fundamentally revamping digital processes.

Figure 7: Share of Advanced Use Cases Leveraging A.I. & DLT

Source: HKMA

To keep pace with these advancements and their growing computational demands, institutions are encouraged to explore emerging infrastructure technologies, including HPC and quantum computing capabilities. Currently, HPC has a 23% adoption rate, with projections indicating growth to 61% by 2028, while quantum computing's current adoption rate remains low at 7%, primarily confined to exploration and testing phases. These technologies support A.I. and DLT and have applications in climate risk analysis, lending optimisation, enhanced payment security, improved customer service, and other areas through advanced analytics.

Based on these insights from the Tech Maturity Stock-take, it is evident that the future of fintech advancement will concentrate on A.I. and DLT, with the infrastructural support of HPC.

1.2.3 The Imperative to Progress Towards Advanced Adoption

The Tech Maturity Stock-take also revealed that 36% of banks have allocated more than 30% of their technology budgets to fintech initiatives, underscoring a substantial commitment to fintech development and integration. Impressively, 95% plan to maintain or increase these investments over the next three years, with half expecting budget growth of 10-20%, which is crucial for positioning Hong Kong as a fintech hub.

Figure 8: Technology Budget Allocation on Fintech Initiatives

Source: HKMA

While the Tech Maturity Stock-take has revealed an increase in fintech adoption rates across a wide spectrum and investments among banks, it is notable that most banks implement fintech solutions as standalone tools that operate in isolation and do not fundamentally transform existing processes or fully integrate into core operating models. This is a particularly important finding as widespread adoption of fintech depends on these technologies delivering tangible, ROI-driven business value. Without clear, practical applications that improve performance and profitability, financial institutions are unlikely to expand or accelerate their use.

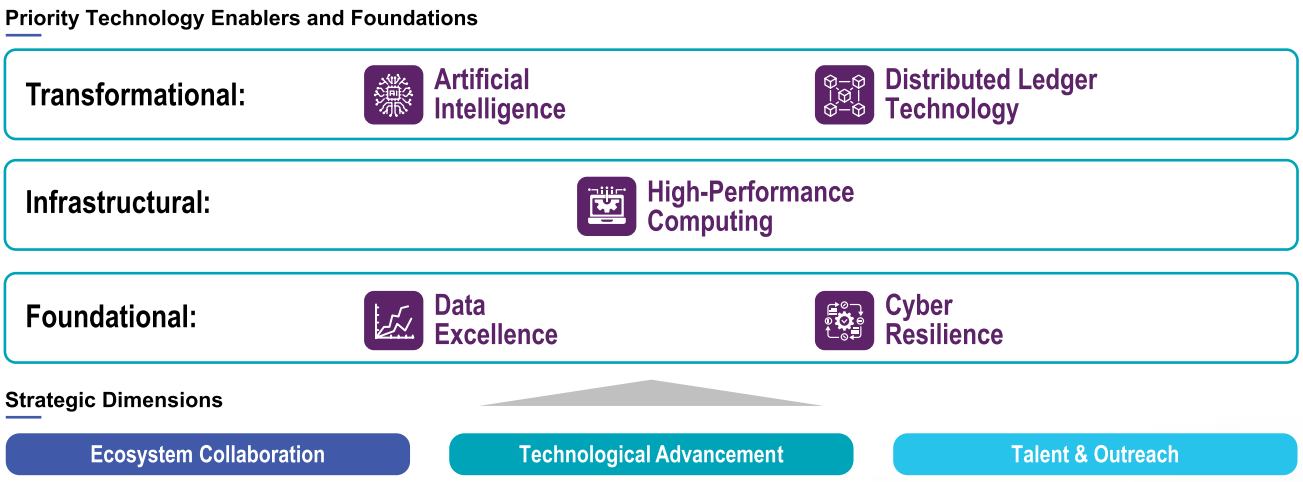
To that end, the HKMA is committed to elevating the implementation of fintech among banks, with the aspiration for most to target an Advanced level of maturity. This entails integrating fintech into existing operating models, to fundamentally transform operations and engineer significant process improvements, ultimately driving tangible business value.

1.3 Moving Forward

1.3.1 Fintech Promotion Blueprint

A key conclusion of the Tech Maturity Stock-take is the necessity of a comprehensive blueprint to accelerate the adoption of more sophisticated fintech in Hong Kong's financial services industry. Under "Fintech 2030", this Blueprint will serve as a tactical guide for our promotional efforts over the coming months, focusing on high-potential technology enablers supported by critical foundational capabilities in the financial industry.

Figure 9: Fintech Promotion Blueprint Key Focus



Source: HKMA

In addition to the three key technology enablers the HKMA identified that require sophisticated application support, namely A.I. and DLT at the transformational layer, as well as HPC at the infrastructural layer, the HKMA also recognises the importance of two foundational capabilities, namely Data Excellence and Cyber Resilience.

These two foundational capabilities serve as the critical foundation to enable sophisticated applications of A.I., DLT, and HPC. As identified in the Stock-take, growing concerns about data privacy and cybersecurity, as indicated by 61% of participating banks, present significant challenges to sophisticated technology application. As banks enhance their use of sophisticated technologies, they will need to correspondingly improve their capabilities in data management and cyber resilience to facilitate further advancements.

By prioritising focus towards A.I., DLT, HPC, Data Excellence and Cyber Resilience, this Blueprint aims to drive the fintech maturity of banks to the Advanced level.

To support this effort, the HKMA will focus on objectives in three key strategic dimensions, including:

- **Technological Advancement:** Driving the development and integration of advanced technologies.
- **Ecosystem Collaboration:** Fostering partnerships and collaborative efforts within the fintech community and beyond.
- **Talent & Outreach:** Enhancing skills, promoting human-machine interactions, and building a robust fintech workforce.

The Blueprint aims to reinforce Hong Kong's leadership at the forefront of emerging technologies through the practical and tactical implementation of a series of initiatives. These initiatives support the overarching ambition of "Fintech 2030" and establish a strong foundation for future advancements.

1.3.2 Fintech 2030

In November 2025, the HKMA unveiled "Fintech 2030",[5] a forward-looking strategy designed to propel Hong Kong's fintech development. The aim is to establish Hong Kong as a robust, resilient, and future-ready fintech hub, leveraging four key strategic pillars collectively known as "DART":

Figure 10: "Fintech 2030" Strategy Key Focus

Source: HKMA

[5] HKMA. 2025. The HKMA Unveils "Fintech 2030" at the Hong Kong FinTech Week 2025 (https://www.hkma.gov.hk/eng/news-and-media/press-releases/2025/11/20251103-3/).

"Fintech 2030" sets out a comprehensive portfolio of over 40 initiatives.

Figure 11: DART's Four Key Strategic Pillars and Their Focus Areas

Source: HKMA

To determine the support needed under each of the technology enablers and foundational capabilities of A.I., DLT, HPC, Data Excellence, and Cyber Resilience to accelerate adoption, the HKMA must first understand Hong Kong's fintech ecosystem and the key challenges financial institutions face in implementing sophisticated fintech solutions.

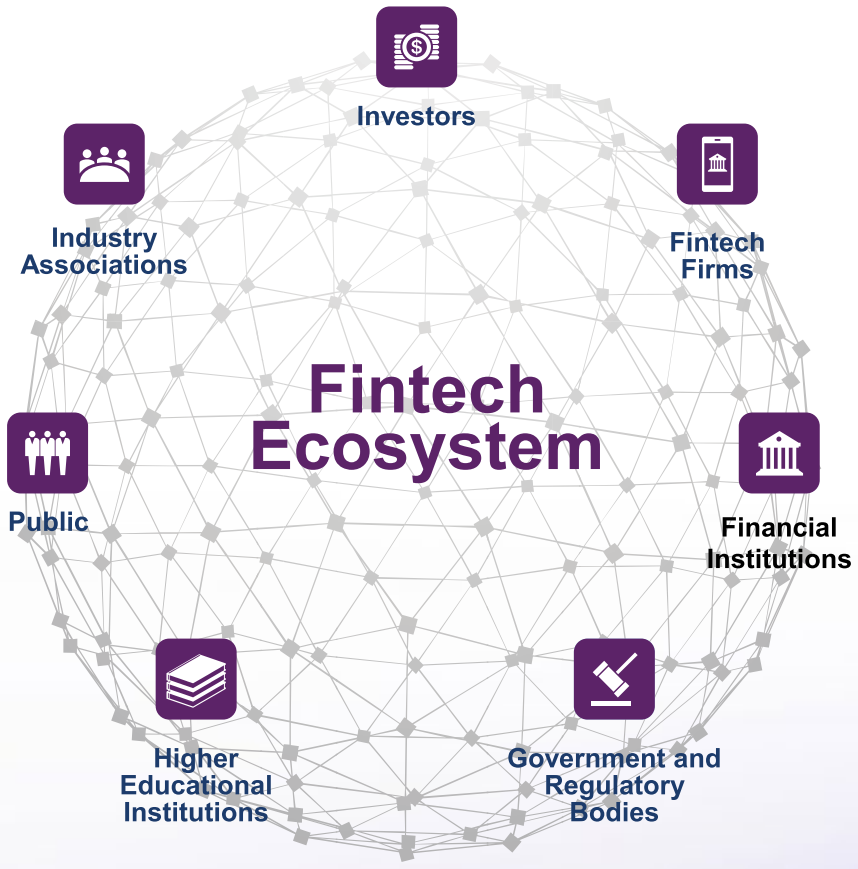
2. Market Understanding: The Adoption Landscape

2.1 Hong Kong's Fintech Ecosystem

2.1.1 Ecosystem Participants

In the Hong Kong fintech ecosystem, multiple key stakeholders fulfil distinct and vital roles.

Figure 12: Hong Kong Fintech Ecosystem



Source: KPMG analysis

Fintech Firms: Acting as solution providers, these companies drive innovation by developing advanced technologies that enable financial institutions to integrate fintech into their operations. They deliver specialised solutions across various fintech areas, tailoring their offerings to meet specific industry needs.

