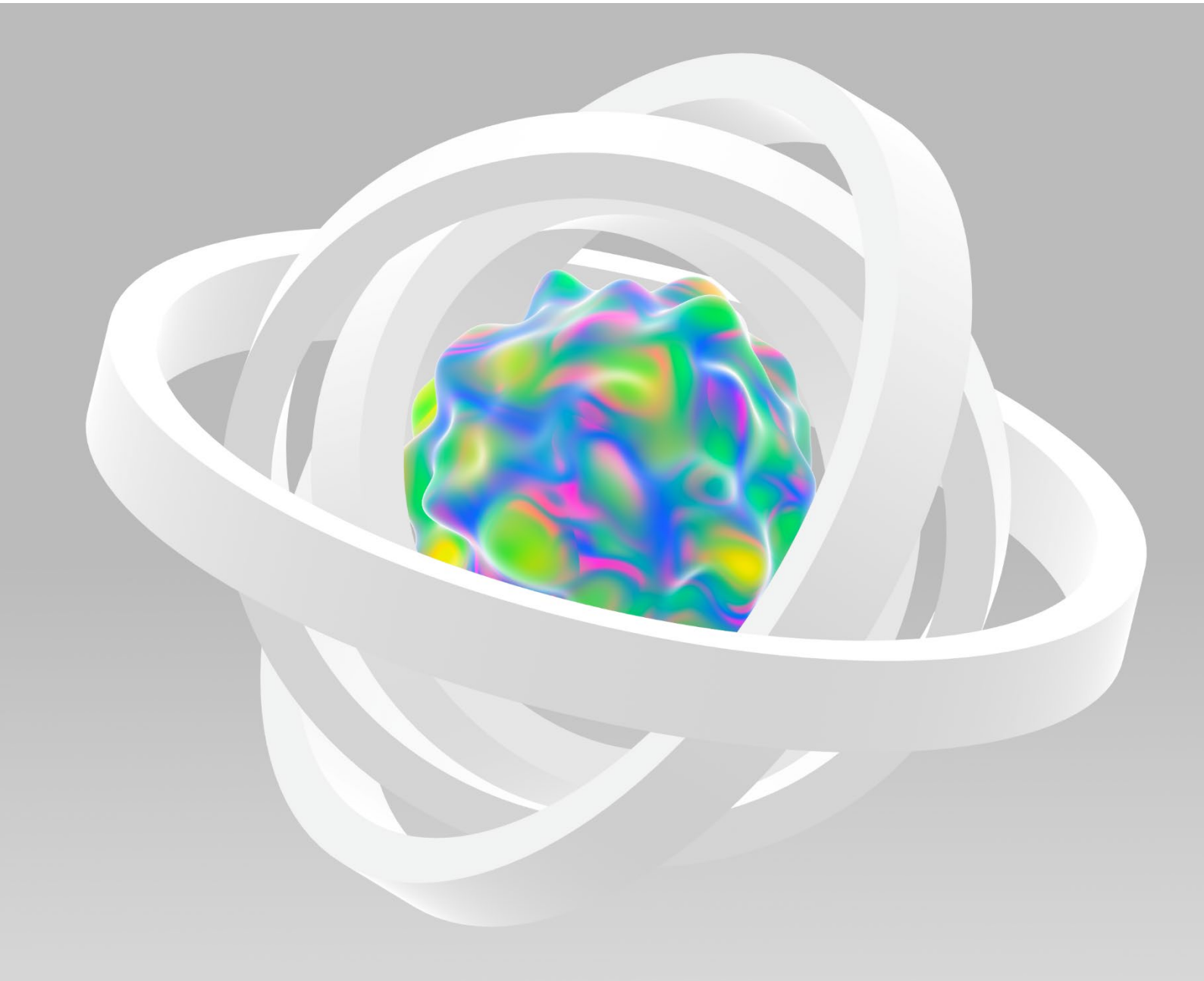
FINTECH ASSOCIATION of HONG KONG
香港金融科技協會

Strategic Advisory Council on AI in Financial Services

Position Paper: Artificial Intelligence in Financial Services, The Way Forward for Hong Kong

April 2026

FTAHK.ORG



Contents

0 Opening remarks

0.1 Foreword

As we stand at the dawn of a new era in financial services, artificial intelligence has emerged not merely as a technological advancement but as a transformative force reshaping our industry's very foundations. Hong Kong's unique position as a global financial hub, bridging East and West under the "One Country, Two Systems" framework, offers us an unparalleled opportunity to lead the world in responsible AI innovation.

The document you hold represents more than a position paper—it embodies a vision for Hong Kong's future. Through extensive collaboration among industry leaders, technologists, regulators, and academics, we have crafted a roadmap that balances innovation with responsibility, opportunity with prudence, and ambition with pragmatism.

Our financial institutions are already demonstrating remarkable enthusiasm for AI adoption, outpacing global counterparts with 38% implementation rates compared to the global average of 26%. Yet this leadership brings with it profound responsibilities—to our customers, our economy, and our community.

This paper arrives at a pivotal moment. The decisions we make today about AI governance will echo through generations, determining whether Hong Kong strengthens its position as a premier international financial centre or cedes ground to more agile competitors. I am confident that by embracing the frameworks, recommendations, and collaborative spirit outlined here, we will choose the path of leadership.

As you explore these pages, I invite you to see beyond technical specifications and regulatory considerations to the greater purpose they serve: creating a financial ecosystem that harnesses AI's power to deliver more accessible, efficient, and equitable financial services for all.

Lareina Wang - Chairperson FTAHK

0.2 Paper overview and objectives

The rapidly evolving landscape of artificial intelligence ("AI") presents unprecedented opportunities and challenges for Hong Kong's financial services sector. As a leading global financial hub with a unique position at the intersection of East and West, Hong Kong stands poised to leverage AI as a strategic differentiator in maintaining and enhancing its competitive advantage. This position paper emerges at a critical juncture where early adopters are beginning to realise significant benefits while regulatory frameworks are still taking shape.

The Strategic Advisory Council on AI in Financial Services (the "Council"), convened by the Fintech Association of Hong Kong ("FTAHK"),"), brings together senior executives, technology experts, regulatory specialists, and academic researchers to establish a comprehensive and actionable framework for AI adoption in Hong Kong's financial ecosystem. Our work is guided by a commitment to balance innovation with responsibility, efficiency with trustworthiness, and commercial objectives with ethical considerations. Additionally, we have undertaken an extensive survey of over 100 FinTechs and FTAHK members to inform our recommendations.