Financial Institutions: Comprising banks, insurance companies, asset management firms, and securities trading firms, these entities leverage fintech solutions to enhance operational efficiency, improve customer experience, and develop new financial products. Some institutions also invest in internal research and development, often forming strategic partnerships with fintech firms to accelerate digital transformation.

Government and Regulatory Bodies: Regulatory Bodies such as the HKMA, the Insurance Authority (IA), the Securities and Futures Commission (SFC), and the Mandatory Provident Fund Schemes Authority (MPFA) play a central role in overseeing the fintech ecosystem. They ensure supervisory frameworks remain up to date and foster an innovation-friendly environment through guidance, sandboxes, and financial incentives, all while safeguarding public interest.

Industry Associations: Industry Associations promote collaboration and dialogue among ecosystem participants. They host networking events, publish research, and advocate for industry needs, they enhance sectoral understanding and highlight real-world applications of fintech innovations.

Investors: Venture capital firms, private equity investors, and angel investors provide essential funding to fintech startups and established firms seeking expansion. Their investment choices shape the trajectory of fintech innovation by supporting disruptive technologies and identifying high-potential market opportunities.

Higher Educational Institutions: Universities and research centres contribute through advanced research in fintech, data analytics, A.I., and related fields. They also play a critical role in cultivating talent by delivering specialised education and training programmes to meet the industry's evolving workforce demands.

Public: As the ultimate consumers of fintech solutions, the public's adoption and feedback are instrumental in driving further innovation and development. Their trust and active engagement are fundamental for the successful deployment and scalability of fintech solutions.

Collectively, these stakeholders maintain ongoing interaction, exchange expertise, and collaborate across sectors, forming a dynamic and resilient ecosystem that sustains innovation and supports long-term growth in Hong Kong's fintech landscape.

2.1.2 Networking and Partnership Between Fintech Users and Providers

In Hong Kong, a range of dedicated platforms and initiatives have been established to bridge the gap between banks and fintech solution providers, cultivating a dynamic and interactive ecosystem. Many initiatives, led by the HKMA, have directly contributed to strengthening collaboration across the sector.

First, under the "All Banks Go Fintech", the HKMA launched Fintech Connect — a platform designed to enhance communication and foster partnerships. This platform enables banks to clearly articulate their technology needs while allowing fintech firms to showcase relevant solutions, leading to more effective pilot projects and commercial deployments. Fintech Connect supports the precise matching of supply and demand for fintech services. In collaboration with the Authority of Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone of Shenzhen, the HKMA has also covered Qianhai-based fintech solution providers, fostering greater collaboration in the Guangdong-Hong Kong-Macao Greater Bay Area (GBA) and promoting mutual growth in the fintech ecosystem.

Additionally, the HKMA introduced the FiNETech series, focused events that bring fintech providers and banks together to drive collaboration and innovation within the ecosystem, specifically addressing technology areas such as A.I. and DLT. This direct engagement helps dismantle barriers and align innovation with industry expectations.

Moreover, organisations such as Cyberport, Hong Kong Science and Technology Park (HKSTP), the Hong Kong Association of Banks (HKAB), the Fintech Association of Hong Kong (FTAHK), and many others serve as key networking hubs. For example, the FTAHK, as a leading independent association, plays a pivotal role in facilitating industry connections by organising events, publishing research, and advocating for the industry. It unites established financial institutions, startups, regulators, and investors, creating a collaborative environment that supports sustained growth and innovation.

2.1.3 Fintech Consortiums and Shared Technology Platforms

To support fintech development in Hong Kong, a range of fintech consortiums and shared technology platforms have been established. These consortiums serve as a primary mechanism for the financial sector to jointly explore and trial transformative fintech innovations, driving new efficiencies across the industry.

One notable example is the Commercial Data Interchange (CDI), which operates as a consortium platform. Built on the foundational principle of open APIs, CDI enables a secure, permissioned data exchange between SMEs and banks, facilitating seamless and trusted information sharing.

Regulatory sandboxes function as essential tools for developing and testing innovative solutions in a controlled environment. The HKMA has launched the GenA.I. Sandbox and the Supervisory Incubator for DLT, bringing together banks, technology providers, and industry players to advance the adoption of A.I. and DLT technologies in the financial sector. These initiatives focus on targeted use cases such as GenA.I. and tokenisation, accelerating innovation, enhancing learning, and fostering trusted partnerships between users and technology providers.

2.1.4 Funding Support for the Adoption of Fintech

Hong Kong has established a comprehensive and multilayered funding landscape to directly finance and de-risk the adoption of fintech by both banks and technology providers. This support is designed to lower the financial barriers to innovation and encourage investment in priority technology areas.

The first level of funding support comes from direct grants and subsidies for innovation, where the government offers schemes specifically to offset the costs of developing and implementing new technologies. An example of this is the Digital Bond Grant Scheme,[6] announced in 2024, which provides grants to subsidise the issuance costs of digital bonds, encouraging financial institutions to explore the efficiencies of tokenisation in capital markets. Another example is the Fintech Supervisory Sandbox (FSS) 3.0 initiative,[7] launched in 2021, which facilitates tech firms to apply for funding support under the Innovation and Technology Commission (ITC)'s Public Sector Trial Scheme (PSTS). The FSS 3.1 Pilot, announced in 2024 and administered by Cyberport, provides development-stage funding support for innovative fintech solutions to promote commercialisation and wider adoption of the projects which fit into the HKMA's regulatory mandate.

For fintech solution providers developing fintech solutions, incubator and accelerator funding is available. Key ecosystem builders like Cyberport and the Hong Kong Science and Technology Parks (HKSTP) offer substantial financial support, creating a pipeline of innovative solutions for the financial services industry. Cyberport, as Hong Kong's largest fintech community, offers a range of funding from the Cyberport Creative Micro Fund[8] to the Cyberport Incubation Programme.[9]

With the fintech ecosystem in Hong Kong now well-established, it is important to understand the challenges that banks encounter in adopting fintech solutions. To address this, primary and secondary research has been conducted to identify existing barriers to fintech adoption within these institutions. The goal of this research is to pinpoint the critical challenges that must be addressed, both in general and specific to the implementation of advanced technologies, to ensure a seamless integration process and to maximise the impact and efficiency of fintech solutions.

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[6] HKMA. 2024. Guideline on the Digital Bond Grant Scheme (https://www.hkma.gov.hk/media/eng/doc/key-functions/ifc/bond-market-development/Guideline_on_the_Digital_Bond_Grant_Scheme.pdf).

[7] HKMA. 2024. Fintech Supervisory Sandbox (FSS) (https://www.hkma.gov.hk/eng/key-functions/international-financial-centre/fintech/fintech-supervisory-sandbox-fss/).

[8] Cyberport. 2025. Cyberport Creative Micro Fund (https://www.cyberport.hk/en/entrepreneurship/cyberport_creative_micro_fund/).

[9] Cyberport. 2025. Cyberport Incubation Programme (https://www.cyberport.hk/en/entrepreneurship/cyberport_incubation_programme/).

Figure 13: Overview of Key Fintech Initiatives and Their Target Audiences

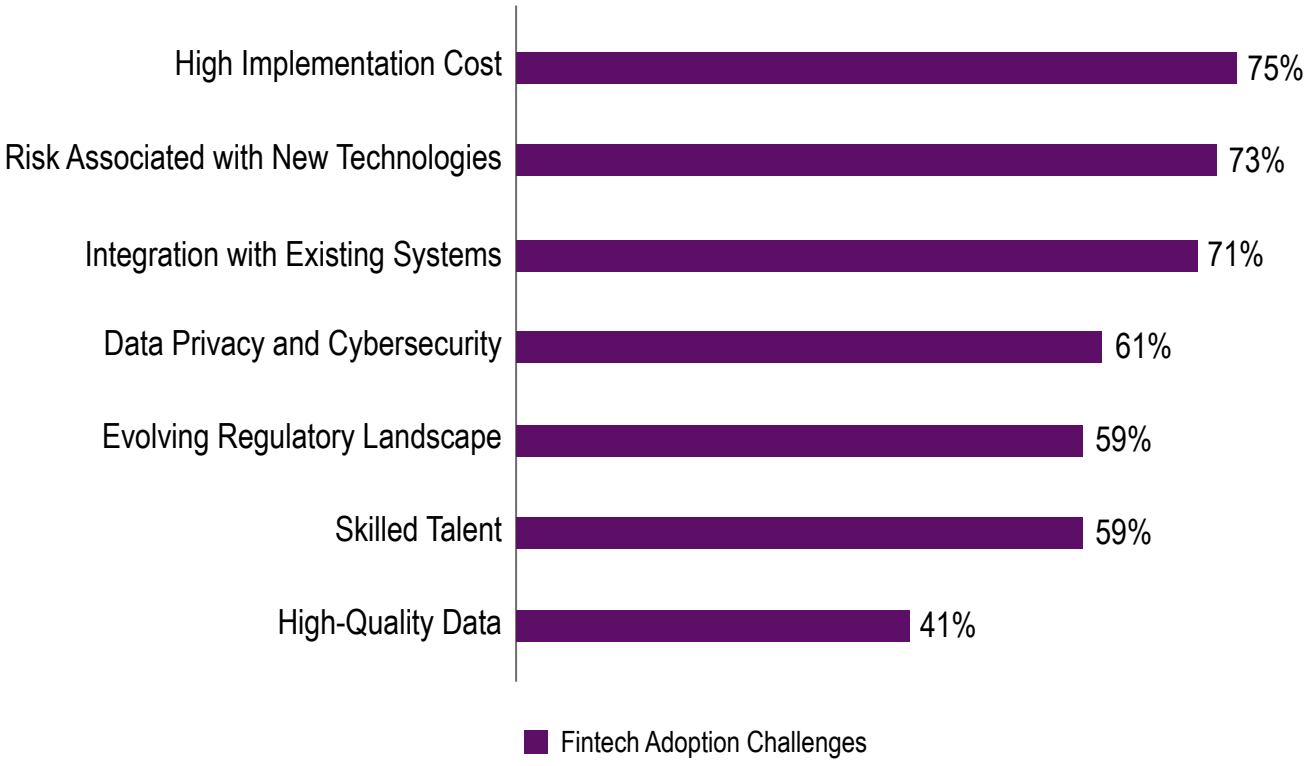
Initiative/Platform	Description	Target Audience
Fintech Connect	Platform to facilitate communication and partnerships, leading to more effective pilot projects and commercial deployments.	Banks, fintech solution providers
FiNETech series	Networking events to foster collaboration and innovation within the fintech ecosystem.	Banks, fintech solution providers
Commercial Data Interchange (CDI)	A regulator-orchestrated ecosystem that facilitates a secure and permissioned data pipeline between SMEs and banks.	Banks, SMEs
Supervisory Incubator of DLT and GenA.I. Sandbox	Controlled environment to facilitate collaboration on specific use cases around tokenisation and Generative A.I.	Banks, fintech solution providers, and industry players
Government's scheme e.g., Digital Bond Grant Scheme	Grants to subsidise the issuance costs of digital bonds, encouraging the development of the digital securities market.	Green bond issuers
Incubator and accelerator funding e.g., Cyberport and HKSTP Funding	Incubator and accelerator funding such as the Cyberport Creative Micro Fund.	Fintech solution providers

Source: HKMA, Cyberport, HKSTP, KPMG analysis

2.2 Challenges Remain

Despite the growing adoption of various fintech solutions across institutions and the presence of a well-established and dynamic fintech ecosystem, several challenges continue to persist. The Tech Maturity Stock-take examined the obstacles faced by banks in further expanding the penetration of fintech, providing valuable insights for future enhancements.

Figure 14: Fintech Adoption Challenges Faced by the Banks



Source: HKMA

The most significant challenge, reported by 75% of participating institutions, was the high cost of implementation associated with larger-scale fintech adoption. One bank highlighted, “banks have limited resources and may not be able to afford the introduction of A.I. or big data models”. This challenge was particularly acute for smaller institutions with constrained financial and human capital.

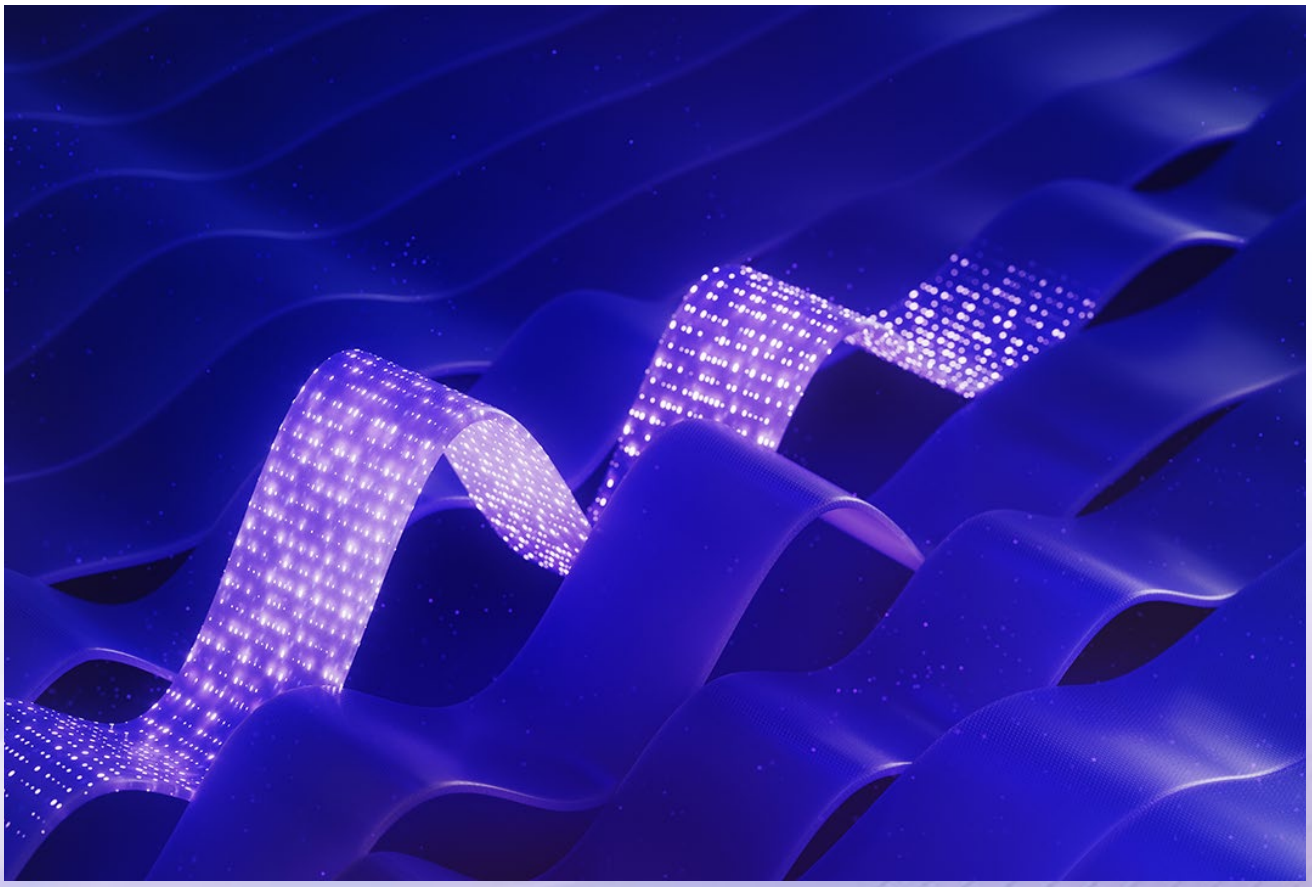
Additionally, 73% of institutions identified the management of risks linked to new technologies as a major concern. As technological advancement accelerates, institutions must rigorously evaluate potential security vulnerabilities, operational disruptions, and regulatory compliance issues. A third key challenge, cited by 71% of institutions, was integration with existing systems. As one bank noted, “the key challenge is the integration of new technology platforms into existing systems.” The implementation of complex technologies often result in increasingly intricate technical environments, requiring careful planning to ensure operational continuity.

Evolving regulatory landscapes was identified by 59% of banks as a critical barrier. In interviews, banks emphasised the difficulty in interpreting regulations related to A.I., including how to validate that A.I. models meet supervisory standards, and how data should be

appropriately used for training. Some institutions also expressed uncertainty regarding cross-boundary data sharing compliance, a fundamental requirement for the effective deployment of A.I. and DLT. Furthermore, as technology evolves, banks face increasing difficulty in understanding regulatory expectations for technologies like HPC. International banks have also underscored the complexity of complying with differing regulatory standards across jurisdictions.

Additional challenges common to emerging technologies included data privacy and cybersecurity concerns, cited by 61% of institutions; rising competition for skilled personnel, as reflected by a bank, “skilled talent is in high demand in the market and so it is difficult to retain or recruit”, noted by 59%; and heightened requirements for high-quality data as fintech solutions scale, highlighted by 41%. These findings indicate that the industry requires more mature and comprehensive strategies that address both technical and organisational facets of technology adoption.

While general adoption barriers affecting the fintech advancement in Hong Kong are well documented, it is essential to examine the specific barriers for the new technological innovations reshaping the financial landscape, namely A.I., DLT, and HPC. Addressing these barriers is critical to accelerating adoption and driving innovation within the financial services industry.



3. Priority Areas of Advanced Technology

3.1. Artificial Intelligence

3.1.1 The Changing Landscape of A.I. in Financial Services

The financial services industry's journey with A.I. has entered a transformative phase, moving beyond the established foundations of traditional A.I. toward more dynamic capabilities offered by GenA.I. and agentic A.I. Traditional A.I., which gained prominence in banking during the early 2000s, remains crucial for functions such as fraud detection and credit scoring, which can benefit from advanced predictive modelling.

GenA.I. has emerged as a powerful catalyst since 2022, fundamentally altering adoption trajectories through its ability to synthesise unstructured data and generate novel insights. Financial institutions now leverage GenA.I. for applications such as anti-money laundering systems that analyse transaction narratives and communications, or conversational agents that resolve customer queries autonomously. Supervisory sandboxes, in particular the HKMA's GenA.I. Sandbox, have accelerated this adoption by providing computational support and controlled environments to banks for development, testing, and validation. Some banks have even started to use it to create solutions that combat against deepfakes that bypass facial recognition during account opening and transaction authorisation.

Looking ahead, agentic A.I. represents the next evolutionary frontier with its potential for autonomous decision-making and execution. This technology enables systems to proactively monitor transactions, cross-reference multiple data sources, and initiate pre-defined actions without human intervention. For instance, agentic A.I. can power real-time fraud prevention systems that freeze accounts based on correlated market signals and behavioural patterns or coordinate multi-agent loan approval processes that simultaneously assess risks, verify identities, and disburse funds.

From interviews, the HKMA have found that smaller banks tend to leapfrog from GenA.I. to agentic A.I. development because, with limited resources available for the exploratory stage, they must generate ROI as quickly as possible. Agentic A.I. allows these banks with limited resources to carry out repetitive, low-risk tasks autonomously, effectively enhancing operational efficiencies and reducing resource pressure.

Despite this promise, several challenges remain in the larger-scale implementation of A.I.

3.1.2 Adoption Barriers in A.I.

The continuous advancement of A.I. introduces significant challenges for financial institutions seeking to adopt and utilise these technologies effectively.

A primary obstacle for GenA.I. is the perceived limitation on revenue-generating applications. A survey[10] by the Hong Kong Institute for Monetary and Financial Research (HKIMR) reveals that most GenA.I. implementations remain internal and non-customer-facing, yielding limited ROI. This cautious approach stems from fundamental concerns including banks' requirement for greater trust in accuracy before deploying GenA.I. in revenue-sensitive areas, the inability of current models to replace front-office expertise, and widespread scepticism regarding ROI from complex models given these limitations.

[10] HKIMR. 2025. Financial Services in the Era of Generative AI: Facilitating Responsible Adoption (https://www.aof.org.hk/docs/default-source/hkimr/applied-research-report/genairep1.pdf?sfvrsn=7b0261f_0).