This position paper aims to accomplish several interconnected objectives:

1. **Highlight Strategic Opportunities**: Identify specific areas where AI can deliver transformative value across retail banking, commercial banking, wealth management, insurance, capital markets, and regulatory compliance.
2. **Create an Industry Roadmap**: Establish milestones and priorities for near-term, mid-term, and long-term development of AI capabilities in Hong Kong's financial services industry.
3. **Define success criteria**: Provide KPIs by which the industry and government can track and measure its success in using AI for delivery within Hong Kong's financial services industry
4. **Identify Implementation Challenges**: Provide a clear-eyed assessment of the obstacles facing financial institutions of all sizes—from global banks to local FinTechs—in deploying AI solutions effectively and responsibly.
5. **Address Regulatory Considerations**: Analyse current regulatory requirements and propose enhancements that promote innovation while ensuring stability, fairness, and consumer protection.
6. **Provide Practical Implementation Guidance**: Offer actionable recommendations for strategy development, technology selection, talent acquisition, change management, and performance measurement.

Overall the Council would like to share its excitement for the potential transformative potential of AI and its use within Hong Kong for innovation and moving the city forward as an International Financial Centre (IFC). AI is not just a tool for role replacement, or efficiency to replace what we are doing now, but actually with AI we can introduce an element of inspiration and create things we never thought possible (e.g. robots performing a lion dance). Particularly for talent, it is not just about having AI tools, but with the tools encourage society to be able to think, dream and innovate to develop new products,

1 Executive Summary

1.1 Summary of the paper

Hong Kong's financial services sector is significantly outpacing the world in artificial intelligence adoption at 38%, yet a convergence of structural weaknesses threatens to undermine that lead, FinTech Association of Hong Kong's (FTAHK) latest survey finds.

Artificial Intelligence (AI) has rapidly evolved from an emerging capability into a critical enabler of competitiveness in financial services. The latest wave—Generative Artificial Intelligence (GenAI), powered by foundation models and large language models (LLMs)—can learn patterns in training data and generate new outputs such as text, images, and analytical responses. GenAI's accessibility, versatility, and adaptability expands the potential to automate routine work, accelerate innovation cycles, and enhance decision support across banking, insurance, asset management, and FinTech. Reflecting this shift, Hong Kong's financial sector is progressing from rules-based automation toward innovative learning-based systems that can be embedded into core workflows and transform how they operate, from customer service and compliance, to risk management and product innovations. We stand on the cusp of a seismic shift, and now is the time to invest and look to what future leadership looks like for Hong Kong.

Adoption in Hong Kong is advancing steadily and is increasingly measurable. Industry indicators show AI adoption in Hong Kong is higher than the global average (38% vs 26%), with FinTech SME adoption accelerating (41% in 2024 vs 12% in 2023). Specifically for GenAI, 75% of surveyed financial institutions have already implemented at least one GenAI use case or are piloting/designing use cases, with the ratio expected to increase to 87% within the next three to five years. Adoption is uneven across firm sizes: 83% of larger institutions have rolled out or are moving toward at least one GenAI use case, compared with 63% of smaller firms, underscoring a resource-driven readiness gap. This disparity matters in Hong Kong, where smaller institutions play a disproportionately important role in market diversity and competitiveness.

In practice, current GenAI deployments remain predominantly internal and non-customer-facing, reflecting both risk considerations and technology maturity. The most common implementations focus on employee virtual assistants, internal knowledge retrieval, document drafting and summarisation, and productivity augmentation. Customer-facing use is largely constrained to service chatbots and sales/marketing customisation, while more complex, higher-risk external applications (e.g., high-stakes advisory, automated decisioning, and sensitive communications) are typically gated by requirements for stronger accuracy, robustness, and control. Across the broader AI landscape, institutions are prioritising proven value pools—operational efficiency gains, improved risk detection, and better compliance execution—while working through the practical constraints of legacy integration and data foundations.

A set of interlocking challenges continues to hinder broader and deeper adoption. First, many institutions face difficulty connecting AI to exploitable, high-quality datasets, with critical information often trapped in unstructured formats or fragmented across legacy platforms. Second, talent shortages remain a binding constraint: a significant share of enterprises report recruitment difficulties for technical talent, and banks consistently identify technology and data skills among the most important capability gaps. Third, regulatory clarity —particularly around model risk management, explainability expectations, data governance, and accountability—

creates friction when institutions seek to scale from pilots to production, and from internal tools to customer-impacting use cases.

GenAI introduces additional risk considerations that amplify the need for disciplined governance. Institutions must address model performance and accuracy (including hallucinations), data privacy and security, and concerns around explainability, bias, and fairness. The pace of technological change also challenges both institutions and regulators: governance frameworks must be strong enough to safeguard consumers and market integrity, yet adaptable enough to avoid stifling innovation. In response, many institutions are taking early steps toward responsible adoption—prioritising transparency, accountability, and data protection—while strengthening monitoring of model outputs, tightening data quality controls, and introducing GenAI-related cybersecurity awareness and assurance practices.

A recurring theme in successful adoption is the necessity of a "human-in-the-loop" approach, especially at this stage of maturity. Human oversight remains critical for high-impact decisions, escalation handling, and quality control, while institutions build confidence through testing, monitoring, and iterative improvement. At the same time, workforce readiness is central: reskilling and upskilling are increasingly core to talent strategy, combining internal capability building, targeted hiring, and partnerships with technology providers and academia. Strengthening practical skills in data engineering, model validation, AI risk management, and secure AI development is essential to move from experimentation to scaled, sustainable deployment.

Looking forward, broader adoption is likely to be supported by maturing technology and less resource-intensive models, alongside continued regulatory engagement and ecosystem coordination. The paper sets out a clear vision for what "success" looks like for Hong Kong: measurable improvements in processing times, customer satisfaction, fraud reduction, cost efficiency, and AI maturity alongside ecosystem growth in talent, research, and AI-native product innovation. To make progress tangible, it highlights eleven use cases ranging from hyper-personalised Greater Bay Area (GBA) wealth management and proactive AI-driven compliance to ESG analytics, cross-border payments optimisation, and cognitive financial agents for SMEs supported by a foundational layer of internal AI assistants for employees.