A.I. adoption in the banking sector introduces a range of significant risks, including bias, cybersecurity threats, data privacy concerns, lack of explainability, and vulnerability to misinformation or manipulation. Bias may arise when models absorb prejudices from training data, leading to skewed outcomes. Large-scale training datasets can present privacy challenges if personal information is inadvertently included, and many A.I. algorithms function as opaque "black boxes", making it difficult to trace how decisions are made. Furthermore, GenA.I. models may produce "hallucinations" - plausible yet factually incorrect outputs - that can mislead users or erode trust.

The banking sector also faces the challenge that governance and oversight frameworks for the large-scale deployment of agentic A.I. systems remain under development. While regulatory bodies and industry groups are actively developing guidance, most existing standards were designed for traditional A.I. and GenA.I. and may require adaptation to address the unique characteristics and risks inherent in agentic A.I. Clearer structures for human oversight, consistent audit practices, and scalable monitoring mechanisms will be essential to ensure safe and compliant operations as these systems begin interacting across multiple business units and customer channels. Without effective and proven governance frameworks, institutions may struggle to deploy agentic A.I. solutions with scale and confidence.

Beyond novel technology risks and governance frameworks, another challenge lies in integration with legacy systems, where technical complexities arise from both software incompatibilities and fragmented data architectures. Many banks struggle with decentralised data repositories that prevent A.I. systems from learning and processing information efficiently (this challenge will be further discussed in the section on data excellence).

Furthermore, resource constraints create prohibitive barriers, particularly for smaller institutions, with adoption rates showing stark disparities. An analysis of the Tech Maturity Stock-take results revealed that only 63% of small firms implement A.I. solutions compared to 76% of medium-sized and 83% of large firms.

The industry faces an A.I. talent shortage where approximately 76% of institutions report technical skills gaps in GenA.I. development and use, while 60% highlight compliance skills shortages in the HKIMR survey. More critically, the survey identifies a severe shortage of professionals possessing both technical expertise and business acumen, particularly for risk management roles requiring the rare combination of GenA.I. proficiency, financial regulation knowledge, and local market operations experience, a skillset seldom cultivated in current training programmes as highlighted in the report.

3.1.3 Promotion Priorities and Support Needs for A.I.

Building on the challenges outlined above, advancing from basic to advanced A.I. adoption in Hong Kong's banking sector will require a coordinated set of measures aimed at knowledge sharing, capability building, and ecosystem facilitation. These priorities should not only address risk mitigation but also unlock revenue-generating potential, strengthen integration capabilities, and embed A.I. fluency across all levels of an institution.

A systematic programme for industry-wide knowledge exchange will help institutions move beyond cautious, internal-only A.I. deployments into strategically selected customer-facing applications with measurable ROI. This should include detailed case studies of successful implementations, both locally and from leading international markets. Sharing practical methods for overcoming integration challenges, such as harmonising fragmented data architectures or deploying middleware to bridge legacy systems, will be critical to accelerating adoption. Forums, publications, and collaborative knowledge repositories could be developed to distribute this expertise.

Addressing the talent gap in A.I. adoption requires targeted capability building along both technical development skills and business user adoption. On the technical side, upskilling programmes covering model development, best practices, secure deployment, and explainability techniques can be held. On the user adoption side, training should focus on applying A.I. insights to strategic decision-making, product innovation, and safe usage.

It is also imperative that technology vendors, fintech startups, and infrastructure providers are actively involved along the adoption journey to accelerate the innovation of A.I. and reduce entry barriers, particularly for smaller institutions. This ecosystem approach can provide access to pre-built solutions, shared data platforms, interoperability tools, and integration expertise, enabling banks to bypass some of the most resource-intensive implementation steps. Facilitated matchmaking that brings together financial institutions and fintech solution providers in joint pilot programmes can accelerate the development of new revenue-generating use cases.

Structured guidance and sector-wide shared infrastructure can also be provided to accelerate safe and inclusive GenA.I. adoption. For instance, the existing HKMA GenA.I. Sandbox is a key initiative that gives banks a risk-controlled environment to experiment with customer-facing and revenue-generating GenA.I. applications before full-scale deployment. In parallel, the development and promotion of shared infrastructure, such as Cyberport's A.I. Supercomputing Centre, would help address the significant resource limitations faced by smaller institutions, enabling access to the computational power required for model training, simulation, and large-scale testing.

3.2 Distributed Ledger Technology

3.2.1 DLT and the Future of Tokenisation

DLT is gaining traction in the financial world as a shared, replicated, and synchronised database across multiple locations, institutions, or geographies. This enables participants to maintain their own copy of the ledger, with changes validated by the network, significantly reducing the risk of fraud and manipulation targeting the ledger. DLT has the potential to facilitate faster and more secure payments and introduces banks to the tokenisation of assets and the creation of DLT-based digital payments.

Tokenisation involves representing physical or financial assets as cryptographically verified digital tokens on a distributed ledger, each serving as a claim on the underlying asset. This process enhances liquidity for traditionally illiquid assets, reduces reliance on intermediaries, lowers transaction costs and settlement times, and ensures real-time auditability and strengthened regulatory compliance.

The tokenisation of RWAs has transitioned from a fringe experiment to a structural theme in global markets. Current developments include tokenised equities, often referred to as tokenised stocks, which are digital tokens representing ownership or economic exposure to traditional company shares. Some banks are beginning to tokenise RWAs like gold and bonds to create a "digital vault" for asset management and fractionalised trading. Tokenisation also enables the creation of DLT-based digital payments, allowing for faster transactions, reduced transaction costs, and increased security.

For example, the HKMA is advancing the e-HKD+ initiative, collaborating closely with industry stakeholders to explore innovative use cases for next-generation digital money that can potentially be used by individuals and institutions. The HKSAR Government also issued tokenised Green Bonds in a digitally native format, offering investor access via traditional market infrastructure, and integrating green bond disclosures with the digital assets platform. This marks the world's first digital bond issuance to offer tokenised central bank money in the form of e-CNY and e-HKD into the settlement process.

Additionally, some banks are establishing digital asset platforms for precise, automated, and controlled repo transactions, driving innovation through asset tokenisation. These platforms facilitate secured borrowing and lending via repurchase agreements by enabling near-instantaneous settlement of tokenised assets and cash, increasing accessibility for issuers and investors.

The development of transaction platforms and tokenisation has facilitated the creation of digital asset transactions on DLT networks. The HKMA is actively supporting this through Project Ensemble, a sandbox designed to experiment with end-to-end use cases for settling digital asset transactions using experimental tokenised deposits across boundaries. To support the development of DLT-based banking solutions, the HKMA also introduced the Supervisory Incubator for DLT.

While these initiatives collectively digitise core banking functions and help build tokenisation infrastructure for the future of finance, adoption challenges remain. These challenges may make it difficult for banks to fully utilise and derive value from DLT, particularly in the realm of tokenisation.

3.2.2 Adoption Barriers in DLT

While DLT offers significant potential for enhancing transparency, efficiency, and innovation in Hong Kong's financial services industry, banks face persistent barriers to its widespread adoption. These challenges span system integration, standards alignment, talent availability, and regulatory clarity as have been previously explored in the HKMA's DLT research paper[11] published in March 2025. They must be addressed before DLT can move beyond basic application.

A primary obstacle for financial institutions is the alignment of disparate systems and technology stacks that were not originally designed to interface with DLT networks, a challenge identified by 65% of survey respondents in the research paper. Traditional centralised architectures typically rely on fixed protocols and data structures, making integration a complex, resource-intensive task that requires significant customisation and dedicated resources. Furthermore, siloed development has led to a lack of native messaging interoperability between legacy infrastructure and DLT networks, which significantly increases integration costs. Because of these complexities, the expenses associated with DLT integration and migration may often exceed the cost of maintaining existing legacy systems.

Adopting DLT introduces unique technology risks, with 62% of institutions highlighting security and data privacy as moderate-to-major challenges. These inherent risks include smart contract vulnerabilities, where coding bugs or loopholes can be exploited at high speed, and private key risks, where the theft or loss of keys results in an irreversible loss of access to digital assets. Immutability risk is also central to DLT, as once data or fraudulent transactions are recorded on the ledger, they become extremely difficult to reverse or rectify. Additionally, node concentration risk poses a threat to ledger integrity if malicious actors gain control over a majority of a network's computational power or staked tokens of permissionless DLT.

Broad industry-wide adoption is currently hindered by interoperability and scalability issues, cited by 56% of surveyed firms. A significant barrier is the low throughput of many DLT networks in comparison to more established networks. This limited processing capacity can lead to network congestion and inefficiencies during peak periods. Furthermore, a lack of common messaging formats and communication protocols between different DLT initiatives creates silos, preventing the seamless flow of information across the wider financial industry.

Regulatory uncertainty remains an overarching barrier, with 53% of survey respondents identifying legal hurdles as a primary challenge. Institutions face difficulties navigating ambiguous legal definitions regarding digital assets and the enforceability of smart contracts across different jurisdictions. One bank the HKMA interviewed emphasised that while the HKMA has introduced a regulatory regime for various types of digital monies, further regulatory clarification remains essential. For instance, determining whether a digital monetary unit is classified as a currency or an asset carries significant implications for how it is reflected on a bank's balance sheet and reported, ultimately affecting the configuration of its core banking systems.

Currently, there is no consolidated industry view on the most suitable types of blockchain for financial operations, with institutions divided among private-permissioned, public-permissioned, and permissionless networks. This fragmentation presents challenges as institutions explore ways to utilise and balance both private and public networks effectively to achieve interoperability while protecting privacy. The lack of common standards is further complicated for global institutions that must manage cross-jurisdictional discrepancies in regulatory approaches. Without clear, legally binding standards and guidance on preferred network types, many financial institutions struggle to confidently adopt DLT solutions.

Smart contracts, as key enablers of DLT, offer immense potential for automation and efficiency. However, the lack of adequate knowledge, experience, support, and a robust ecosystem for smart contract deployment further complicates seamless adoption. These gaps highlight the need for comprehensive support and industry collaboration to build the necessary infrastructure and expertise for effective DLT implementation.

[11] HKMA. 2025. Distributed Ledger Technology in the Financial Sector: A Study on the Opportunities and Challenges (https://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/DLT_Research_Paper.pdf).

3.2.3 Promotion Priorities and Support Needs for DLT

Overcoming the barriers to DLT adoption in Hong Kong's financial services industry will require coordinated, industry-wide initiatives addressing both technical and non-technical challenges. Beyond risk mitigation, the focus should be on enabling scalable, interoperable, and commercially viable deployments that deliver demonstrable business value.

Knowledge sharing is essential to move DLT beyond narrow pilots into production environments that generate tangible business benefits. This includes disseminating integration strategies for aligning legacy systems and DLT networks, overcoming messaging interoperability issues, and managing migration costs. Structured case studies showcasing commercially successful DLT applications, such as tokenised deposits, cross-boundary settlements, smart contracts, and real-time asset custody, should be shared to illustrate the technology's ROI potential.

As DLT moves beyond the proof-of-concept stage, capability building programmes should focus on equipping industry practitioners with the skills needed for production-level application. This involves developing competencies in areas such as managing integration with existing systems, coordinating cross-functional implementation, building smart contracts and embedding governance and compliance practices into the DLT development programmes.

Clarity on the classification of digital assets, the legal enforceability of smart contracts, the baseline security requirements, and preferred DLT network types is essential to building confidence in adoption. Achieving industry consensus on these points would support the development of standards that harmonise messaging formats, governance protocols, and interoperability requirements across both local and cross-boundary networks.

3.3 High-Performance Computing

3.3.1 HPC and the Frontier of Computational Power

HPC can be categorised into supercomputers and computer clusters, which execute extensive computational tasks at high speed. These systems integrate parallel processing, large memory capacity, and high-throughput interconnects to perform complex computations beyond the capabilities of standard desktop machines. Additionally, quantum computing also offers a much larger scale of parallel processing as it harnesses the unique properties of quantum mechanics to perform calculations that are infeasible for traditional computers.

Supercomputing significantly enhances the speed and accuracy of financial systems, particularly in areas such as risk modelling and management. It can evaluate the effectiveness of credit, market, and operational risk management by simulating millions of random scenarios to stress-test portfolios and decision frameworks. Furthermore, supercomputing optimises quantitative trading and algorithmic strategies by modelling historical market conditions across vast datasets, enabling the development of more robust trading strategies. It also serves as foundational infrastructure for advanced technologies, including GenA.I. In Hong Kong, a notable example is the A.I. Supercomputing Centre, an initiative advanced by Cyberport to expand supercomputing access and support the growth of Hong Kong's A.I. ecosystem.

Quantum computing represents a potential paradigm shift for financial services by enabling the processing of complex calculations at speeds unattainable by classical computing systems. Leveraging quantum bits (qubits) and principles such as superposition and entanglement, quantum computers can explore numerous computational pathways simultaneously, making them particularly suited for optimisation problems, portfolio risk analysis, and cryptographic algorithms. In the banking sector, quantum computing could revolutionise areas like fraud detection, derivative pricing, and high-frequency trading by evaluating vast probabilities and correlations in near real-time.

However, it also introduces significant cybersecurity concerns, notably the risk that sufficiently advanced quantum machines could break current encryption standards, undermining data confidentiality across financial networks. This underscores the importance of proactive research into the area and initiates strategic transition plans to quantum-resistant cryptography, along with developing frameworks to ensure the technology is harnessed securely when it becomes commercially viable.

In Hong Kong, some sizable banking institutions that participated in our interviews are starting to actively explore quantum computing opportunities. Some have assigned resources to investigate business use cases such as product pricing, portfolio optimisation, and risk analysis, while others are researching quantum-safe standards and protocols.

3.3.2 Adoption Barriers in HPC

While technological advancements such as supercomputing and quantum computing hold transformative potential, they also bring evolving risks and challenges that require proactive management across technical, operational, and security dimensions. Tailored strategies are essential to safeguard institutional integrity.

HPC faces practical adoption barriers. One significant challenge is the high cost, as hosting supercomputing centres is expensive for individual banks. Additionally, there is a skills gap, with a shortage of talent capable of effectively utilising HPC technology, compounded by limited understanding within the industry. A smaller bank the HKMA interviewed indicated that it is not currently exploring HPC initiatives at all, citing a lack of resources to support such investments.

Supercomputing shares similar risk profiles with existing technologies, including technical risks such as hardware failures, software bugs, and scalability challenges. However, it also introduces new considerations related to the integration of advanced computing processes. Security risks of unauthorised access and data privacy compliance breaches remain pertinent. An important challenge to address for scaling supercomputing is its substantial energy consumption and cooling requirements. While these are not operational risks in themselves, they are crucial issues that need to be managed to facilitate the effective expansion of supercomputing capabilities.

Quantum computing presents even more complex challenges. Cryptographic risks arise from the potential for bad actors to intercept and store encrypted data for future decryption using quantum systems when they become more available, threatening current encryption standards. Additionally, legal and compliance risks will arise as a result of potential data protection breaches from compromised encryption.

To address these issues, banks should prioritise migrating to PQC, for instance adopting lattice-based, hash-based, or code-based algorithms to replace vulnerable cryptographic systems. Introducing cryptographic agility by designing adaptable systems capable of algorithmic updates as PQC standards evolve, along with proactive data lifecycle management to assess long-term confidentiality needs, could further strengthen resilience. Workforce development and alignment with emerging regulatory frameworks also represent essential steps.

Importantly, effective risk management in this domain is not merely defensive but also enables the secure adoption of these technologies, ensuring that institutions can harness their benefits without compromising stability. As both standards and threats continue to evolve, maintaining flexibility in technical infrastructure and governance approaches will be crucial for sustained operational resilience.

3.3.3 Promotion Priorities and Support Needs for HPC

As supercomputing and quantum computing gain traction in the financial services industry, their transformative potential is often constrained by prohibitive costs, specialised infrastructure requirements, and a shortage of qualified talent. To accelerate secure and equitable adoption, the financial services industry will benefit from coordinated strategies that combine shared infrastructure, capability building, and targeted risk mitigation.

Promoting the use of industry-wide shared facilities for supercomputing resources, such as Cyberport's A.I. Supercomputing Centre, can significantly reduce the financial barriers that individual banks, particularly smaller institutions, face in acquiring and maintaining these capabilities.

There should also be a common baseline understanding of supercomputing and quantum computing, including what these technologies are, their principles of operation, their potential financial applications, and the risks they present across the industry. A strong foundation in industry-wide literacy will create the context for more advanced, role-specific training later, ensuring that discussions around implementation are informed and aligned across stakeholders.

As part of the GenA.I. Sandbox trials, participating banks have also been making use of the supercomputing infrastructure provided in the A.I. Supercomputing Centre. With the technical guidance offered by Cyberport and the supervisory feedback from the HKMA, the GenA.I. Sandbox also serves as a platform to promote the more advanced use of HPC, particularly among smaller institutions.

To prepare for quantum risks, banks should focus on integrating PQC within their cybersecurity frameworks. This involves creating practical pathways to elevate banks' maturity in handling quantum threats, ensuring secure management of cryptographic assets and data.

4. Foundational Capabilities for Advanced Applications

Data Excellence and Cyber Resilience have emerged as the foundational pillars upon which sophisticated fintech, including A.I. and DLT, can be successfully deployed within Hong Kong's banking sector. As mentioned in the previous sections, 61% of institutions in the HKMA's Tech Maturity Stock-take identified data and cybersecurity as key challenges to fintech adoption. As institutions navigate the transformative potential of these technologies, they increasingly confront two interrelated constraints: the quality, availability, and governance of the data that powers these systems, and the robustness of their defences against evolving cybersecurity risks.

4.1 Data Excellence

4.1.1 The Challenges in Achieving Data Excellence

Data availability and quality are foundational to the successful development and adoption of sophisticated fintech solutions, yet they continue to pose significant challenges for many banks in Hong Kong.

For A.I. and advanced analytics, the reliability of outputs depends on well-curated datasets, yet data in some financial institutions remain incomplete, inconsistent across systems, and trapped within isolated repositories. Legacy input errors, inconsistent formatting, and gaps in records limit the development of accurate models and insights. In some cases, institutions also lack the infrastructure or protocols for secure and timely data sharing, whether between internal business units, across institutions, or with trusted third-party service providers. This limits the creation of cross-institution and cross-sector datasets that could strengthen fraud detection and enhance credit risk modelling. Without comprehensive, timely, and high-quality datasets, institutions risk undermining applications ranging from credit scoring to fraud detection.

Integration with decades-old legacy systems is a major obstacle to improving data excellence. While many banks in Hong Kong have already or are currently in the process of migrating their core banking systems to more modern platforms, some still rely on aging mainframe architectures designed for batch data-output processing creating fragmented systems and data. Such fragmentation prevents a unified customer view, undermining advanced analytics and fintech deployments such as A.I. and DLT. Batch-oriented architectures also lack support for continuous quality monitoring, limiting real-time assurance. Migration from legacy platforms demands significant financial and human resource investments for extensive cleaning, mapping, and validation of data to preserve records, further complicating modernisation efforts, particularly for small and medium-sized banks with resource constraints.

Beyond quality and availability concerns, financial institutions face a growing challenge in managing increasingly complex and unstructured datasets (e.g., text, images, and audio), which is supplemented by highly granular transactional data. Additionally, banks now handle more cross-boundary data transfers and external data sources, adding complexity to data management. While rich in potential insight, these datasets require advanced storage, indexing, metadata management, and governance frameworks to become usable at scale. Without proper structuring, tagging, and integration pipelines, valuable data remains underutilised.

Efforts to integrate core banking systems with intermediate platforms and advanced A.I. and DLT applications encounter structural misalignment. Legacy systems lack native API compatibility for real-time data delivery, meaning API layers often expose only batch extracts behind the scenes. This weakens time-critical use cases such as fraud detection, dynamic risk scoring, and real-time or on-demand reporting. Compliance teams, unable to access continuous data feeds, rely on manual processes, introducing operational risks. For DLT specifically, ensuring real time reconciliation between tokenised deposits on distributed ledgers and centralised balances involves synchronising two fundamentally different data architectures, creating significant technical hurdles.