Based on these findings, the paper outlines practical considerations and a phased roadmap to facilitate responsible GenAI adoption in Hong Kong. In the near term (2026–2027), priorities include publishing common governance templates, developing pragmatic validation and explainability expectations, strengthening AI-ready data foundations, expanding sandbox accessibility (especially for smaller institutions), and accelerating talent pipeline programmes. In the medium term (2028–2029), deeper integration should be enabled through sector-specific playbooks, AI audit and assurance capabilities, privacy-preserving data collaboration, and a formal "regulatory learning loop" that evolves guidance with real-world experience. Over the long term (2030+), Hong Kong's ambition is global leadership in responsible AI for financial services—balancing innovation and safety, enabling secure cross-border AI-enabled services, and sustaining a future-proofed workforce and resilient financial system through coordinated industry–regulator–developer collaboration.

From the Co-Chairs, Strategic Advisory Council on AI in Financial Services

The initiative to promote and steer responsible AI adoption is bringing together FTAHK and the broader Hong Kong financial services industry. Our Council members are already experiencing the transformative impact of practical AI applications through real-world implementations and frontline insights. AI's disruptive nature presents not only an opportunity to drive innovation and growth, but also an imperative to advance regulatory framework.

By concentrating the voices of industry practitioners, we aim to help ensure that AI innovation in finance is enabled rather than stifled by uncertainty or constraints – be they technical, regulatory or through a lack of understanding. A robust, well-thought regulatory governance is, in fact, a cornerstone of what sustains Hong Kong's competitive edge as a leading global financial centre. In this spirit, our Council is pleased to present this FTAHK's position paper, which summarises the jurisdiction's opportunities and the key challenges associated with AI adoption in Hong Kong's financial services industry.

Chris Barford & Guillaume Huet, Co-Chairs FTAHK AI Strategic Advisory Council, Current and Ex-Board members of FTAHK respectively

1.2 Scope and approach

This paper addresses the full spectrum of AI applications in financial services, including:

- Machine learning systems for risk assessment, fraud detection, and compliance
- Natural language processing for customer service and document analysis
- Computer vision for identity verification and security
- Generative AI for content creation, analysis, and decision support
- Autonomous AI agents for process automation and customer engagement
- Predictive analytics for investment, lending, and insurance
- Voice interfaces and virtual assistants for customer interaction

Our approach is grounded in extensive research and stakeholder engagement, incorporating:

- Insights from a comprehensive survey of 103 financial institutions across banking, insurance, asset management, and FinTech sectors, undertaken in late 2025 concluding in December 2025
- Analysis of global and regional best practices, regulatory developments, and implementation case studies
- Workshops to validate findings and test recommendations with Council members

The resulting recommendations are deliberately pragmatic, focusing on tangible actions that can be implemented in the context of Hong Kong's unique regulatory environment, market structure, and competitive position. We have paid particular attention to addressing the needs of smaller institutions, which form the backbone of Hong Kong's financial ecosystem but often lack the resources of their larger competitors.

2 Current state of AI adoption in Hong Kong's financial services industry

Artificial intelligence has rapidly transformed from an emerging technology to a critical component of financial services operations. In Hong Kong, adoption rates have accelerated significantly since 2023, with applications spanning customer service, risk assessment, fraud detection, investment management, and regulatory compliance.

Key trends include the transition from rules-based to learning-based systems, the emergence of foundation models and large language models (LLMs) in enterprise applications, and increased integration of AI with existing systems. Opportunities include operational efficiency gains, enhanced customer experiences, improved risk management, and new product development. Challenges facing the industry include connection to exploitable and qualitative data sets, integration with legacy systems, talent shortages and regulatory clarity.

Looking at differentiation, Hong Kong has special characteristics on its adoption of this technology as it has financial services companies and FinTechs that host their infrastructure and use AI models from technology companies headquartered in both the US (e.g. AWS, Azure, Google, OpenAI, Anthropic) and Mainland China (e.g. Alibaba Cloud, DeepSeek, Tencent Cloud, Alibaba Qwen). A further characteristic of Hong Kong financial services' AI development is the interplay between digital assets and AI. Hong Kong's government and regulator have a stated intention to take a leading position in supporting the development of a regulated digital asset industry, and AI can assist on this journey.

Adopting specifically generative AI (GenAI) will present risks around the model performance and accuracy, data privacy and security with a need to address concerns around explainability, bias, and fairness. Furthermore, the rapid pace of technological advancement creates difficulties for both institutions and regulators in establishing appropriate governance frameworks in a timely manner.

2.1 Key AI adoption statistics

- AI adoption rate higher than global average (38% vs 26%) / Hong Kong financial institutions [Source: HKPC/HKU AI Study 2024]
- Fintech SME adoption shows significant momentum (41% in 2024 vs 12% in 2023) / Hong Kong FinTech SMEs [Source: China Daily HK]
- 75% of surveyed financial institutions in Hong Kong have already implemented or are piloting/designing at least one Generative AI (GenAI) use case, with this figure projected to rise to 87% within the next three to five years. [Source: HKIMR April 2025]
- Disparity in GenAI adoption, where larger financial institutions (83%) are leading compared to smaller firms (63%). [Source: FintechNews.hk]
- Hong Kong's strong global standing by mentioning its 3rd place ranking in the Global Financial Centres Index (GFCI) and 7th place in the World Digital Competitiveness Ranking (WDCR) 2024, alongside its status as a leading FinTech hub with around 1,200 FinTech companies. [Source: InvestHK FinTech Ecosystem Report March 2025]
- Five of Hong Kong's universities are within the world's best 50 Best Global Universities for AI in 2025-26 [Source: US News]
- The talent shortage is a barrier to the AI adoption, with 49% of enterprises having difficulties in recruiting technical talents [Source: HKPC] and 97% of banks identifying

the Technological and Data skills as amongst the top 3 major knowledge and skill requirements. [Source: HKMA | HKAB | HKIB]

2.2 Key GenAI applications

FTAHK's survey shows that firms are particularly interested in investing in future AI use cases, including virtual interactive avatars and agentic architectures, per Figure 1.

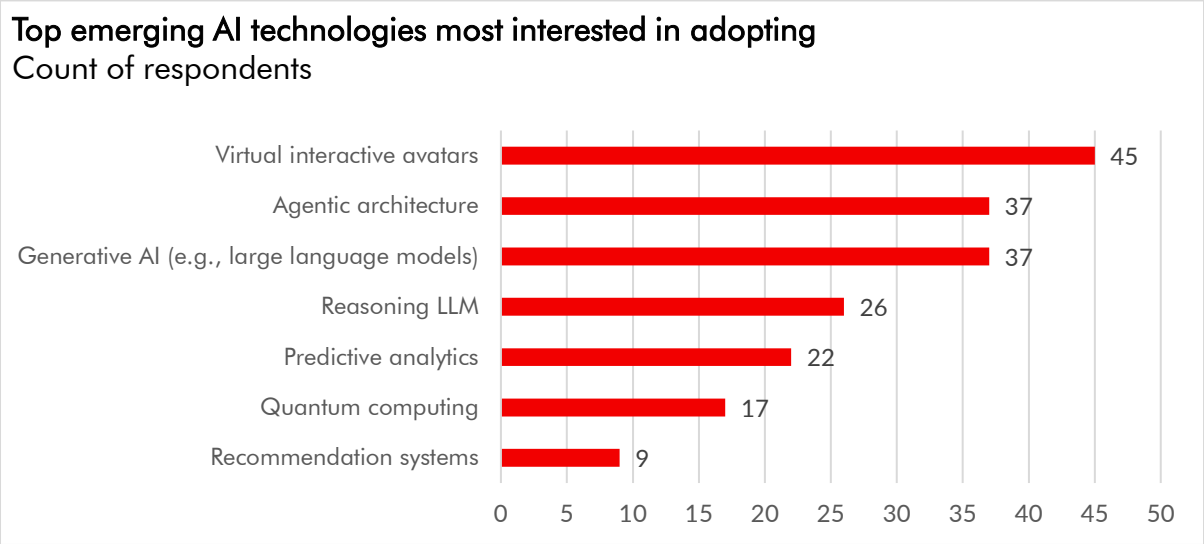


Figure 1 Top emerging AI technologies most interested in adopting

In addition from our survey, the areas of the firms in our survey that were primarily considering the use of AI applications then focus on customer service automation, risk assessment and management per Figure 2.

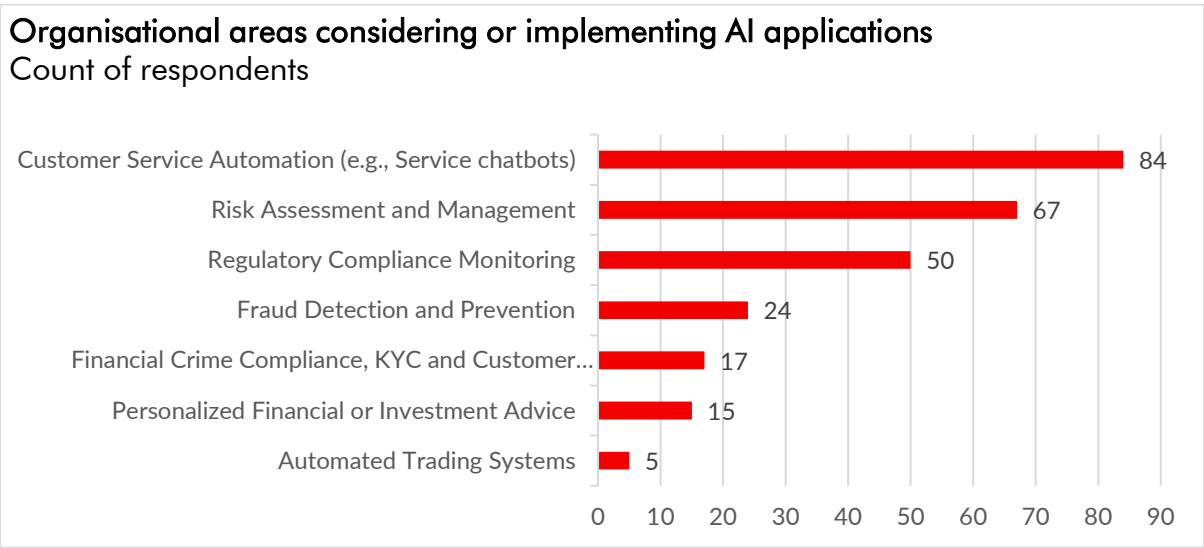


Figure 2 Organisational areas considering or implementing AI applications

Finally, we can see that firms anticipate many benefits from their use of AI, particularly in improvements to operational efficiency and cost reduction per Figure 3.

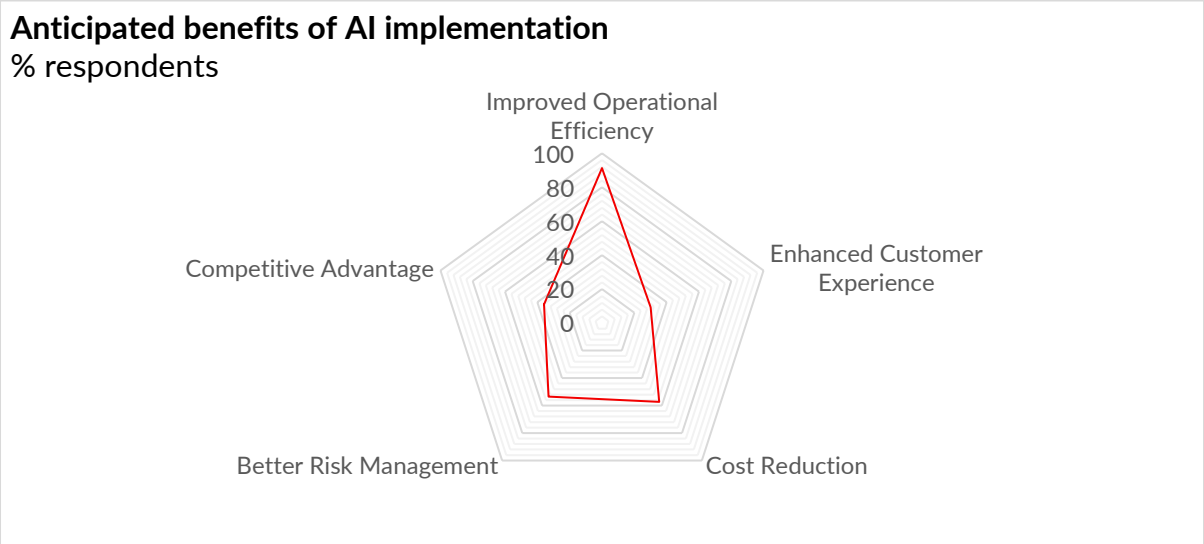


Figure 3 Anticipated benefits of AI implementation

The Council also recognises the Hong Kong Institute for Monetary and Financial Research's(HKIMR) report on "Financial Services in the Era of Generative AI for Hong Kong which details use cases that resonate with the Council, Figure 4. The primary implementations of GenAI in Hong Kong's financial services are currently, as of 2025, on internal and non-customer-facing applications, such as virtual assistants for employees, with customer-facing applications largely restricted to service chatbots and enhanced sales/marketing customisation. Key potential use cases include:

- Customer Service (e.g., virtual assistants, chatbots)
- Risk Assessment and Management (e.g., fraud detection, credit scoring)
- Regulatory Compliance (e.g., AML checks, fraud detection)

Front office			Middle and back office				
Internal facing	Virtual assistant	58%	Virtual assistant for preparing or processing internal documents	45%	AI-assisted cybersecurity defence	9%
External facing	Advanced chatbot for customer communications	31%	Coding	31%	AI-assisted finance data reconciliation	9%
External facing	Enhanced sales and personalised marketing content	29%	Provision of natural language inquiry/ search for company information and policies	25%	Others	7%
Internal facing	Identifying investment signals as part of investment decision making process	15%	Enhanced AML/KYC	22%	Enhanced / continuous risk management	7%

Front office				Middle and back office			
External facing	Customised advice	15%		Real-time fraud detection and prevention	20%	Predictive analytics	5%
	Others	4%		AI-assisted data entry	13%		

Figure 4 AI use cases for front, back and middle office in Hong Kong, source: HKIMR

2.3 Constraints on AI adoption

Despite the enthusiasm for adopting AI, there are a number of critical concerns that firms encounter when deploying AI in Hong Kong, our survey highlights the most pressing, which in the following sections we look to address.

2.3.1 Internal constraints

First, the primary internal challenges that an organisation faces, with a focus on data privacy and security concerns, as well as the ethical considerations and bias concerns from AI models, Figure 5. Subsequently typical concerns such as regulatory/compliance, business case and skills appear. People may not understand the power and potential of the AI tools, so instead they focus on risk and the lack of return, rather than the productive potential of the tools and capabilities.

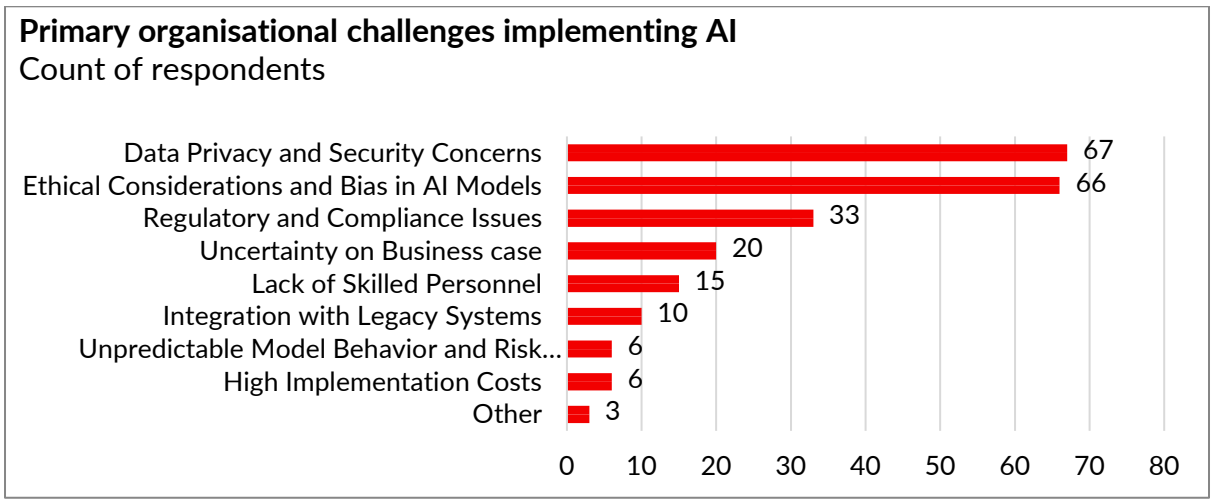


Figure 5 Primary organisational challenges implementing AI

2.3.2 Regulatory and compliance constraints

As is typical for any heavily regulated industry such as financial services, great attention is paid to regulatory and compliance considerations. It is fair to say that data protection guidelines remain the biggest focus for most firms, though regulated entities pay attention to their regulator's AI guidelines and all areas struggle with cross-border data regulations, Figure 6.

Most challenging regulatory and compliance issues

% respondents, by sectors

	Bank	Fintech	Insurance	Service Provider	Technology Provider	Other
AI Guidelines for my industry (e.g., SFC, HKMA, …)	70%	56%	67%	62%	46%	83%
Consumer duty of care, disclosure or similar requirements	33%	36%	60%	56%	48%	17%
Cross-border regulatory differences	57%	60%	55%	53%	46%	50%
Data protection regulations (e.g., PDPO, …)	73%	78%	74%	72%	81%	67%
Lack of clear AI-specific guidelines for my industry	61%	74%	62%	62%	67%	100%
Transparency and explainability requirements	55%	46%	33%	45%	61%	33%

Figure 6 Most challenging regulatory and compliance issues

Indeed we further broke down the cross-border concerns from our survey and confirmed that for most organisations these had a moderate impact on their AI implementation strategies, Figure 7.

How cross-border regulatory differences affect AI implementation strategies

	Count of respondents	% respondents
No impact	2	1.9
Minimal impact	6	5.8
Moderate impact	72	69.9
Significantly hinder implementation	19	18.4
Cannot tell	4	3.9

Figure 7 How cross-border regulatory differences affect AI implementation strategies

2.3.3 Implementation challenges

We further investigated the main technical challenges of integrating AI within existing systems, confirming that data quality and legacy system compatibility remains the primary implementation constraints, Figure 8. Our council observes that the quality of data will have a direct impact on the effectiveness of AI, which in turn impacts the potential return on investment from AI.