4.1.2 Promotion Priorities and Support Needs for Data Excellence

Addressing the data excellence challenges facing Hong Kong's banking sector will require coordinated efforts across the fintech ecosystem. Several strategic priorities stand out as enabling measures.

A critical enabler is the creation of structured programmes for sharing best practices, technical insights, and governance frameworks across the sector. This should focus not only on high-level principles, but also on operational protocols for managing diverse datasets, including structured, unstructured, and increasingly granular transactional data. By disseminating proven data management methods, institutions can accelerate resolving data quality gaps and mitigate integration issues. Shared knowledge repositories, industry-wide workshops, and case study exchanges can help banks of varying maturity levels learn from leading industry practices and one another.

Improving data availability will require both clear guidance and supporting infrastructure. Industry-wide standards and guidance can be developed to support banks in enhancing their ability to source, process, and integrate external market data sources, whether for fraud detection, risk modelling, or credit underwriting. Such frameworks could address interoperability requirements, data format consistency, and validation practices, as well as outline governance protocols for incorporating third-party datasets into institutional workflows.

4.2 Cyber Resilience

4.2.1 The Challenges in Cyber Resilience

Data privacy and security risks have been routinely cited by financial institutions in Hong Kong as one of the major concerns in adopting sophisticated fintech. These risks are heightened as A.I., DLT, and HPC solutions demand large, granular datasets, often combining transactional, behavioural, biometric, and alternative data to enable new fintech products and risk models. In A.I. implementations, poorly controlled training and inference environments can expose sensitive personal data, allow model inversion or membership-inference attacks, and create channels for inadvertent leakage through prompts, logs, or API responses. DLT platforms add a further dimension where data written to distributed ledgers is difficult to alter or delete, creating tension with data-minimisation and erasure principles while making any integrity breach effectively permanent. At the same time, high-performance and emerging quantum computing capabilities can render current cryptographies useless once capabilities mature, as highlighted in previous sections.

Implementation of A.I., DLT, and HPC in Hong Kong's banking sector amplifies third-party risks because these technologies are typically delivered through complex, layered ecosystems of cloud providers, fintech vendors, data suppliers, and open-source components. Banks increasingly depend on external platforms for A.I. model development and deployment, blockchain infrastructure, and HPC, meaning a single upstream vulnerability, such as a compromised software library, misconfigured cloud service, or insecure API, may work its way downstream to affect banking services. According to an HKIMR survey, 40% of firms identified third-party GenA.I. provider security assessments as a priority regulatory area, with a desire among financial institutions for more standardised regulatory guidelines. Therefore, effective governance must extend beyond contractual clauses to continuous due diligence and supply-chain mapping to validate the cyber resilience of technology solution providers.

Beyond third-party and data-centric issues, A.I. and DLT each introduce distinct technology-specific cyber risks that can undermine resilience if not explicitly addressed in design and operation. A.I. systems are vulnerable to adversarial manipulation, such as poisoned training data, sophisticated deepfake manipulation, crafted inputs that cause misclassification, and prompt-injection attacks for generative models, which can corrupt fraud detection, credit assessment, and surveillance outcomes without necessarily triggering conventional security alerts. DLT infrastructures face threats such as smart contract vulnerabilities, oracle manipulation, and private-key compromise, any of which can enable irreversible asset theft or transaction tampering, while governance weaknesses in permissioned networks such as validator concentration or weak node controls can expose systemic settlement functions.

4.2.2 Promotion Priorities and Support Needs for Cyber Resilience

To effectively mitigate the cyber resilience challenges amplified by A.I., DLT, and HPC adoption in Hong Kong's banking sector, coordinated priorities should focus on robust governance, capability building, and shared knowledge resources. These actions will help institutions address both systemic and technology-specific risks while enabling innovation in a secure, sustainable manner.

Third-party vulnerabilities represent a significant exposure point for banks deploying advanced fintech solutions. To address these risks, support can be given to the wider fintech ecosystem to define clear expectations on the security standards from advanced fintech applications. This would allow solution providers to have an early understanding of the cybersecurity requirements, whereas financial institutions can evaluate and validate the resilience of external partners more efficiently and effectively, reducing the latency between risk identification and mitigation.

Given the speed at which attack vectors evolve, cyber resilience depends on agile learning across the sector. A structured programme for sharing cyber risk intelligence, operational learnings, and proven defensive practices would strengthen institutions' ability to anticipate and counter emerging threats. This could include case studies of incident response, shared playbooks for securing GenA.I. environments, hardening DLT platforms, and safeguarding HPC infrastructures. Regular workshops and knowledge repositories of security configurations could be developed for industry-wide participation. The goal would be to enable a diverse range of institutions to benefit from collective expertise, ensuring that the baseline resilience standard across the sector rises in step with the complexity of the technologies being deployed.

5. Key Priorities and Blueprint Design

5.1 Key Priorities

Having analysed the key trends, challenges, and needs that banks face in adopting A.I., DLT, and HPC, as well as advancing data excellence and cyber resilience, the HKMA has consolidated these insights into the key priorities guiding the design of the Blueprint initiatives.

For A.I., the priority is to move beyond cautious, internal-only deployments towards advanced, customer-facing use cases that deliver measurable ROI. By showcasing proven applications and connecting institutions with credible and capable solution providers, the HKMA aims to demonstrate tangible business value and accelerate risk-managed integration into core banking operations.

In DLT, the focus is on embedding tokenisation, real-time asset transactions, and cross-boundary settlements into existing business models, supported by clear standards on interoperability, asset classification, and smart contract enforceability. Highlighting commercially successful deployments will help institutions move beyond pilots to scalable and revenue-generating operations.

As HPC remains a relatively new topic for many institutions, developing literacy, delivering targeted education, and establishing clear pathways for its integration are paramount. A focused effort on these fronts will accelerate readiness and implementation, enabling institutions to fully leverage HPC's potential for data processing and analytics and prepare for the post-quantum age.

Data Excellence underpins all these innovations. The HKMA will promote the development of industry-wide standards and guidance to support banks in enhancing their ability to manage diverse datasets, and source, process, and integrate external market data sources to power analytics, fraud prevention, risk modelling and other use cases.

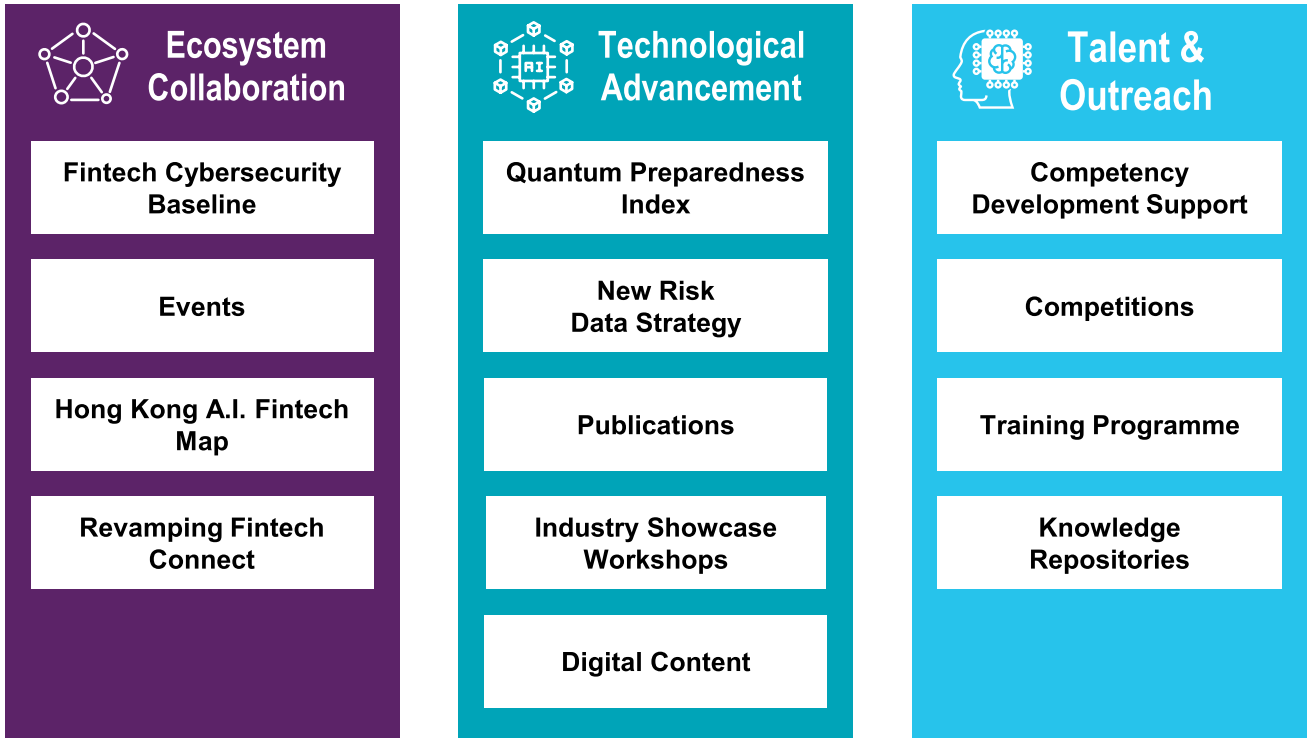
Finally, Cyber Resilience is essential to safeguarding fintech adoption. Key actions include strengthening governance for technology-specific risks, particularly third-party and supply-chain vulnerabilities, and implementing collaborative programmes for sharing cyber risk intelligence and defensive practices to help banks anticipate and counteract emerging threats.

5.2 Blueprint Design

To address these key priorities, the HKMA has designed a suite of Blueprint initiatives structured around the three dimensions: Ecosystem Collaboration, Technological Advancement, and Talent & Outreach.

Ecosystem Collaboration initiatives will focus on fostering partnerships that enable industry-wide transformation and coordinated advancement across A.I., DLT, HPC, data excellence, and cyber resilience. This includes bringing together financial institutions, fintech firms, technology vendors, academia, and regulators to showcase innovations and share lessons learned from successful deployments. It will also

Figure 15: Strategic Dimensions and Initiatives



Source: HKMA

include providing platforms for fintech firms to gain exposure to the wider ecosystem and demonstrate their capabilities and a cybersecurity baseline that ultimately supports the due diligence process undertaken by financial institutions when evaluating and onboarding fintech partners. By promoting open dialogue, consensus-driven standards, and joint projects, the HKMA will strengthen the development of the fintech ecosystem and accelerate the rate of innovation and adoption.