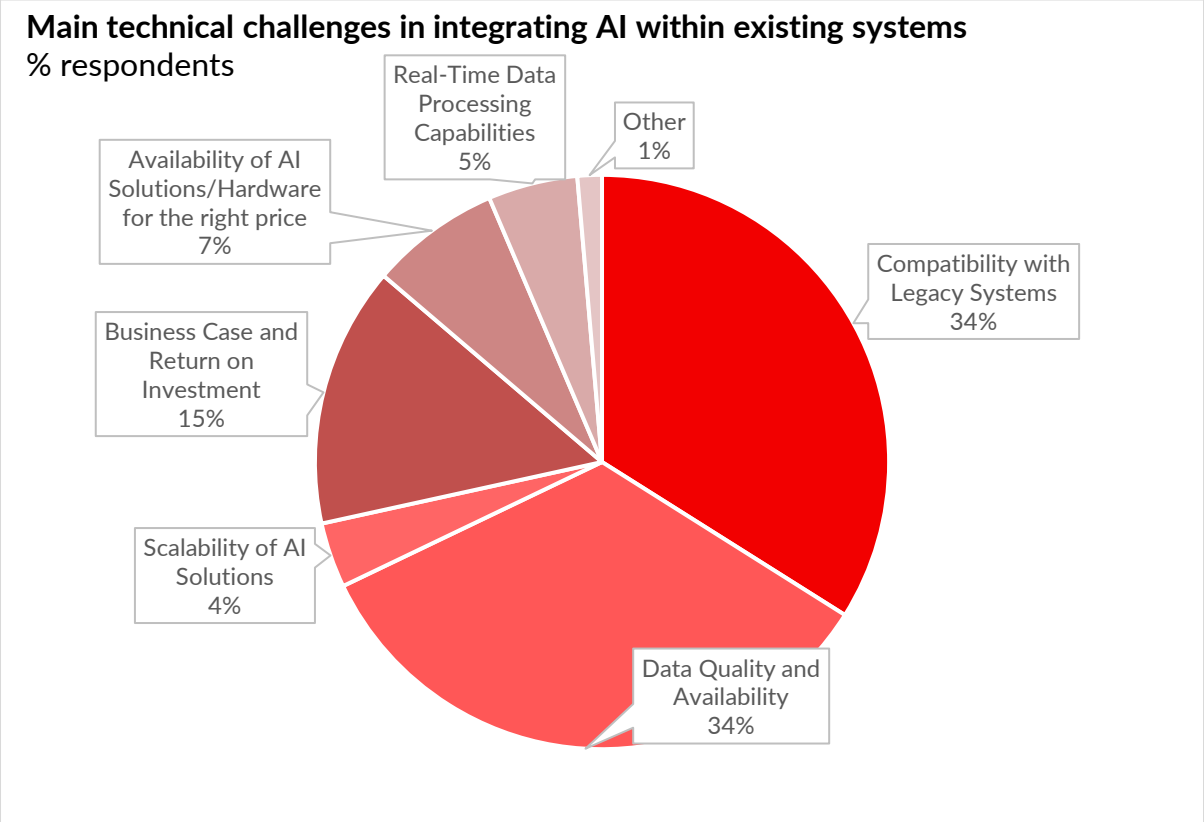


Figure 8 Main technical challenges in integrating AI within existing systems

2.3.4 Ethical considerations

There are also ethical concerns around the use of AI that remain within firms within our survey – particularly as it relates to transparency of AI processes and bias in decision-making, Figure 9. All of these will need to be overcome to fully realise AI's potential within Hong Kong.

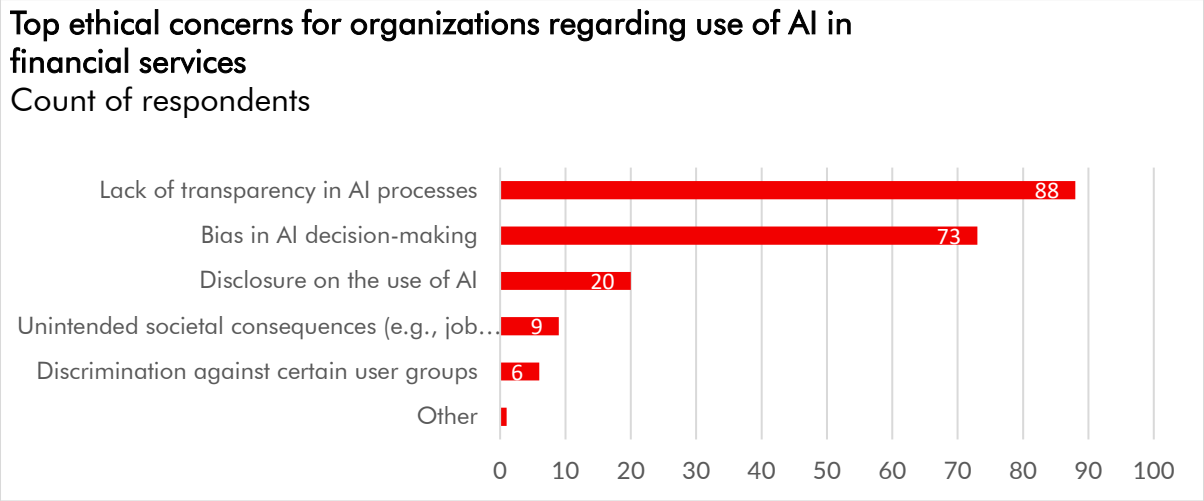


Figure 9 Top ethical concerns for organizations regarding use of AI in financial services

2.3.5 Sectoral divergence

A further constraint on AI adoption emerges from the differing strategic postures of Hong Kong's financial service industry sectors. Traditional financial institutions including banks, insurers, and service providers operate within heavily regulated environments and therefore adopt a markedly more cautious approach to AI deployment. In contrast, FinTech firms, which typically prioritise speed, innovation, and commercial expansion, show another set of concerns and priorities. These differences are reflected across multiple dimensions of the survey.

Traditional banks, insurers, and service providers show the greatest concern for data privacy, security, and regulatory exposure. These constraints inherent in their risk-averse operating models. Meanwhile Fintech firms are less burdened by these issues and place minimal emphasis on legacy integration challenges, Figure 10 .

Primary challenges in implementing AI in organisations
Count of % by sector

	Overall	Bank	FinTech	Insurance	Service Provider	Technology Provider
Data Privacy and Security Concerns	66	70	5	100	88	56
Ethical Considerations and Bias in AI Models	65	67	37	100	80	22
Regulatory and Compliance Issues	32	48	68	0	10	33
Uncertainty on Business case	19	30	11	0	8	67
Lack of Skilled Personnel	14	19	5	0	12	33
Integration with Legacy Systems	10	26	5	0	2	11

Figure 10 Primary challenges in implementing AI in organisations

Traditional institutions prioritise risk management and regulatory compliance monitoring areas where AI can strengthen control functions. Fintech firms, in contrast, stand out for their limited focus on compliance-related use cases and instead emphasise commercial applications such as customer service automation and personalised engagement, Figure 11.

Organisational areas considering or implementing AI applications

Count of % by sector

	Overall	Bank	Fintech	Insurance	Service Provider	Technology Provider
Customer Service Automation (e.g., Service chatbots)	82	93	68	100	82	67
Risk Assessment and Management	65	74	16	100	88	11
Regulatory Compliance Monitoring	48	30	5	100	80	11
Fraud Detection and Prevention	24	33	53	0	5	33
Financial Crime Compliance, KYC and Customer Onboarding	16	19	32	0	5	33
Personalised Financial or Investment Advice	15	26	5	0	15	11

Figure 11 Organisational areas considering or implementing AI applications

While all sectors uniformly rank financial-inclusion guidelines as the lowest priority, Fintech firms distinguish themselves as strong advocates of limited or no additional regulation. Banks, insurers, technology providers, and service providers express significantly lower enthusiasm for such a deregulatory stance, reflecting their greater exposure to compliance obligations, Figure 12.

Policy Prioritisation requested by organisations

Count of % by sector

	Overall	Bank	Fintech	Insurance	Service Provider	Technology Provider
Regulations on ethical use of AI in customer-facing applications	74	81	47	100	85	33
Cross-border data-sharing agreements	40	59	74	0	12	67
None - it's enough for now!	29	37	89	0	2	22
Industry-specific standards for AI model validation	14	22	11	0	10	22
Guidelines for AI's role in financial inclusion	6	11	0	0	8	0

Figure 12 Policy Prioritisation requested by organisations

3 Attributes of a successful AI enabled financial services ecosystem in Hong Kong

Defining success for Hong Kong's adoption of AI in the financial services industry requires a multi-faceted approach across different actors. The Council recognises that the AI-native era will drive the financial services industry towards reimagining the way we provide and consume digital services. As such, based on a number of Council discussions and seeking external opinions, we have defined a set of metrics that we believe are stretch goals for Hong Kong – challenging but achievable – that will move the city successfully towards an AI enabled financial services ecosystem. The forward direction and ambition of the Council with the proposed metrics is to plant the seeds of possible future AI-native financial institutions emerging, whether from traditional players, or from new market entrants

The metrics encompass tangible impacts on financial institutions, robust market-level indicators, thriving ecosystem development, and effective regulatory oversight. The following measurable criteria establish a vision for what success looks like across these dimensions specifically for Hong Kong, and state an overall target or reduction, rather than being per annum. The intention over time is for the FTAHK to track Hong Kong's progress on these metrics and provide commentary, as well as opportunities for further investment:

3.1 Impact metrics for financial institutions

- **Operational efficiency**: Target 25-35% reduction in average processing times for AI-enabled workflows (e.g., loan applications, claims processing, back-office operations) by 2028.
- **Customer satisfaction**: Achieve 15-20% increase in Customer Satisfaction (CSAT) scores for AI-driven customer service channels (e.g., chatbots, virtual assistants) by 2028.
- **Risk mitigation**: Realise 20-30% enhancement in the accuracy and efficiency of fraud detection attributable to AI-powered systems by 2028.
- **Revenue growth**: Realise a measurable 8-12% revenue uplift from new AI-driven products, services, or enhanced customer engagement by 2029.
- **Cost reduction**: Achieve 10-15% reduction in operational costs and overheads through AI automation by 2029.

3.2 Market-level indicators

- **AI adoption rate**: Achieve 90% AI adoption rate (defined as piloting or implementing at least one AI use case) across Hong Kong's financial institutions by 2028, with 70% demonstrating mature, scaled adoption in core business functions by 2030.
- **Venture capital funding**: Attract HK$8-12 billion in AI-related angel, venture capital ("VC"), private equity ("PE") and family office funding specifically for financial technology startups and scale-ups in Hong Kong between 2026 and 2030.
- **New AI-native financial services**: Launch at least 75 new AI-native financial products or services (e.g., personalised investment platforms, AI-driven insurance policies, predictive analytics for wealth management) to the market by 2027.
- **International recognition**: Hong Kong consistently ranks among the top 3 global financial centres for AI innovation and adoption in relevant international indices by 2030 (e.g., the Global Financial Centres Index).

3.3 Ecosystem development

- **AI talent pool growth**: Grow the AI talent pool in financial services by 1,500-2,000 professionals annually (across data science, AI ethics, machine learning engineering, and AI risk management) through local education and attraction programmes by 2030.
- **Research publications**: Increase AI research publications related to financial applications by 25-35% annually in academic journals and conferences by 2030.
- **Fintech startup incubation**: Foster at least 40-60 new AI FinTech startups annually, driving innovation, through incubation programmes and accelerators by 2030.
- **Education integration**: 90% of university students in relevant disciplines (e.g., finance, computer science, business) have access to and complete GenAI training/courses by 2027.
- **Workforce integration**: 70% of the financial services workforce reports having AI tools available and receive the necessary training to utilise, integrate and innovate their daily working environment and overall tasks by 2028.

3.4 Regulatory effectiveness

- **Industry satisfaction**: Achieve 90% industry satisfaction with the clarity, practicality, and responsiveness of regulatory guidance on AI by 2028, as measured by annual surveys.
- **Sandbox efficiency**: Reduce the average time for regulatory sandbox approvals for AI-driven financial innovations to 3-4 months by 2027.
- **Regulatory alignment**: Publish and actively implement a defined roadmap for aligning Hong Kong's AI regulatory frameworks with key APAC/global AI principles and standards (e.g., EU AI Act, NIST AI RMF, Singapore's FEAT principles) by 2027.
- **Supervisory capacity:** Regulators demonstrate a 50% increase in their internal capacity and tools for AI model validation and oversight by 2029.

3.5 Chinese AI vendors going overseas

- **Market development:** Provide a pre-vetted list containing at least 30 Chinese and Hong Kong based AI vendors that are suitable for general usage of Hong Kong financial services institutions by 2026.
- **Model access:** Ensure that at least 10 frontier Chinese generative AI models are deployed for students' consumption into Hong Kong universities and the *Cyberport Artificial Intelligence Supercomputing Centre* by 2026.
- **Top talent:** At least 500 top talent pass holders are employed by the pre-vetted AI vendors in Hong Kong, building the capacity of the Hong Kong AI community by 2027.
- **Data transfers:** At least 10 frontier pre-vetted Chinese AI models must be approved for use in Hong Kong in a manner that complies with all data privacy, data transfer and residency laws between the Mainland and Hong Kong by 2027.

4 Achieving an AI enabled future state in Hong Kong

Based on the analysis presented throughout this paper, we offer the following consolidated recommendations for industry stakeholders to achieve the attributes of success that we have defined earlier:

4.1 Key AI enabled use cases that need to be delivered

To cement Hong Kong's role as a premier international financial centre, the paper sees that the Greater Bay Area plays a key role. Use cases such as AI-powered hyper-personalised wealth management across the Greater Bay Area, and AI-optimised cross-border payment infrastructure, will ensure Hong Kong continues to lead in its AI adoption.