Technological Advancement initiatives will promote the development and seamless integration of advanced technologies into existing operating models across the banking sector. Through structured knowledge-sharing programmes, targeted demonstrations, and curated showcases of proven solutions, the HKMA will encourage institutions to move beyond internal, siloed applications to scalable, ROI-driven deployments. Efforts will also address developments in quantum computing, providing banks with a maturity pathway in preparation for quantum applications and risks. A collaborative programme will also be put in place to support banks in uplifting their data management capabilities to facilitate better use of risk data for proactive risk management. These initiatives will enable institutions to adopt customer-facing solutions confidently, embed innovation into their operating models, and maintain resilience while leveraging transformative technologies.

Talent & Outreach initiatives will focus on building the skills, awareness, and organisational readiness needed to support the safe and effective application of advanced fintech solutions. This includes delivering targeted training, industry-wide education programmes, and accessible resources that deepen understanding of technologies such as A.I., DLT, HPC, and their implications for data excellence and cyber resilience. Outreach efforts will showcase proven best practices, publish case studies, and encourage knowledge exchange across the sector to ensure stakeholders are informed, capable, and confident in integrating innovation into business models. By strengthening overall readiness, these initiatives will support long-term adoption and maximise the impact of the Blueprint priorities.

Together, these dimensions provide a cohesive framework that translates the sector's identified challenges and opportunities into actionable programmes that will drive sustainable growth and position Hong Kong as a global leader in fintech innovation.

6. Promotional Initiatives and Support Mechanisms

6.1 Ecosystem Collaboration

Fintech Cybersecurity Baseline

The HKMA plans to establish a standardised, industry-led Fintech Cybersecurity Baseline for fintech solution providers. This baseline aims to assess fintech solution providers and enable them to demonstrate their technological capabilities, operational readiness, and compliance with supervisory expectations within the cybersecurity domain.

The primary purpose of this baseline is to enhance the efficiency of the due diligence process undertaken by financial institutions when evaluating and onboarding fintech partners. By setting clear security benchmarks with an emphasis on emerging technology risks associated with specific application of advanced fintech, such as A.I. and DLT, the baseline seeks to elevate trust and resilience across the ecosystem.

The development of the baseline includes reviewing leading international standards and regulatory models and engaging with industry stakeholders to identify practical challenges and create a comprehensive perspective.

To facilitate practical implementation of the baseline, guidance materials will support fintech firms in aligning with the defined standards. Ultimately, the baseline will set a clear standard for fintech companies to understand the expectations of banks and regulators regarding the security, reliability, and safety of novel fintech solutions, strengthening credibility and building trust with investors and partners. This initiative will help reduce potential misinterpretations of regulatory requirements by fintech solution providers when they develop their products and services, especially for those new to partnering with financial institutions.

Events

The HKMA will host a series of events aimed at driving industry-led knowledge sharing, showcasing global fintech innovations, and fostering collaboration across the ecosystem. These events will build on previous successful formats, such as conferences and FiNETech events, each crafted to address various aspects of engagement, connection-building, and market access.

Conferences will feature curated programmes centred on key themes such as A.I., DLT, HPC, Data Excellence, and Cyber Resilience. Guided by industry leaders from local, regional, and global institutions, these gatherings aim to unite key stakeholders, including banks, fintech firms, non-bank financial institutions, and regulators, to share insights into global innovations. The focus will be on exploring emerging trends and discussing cutting-edge applications. By facilitating thought leadership and idea exchange, the conferences reinforce Hong Kong's status as a premier international fintech hub.

Building on past successes, the FiNETech series will continue to facilitate networking and collaboration, promoting innovative fintech solutions and highlighting their business benefits, driving adoption among financial institutions. While encouraging cross-boundary collaboration, contributions from fintech firms outside the region will provide a global perspective. Participants will showcase offerings through demonstrations and discussions, with expo areas allowing providers to engage attendees in more detailed conversations.

Satellite events, organised alongside major gatherings, will serve as platforms for announcing new HKMA fintech initiatives and development directions. These may include exhibitions, webinars, workshops, training sessions, and more.

Collectively, different event formats will establish an integrated engagement framework that encourages knowledge exchange, showcases innovation, expands networks, and supports the growth and international competitiveness of Hong Kong's fintech ecosystem.

Hong Kong A.I. Fintech Map

To support the effective application of A.I. within Hong Kong's fintech ecosystem, the HKMA is launching an initiative to develop a Hong Kong A.I. Fintech Map. The initiative is intended to provide a clear, structured overview of Hong Kong's A.I. landscape, including company profiles, technological capabilities, and application cases in the financial services industry, while helping solution providers enhance their visibility to relevant ecosystem stakeholders, such as financial institutions, investors, potential partners, and regulators.

The Hong Kong A.I. Fintech Map will be prepared for integration with Fintech Connect and will serve as a centralised directory of A.I. and GenA.I. firms operating in Hong Kong's financial ecosystem. It will organise information through a categorisation framework aligned to relevant capabilities, use cases, and application areas, supporting stakeholder discovery and market understanding.

As part of the development process, an expert panel will be formed to provide input on the Map's design focus, categorisation approach, and content priorities. Research will be conducted to identify relevant institutions and to inform the content and structure of the directory. This will include primary research (e.g., surveys and interviews) to understand emerging market needs, complemented by secondary research on ecosystem developments, relevant market participants, and approaches to categorisation.

Based on the research findings, the HKMA will develop a categorisation structure designed to support intuitive user navigation, and a methodology for periodic updates to help keep the directory current as the A.I. landscape evolves. The Map will be accompanied by a report summarising key observations from the research to support awareness and ecosystem engagement.

Revamping Fintech Connect

The HKMA established Fintech Connect in 2024 as Hong Kong's first cross-sectoral sourcing platform to bridge financial institutions with fintech solution providers. The one-stop platform practically works as a matchmaking portal that fosters collaboration and innovation among fintech ecosystem players in Hong Kong.

To further increase the awareness and exposure of available fintech solutions in the market and to boost the matching rate between financial institutions and fintech solution providers, the HKMA plans to revamp the Fintech Connect platform to enhance its existing capabilities. The primary objective is to facilitate the formation of partnerships and encourage on-going participation and collaboration among the ecosystem players.

The HKMA will conduct research, focus group sessions, and interviews to understand the current usage, requirements, and pain points of users for the Fintech Connect platform. Following this, the HKMA will analyse the results to identify innovative functionalities that can be implemented to improve matching precision. While the new functionalities will be determined as the initiative progresses, there are two potential features that can be incorporated into the revamped platform.

Firstly, the existing data on fintech providers will be enriched to include additional data points that provide more in-depth insights about the listed firms' capabilities, solutions, and unique value. Providing more comprehensive profiles of fintech solution providers will help fintech users make informed, confident, and faster decisions.

Secondly, AI-driven matching can be implemented to allow fintech users to describe their business problems so that the advanced matchmaking platform can identify more suitable fintech providers to address the issue. This allows fintech users to receive tailored provider recommendations, improving accuracy, speed, and relevance in finding the most suitable solutions.

To encourage the use of Fintech Connect, the HKMA will explore introducing event-linked participation, where signing up for the matchmaking platform also provides companies with prioritised access to conferences and FiNETech events. By integrating platform registration with event participation, fintech providers can showcase their solutions both online and in-person, expanding their reach to a wider pool of potential clients and partners.

6.2 Technological Advancement

Quantum Preparedness Index

With the development of HPC, especially quantum computing, it is important to assess the readiness of the banking sector in adopting this technology and potential security threats of the post-quantum era. The HKMA aims to develop a Quantum Preparedness Index, which will assess the preparedness of the banking sector for quantum computing and PQC adoption, with a focus on offering practical support to banks, particularly small and medium-sized ones in strengthening their preparedness. The first step in establishing this index involves setting a baseline for the sector's overall readiness to adopt quantum computing technologies and transition their security frameworks to include PQC. The baseline will be established through a comprehensive Quantum Preparedness Assessment, designed to measure banks' strategic awareness and operational readiness, thereby identifying gaps and areas in need of improvement.

The Assessment will be conducted through a series of information collection activities, interviews, and market research. Following the assessment, a transition roadmap will be developed. This roadmap will clearly outline potential quantum computing and PQC projects and pilot initiatives aimed at practically addressing the gaps identified during the assessment, thereby elevating the overall quantum readiness of the sector.

The primary function of the Quantum Preparedness Index is to systematically track the adoption and integration of PQC algorithms within the banking sector as well as measure the quantum readiness of the sector. By doing so, the index will not only provide a better understanding of the current state, but also facilitate the setting of measurable goals to expedite the sector's PQC and quantum computing preparedness. Ultimately, the index is envisioned to serve as a catalyst, encouraging the financial industry to proactively engage with emerging quantum technologies and ensuring that Hong Kong remains at the forefront of financial innovation.

New Risk Data Strategy

As highlighted in the previous sections, well-managed, high-quality data is fundamental to unlocking the full potential of A.I., DLT, and HPC. To this end, the HKMA proposes the establishment of a New Risk Data Strategy with the aim to create a collaborative programme with industry stakeholders to gather feedback and share best practices in data strategy and management. The availability of more comprehensive and granular risk data will allow banks and regulators to conduct more in-depth analysis across various risk domains, thereby unlocking the potential of more intelligent risk management and more agile supervision. With the availability of robust data infrastructure in the banking sector, the HKMA will work with the industry to broaden the scope of its Granular Data Reporting initiative to cover a more comprehensive scope of supervisory data.

To achieve this strategy, the HKMA plans to assess local industry gaps, and identify potential foundational approaches for the risk data strategy. In parallel, the HKMA will select and engage participants to gain insights into their data strategies, needs, and challenges, focusing on both structured and unstructured data. Following this, the HKMA will disseminate the identified best practices within the industry and assist in formulating a comprehensive roadmap of risk data strategy initiatives, incorporating feedback from consultation sessions.

Ongoing industry engagement will be conducted through working groups to ensure the seamless implementation of risk data strategy initiatives. The ultimate aim of this strategy is to encourage the development of enhanced data infrastructure for risk data, proactive insights, and innovative services. Additionally, it seeks to establish a data ecosystem that fosters collaboration among financial institutions, service providers, and the HKMA.

Publications

As part of the Fintech Promotion Roadmap, the HKMA has published practice guides on Greentech and research papers on DLT and GenA.I. to support industry participants in adopting and implementing fintech solutions.

Building on this foundation and recognising the challenges financial institutions face in adopting more sophisticated technologies at scale, the HKMA aims to develop a new series of in-depth publications to provide practical guidance and implementation considerations for financial institutions at different stages of their adoption and integration journey across selected fintech focus areas.

The publications are expected to cover selected topics across five priority technology enablers and foundations as in A.I., DLT, HPC, Data Excellence, and Cyber Resilience, featuring market developments, real-world application cases, and practical frameworks that address risk management and implementation considerations when evaluating, piloting, and scaling fintech solutions.

The research will combine primary research such as surveys and in-depth interviews with relevant stakeholders across the financial and non-financial sectors and secondary research to inform market context, adoption hurdles which could be technical, regulatory, operational, and areas that may warrant policy consideration moving forward.

The publications aim to provide early insight into adoption trends while reflecting real-world experiences and implementation considerations. By incorporating perspectives from industry practitioners and key stakeholders, the publications are intended to remain timely, relevant, and actionable, supporting financial institutions in navigating complexity and identifying practical opportunities to capitalise on the market opportunities ahead while addressing risk management concerns.

Industry Showcase Workshops

The HKMA aims to support the banking sector in adopting advanced fintech applications that can be embedded into existing operating models, address industry challenges, and deliver tangible business value.

To this end, the HKMA will organise a series of industry showcase workshops featuring hands-on demonstrations and expert sharing of emerging technologies that address specific industry needs. The objectives are to showcase fintech solutions that respond to current challenges in the financial sector, support skill development and professional capability-building, and encourage the city's fintech community to engage actively with banks and other financial institutions.

Workshop themes may include emerging areas such as agentic A.I., tokenised assets, advanced computing capabilities such as quantum and supercomputing, best practices in data management, and AI-enabled cyber resilience. Each topic will emphasise practical applications and potential impacts on the financial services sector.

To maximise the impact of these sessions, the HKMA will provide follow-up resources to support continued learning and, where appropriate, facilitate ongoing collaboration among participants. These measures are intended to support knowledge retention, encourage exploration of showcased solutions, and strengthen

capabilities across institutions. Through these curated workshops, the HKMA seeks to elevate local expertise, reinforce skill development, and drive collective innovation within Hong Kong's fintech community.

Digital Content

To promote knowledge sharing and help address the challenges financial institutions face in adopting fintech, the HKMA will launch a new series of educational podcasts and video spotlights. The initiative aims to showcase innovative, solution-focused approaches to overcoming adoption barriers, while introducing cutting-edge solutions and technology providers to increase their exposure.

Delivered as a themed series of podcasts and videos, each episode will feature in-depth interviews, expert-led discussions, and the sharing of case studies that address specific adoption challenges and explore solutions across A.I., DLT, and HPC. Interaction will be actively encouraged, with viewers invited to submit questions and comments to be addressed during episodes.

Potential topics include approaches to identifying, mitigating, and addressing biases in A.I. models, strategies for improving interoperability between DLT platforms and legacy financial systems, and understanding HPC through its core concepts, enabling technologies, and its transformative impact on data processing, complex calculations, and decision-making within financial institutions. Future episodes may also spotlight the competition's winners.

6.3 Talent & Outreach

Competency Development Support

To build a clearer view of skills requirements and professional capability-building needs in A.I. and DLT within Hong Kong's banking sector, the HKMA will leverage existing talent research and industry interactions to pinpoint current and emerging competency needs in both domains, in line with evolving market expectations.

With the aim of complementing existing competency frameworks, including programmes under the Hong Kong Institute of Bankers' (HKIB) Enhanced Competency Framework (ECF)-Fintech module, the emphasis of the Competency Development Support will be on offering practical, scalable tools to support training and professional development needs.

With a focus on "human-machine interaction", the HKMA will also examine opportunities to enhance support for continuous learning for general fintech users from financial institutions. The support will be provided through modular training resources, peer-sharing platforms, or targeted guidance on skill progression. Potential collaborations will be evaluated based on feasibility, practical impact, and the extent to which they can strengthen the sector-wide readiness for A.I. and DLT adoption — ultimately aiming to foster a more resilient, adaptable, and future-ready banking workforce.

Competitions

The HKMA hosted the Green Fintech Competition in 2023 and 2025, which received positive feedback from the market and proved to be effective in fostering collaboration between the financial and technology sectors and showcasing innovative applications for green fintech in the banking sector and wider financial services industry.

To encourage innovation and showcase sophisticated use cases of A.I. and DLT for financial institutions to move from basic to advanced application, the HKMA plans to organise innovation competitions focusing on the novel use cases of GenA.I. and DLT within the financial services industry.

The competitions aim to promote the exploration and application of cutting-edge technologies to transform financial services in Hong Kong. They foster collaboration among stakeholders, encourage the local and international fintech communities to exchange ideas as well as to address real industry challenges, and help build relationships with leading technology providers for future partnerships.

Training Programme

Building on the training programme under the Fintech Promotion Roadmap, which received positive industry feedback, the HKMA will continue to deliver a talent and capacity-building programme to support the development of practical fintech skills across the financial industry. The programme is intended to establish literacy in more advanced fintech topics, provide structured learning opportunities to strengthen professional capability, and offer additional visibility into talent and skills gaps that may constrain adoption.

In line with the HKMA's previous approach, the programme will include curriculum development, instructor preparation, and the production of training content. These materials are intended to be made available through the Fintech Knowledge Hub to enable flexible access and internal knowledge-sharing by participating organisations.

Training modules are expected to be organised across five themes: A.I., DLT, HPC, Data Excellence, and Cyber Resilience. Illustrative topics include foundations and architectural considerations for agentic A.I.; core DLT concepts and introductory smart contract development; fundamental principles and use cases of HPC; data excellence for financial and non-financial risk management, and cyber resilience topics such as A.I.-driven threat detection, threat landscape evolution, and implementation considerations.

The programme will prioritise practical demonstrations and hands-on exercises to help participants understand how selected fintech areas and use cases are applied in real-world settings, and how the learning can be translated into their day-to-day operations. The specific scope of modules, delivery format, and sequencing will be refined as part of the programme design.

Knowledge Repositories

The HKMA has previously developed the Fintech Knowledge Hub as a central platform for disseminating fintech-related information and knowledge to industry participants. Building on this foundation, the HKMA aims to establish a dedicated knowledge repository within the hub to facilitate the sharing of specialised technical know-how, such as GenA.I. prompt references and DLT smart contract designs tailored for the financial services industry. This repository will provide financial institutions and fintech providers with practical resources and real-world examples to accelerate the application of advanced technologies. These repositories will also augment the overall competency development efforts from a more technical perspective.

To ensure the repository meets the specific needs of the Hong Kong market, the HKMA will actively engage industry stakeholders to understand their priorities and challenges. Stakeholders will also be invited to contribute content, including technical references and implementation guides, to enrich the repository with insights rooted in local experience.

By making practical, ready-to-use materials widely accessible, the repository will serve as an ongoing, collaborative resource that supports knowledge sharing and drives meaningful technology adoption across the industry.

7. Looking Forward

7.1 Progress Tracking

The success of the Fintech Promotion Blueprint will be determined by our ability to translate tactical intent into tangible and measurable progress. A framework is therefore designed to track progress at two distinct, yet interconnected levels: the initiative level and the programme level.

At the initiative level, our focus is on evaluating the alignment of each action with its intended objectives and measuring the immediate behavioural changes and feedback from participants. This is achieved by tracking key inputs and outputs such as engagement rates or interaction rates.

While individual initiatives create momentum, the ultimate goal of the Blueprint is to drive a systemic, long-term transformation of Hong Kong's fintech landscape. The programme-level assessment consolidates the effects of all initiatives to evaluate progress in three core pillars: Ecosystem Collaboration, Technological Advancement, and Talent & Outreach.

By continuously tracking these indicators, the HKMA will calibrate and adjust the Blueprint as well as future promotional efforts according to the needs of the industry and changes in the market to reach our defined objectives, reinforcing Hong Kong's position as a leading global fintech hub.

7.2 Future Considerations and Upcoming Events

The Blueprint's initiatives highlight the HKMA's commitment to fostering fintech growth and innovation in Hong Kong, ultimately driving fintech application to a more sophisticated level. Through in-depth interviews and extensive research conducted for this Blueprint, the HKMA has meticulously assessed a wide range of concerns facing the industry and devised initiatives to address the challenges.

Recognising that successful implementation of these initiatives requires thorough planning, dedicated resources, and collaborative efforts across multiple sectors, the HKMA will actively engage key stakeholders, including financial institutions, technology firms, and regulatory bodies, to ensure a coordinated approach. To start off the Blueprint, the HKMA plans to host a FiNETech event in the second quarter of 2026, focusing on Data Excellence.

In response to the rapidly changing fintech environment, influenced by technological advancements and shifting market demands, the HKMA remains committed to actively monitoring market trends and promoting open dialogue across industries to anticipate and respond to changes. As these needs evolve, the HKMA will enhance and implement these initiatives to develop a robust, competitive, and sustainable local fintech ecosystem, further accelerating fintech application among participants in the financial services industry.

The success of this Blueprint relies on the active collaboration and innovation from stakeholders across the fintech ecosystem. Guided by the vision of "Fintech 2030", the support from the ecosystem will help propel Hong Kong to the forefront of global fintech leadership. By harnessing collective expertise, resources, and commitment, the HKMA can solidify Hong Kong's position as an international fintech hub, driving sustainable economic growth and fostering innovation for generations to come.