We will first highlight eleven illustrative use cases that would provide evidence of a successful achievement of AI at scale within the Hong Kong Financial services industry. Whilst achieving all ten is unlikely, moving towards the majority of these cases would demonstrate tangible, AI-enabled, advancements in Hong Kong's position as an international financial centre:

#	Use Case	Successful Adoption
1	**Hyper-personalised wealth management for the GBA** AI-powered platforms will offer highly individualised investment advice in multiple languages, portfolio management, and financial planning services to affluent individuals and the burgeoning middle class across the GBA. These platforms will analyse vast datasets (market trends, individual financial behaviour, risk appetite, and cross-border regulatory nuances) to provide tailored recommendations in real-time, accessible via multilingual conversational AI interfaces.	Hong Kong's wealth management sector will leverage its expertise and AI to seamlessly serve clients across the GBA, offering bespoke financial journeys and solidifying its role as the region's premier wealth management hub. Success will be measured by significant AUM growth from GBA clients and high client satisfaction scores.
2	**AI-driven proactive regulatory compliance** Financial institutions will utilise advanced AI systems for real-time monitoring of transactions, communications, and market behaviour to ensure adherence to complex local and international regulations. These AI-RegTech solutions will predict potential compliance breaches, automate regulatory reporting, and dynamically adapt to evolving legal frameworks, significantly reducing compliance costs and risks.	Hong Kong will be recognised for its highly compliant and stable financial environment, attracting further international investment. Success will be measured by lower counts of regulatory fines and emergence of such RegTech solutions.
3	**Empathetic AI customer service & financial well-being coaches** AI-powered virtual assistants and chatbots will handle a vast majority of customer interactions, moving beyond simple queries to provide empathetic, context-aware support and personalised financial well-being	Banks and insurers will see dramatically improved customer engagement and loyalty, with AI handling complex queries effectively. Indicators will include

#	Use Case	Successful Adoption
	coaching. These AI systems will understand customer sentiment, offer tailored advice on budgeting and saving, and guide users through complex financial decisions, available 24/7.	reduced call centre volumes for routine tasks, higher customer satisfaction with automated channels, and measurable improvements in customers' financial literacy and habits.
4	**AI-enabled seamless & predictive trade finance for global commerce** AI will automate and optimise the entire trade finance lifecycle, from KYC/AML checks for new trade partners to intelligent document processing, fraud detection, and predictive risk assessment for trade transactions. Smart contracts powered by AI will facilitate faster, more secure, and transparent trade settlements.	Success will be demonstrated by increased trade finance volumes, reduced processing times and costs for trade finance operations, and lower fraud rates in trade activities.
5	**Personalised insurance underwriting & proactive risk prevention** Insurers will leverage AI and diverse data sources (e.g., IoT devices, health records with consent, lifestyle data) to offer highly personalised insurance products with dynamic pricing. AI will also power proactive risk prevention services, alerting customers to potential health risks or property hazards and suggesting preventative measures.	The insurance sector will shift from a reactive "claim and pay" model to a proactive "predict and prevent" paradigm. The success will be measured by more affordable and tailored insurance plans for consumers, improved population health outcomes, and reduced claims ratios for insurers.
6	**Generative AI for sophisticated financial product innovation & stress testing** Financial institutions will use generative AI to rapidly design, simulate, and stress-test new financial products and investment strategies. This will allow for quicker adaptation to market changes and customer needs, as well as more robust risk modelling by creating synthetic data for extreme scenarios.	Hong Kong's financial institutions will be more agile and innovative, launching highly relevant and resilient financial products. The success will be measured by reduced time-to-market for new product offerings, and regulators' acknowledge of the AI-enhanced risk management practices.
7	**AI-powered cross-border payment optimisation & fraud prevention in the GBA** AI algorithms will optimise cross-border payment routes within the GBA for speed, cost, and transparency. Simultaneously, sophisticated AI-driven fraud detection systems, constantly learning from regional payment data, will provide enhanced security for the increasing volume of digital transactions.	Seamless and secure low-cost payments will be a hallmark of GBA economic activity, facilitated by Hong Kong's payment infrastructure. Success will be evident in high adoption rates of GBA-focused payment solutions

#	Use Case	Successful Adoption
		and demonstrably low cross-border payment fraud.
8	**AI for green finance and ESG (Environmental, Social, Governance) investment analysis** AI platforms will analyse vast amounts of structured and unstructured data (company reports, news, satellite imagery, IoT sensor data) to provide deep insights into the ESG performance of companies and projects. This will enable investors and financial institutions to make more informed green financing and sustainable investment decisions.	Hong Kong will solidify its position as a leading centre for green finance. Financial institutions will demonstrate a significant increase in ESG-compliant investments, driven by robust AI-powered analytics and reporting, contributing to global sustainability goals.
9	**AI-driven talent development & future-proofing the financial workforce** AI tools will be used to identify skill gaps within financial institutions and deliver personalised learning pathways for employees. AI will also augment human capabilities by automating repetitive tasks during an employee's daily workflow, allowing staff to focus on higher-value strategic activities and customer relationships, fostering a digitally fluent workforce.	Hong Kong's financial workforce will be highly skilled and adaptable to the evolving technological landscape. Success will be measured by adoption rate of AI-based learning pathways for employees and increased net promoter score of post learning surveys.
10	**Cognitive financial agents for SMEs & startups** AI-powered "Cognitive Financial Agents" will act as virtual finance teams for Small and Medium-sized Enterprises (SMEs) and FinTech startups. These agents will offer services like automated bookkeeping, cash flow forecasting, credit risk assessment, access to tailored financing options, and guidance on financial strategies.	SMEs, the backbone of Hong Kong's economy, will experience improved financial health, operational efficiency, and access to capital. This can be measured by the SEMs' adoption rate of AI-enabled financial management of SaaS.
11	**AI-powered assistants for employees** A suite of internal AI tools to augment the capabilities of knowledge workers, to boost their overall productivity, assisting them in a variety of domains including the coding assistance (writing, reviewing or debugging code) or the internal knowledge and research (to get instant and summarised information from vast enterprise knowledge repositories).	Hong Kong's workforce will be able to focus more on higher-value strategic work and Hong Kong's enterprises will operate more efficiently and stay competitive both on a regional and global scale. Success will be measured by daily usage rate of internal AI tools.

4.3 Recommendations to achieve these aims

Referencing our survey again, we can see a desire towards further regulations and guidance, that form the basis of our recommendations. Further advice on regulations on the ethical use of AI, and cross-border data sharing agreements remained priority. Surprisingly, around 30% of respondents did not see the need for any further regulatory frameworks, Figure 13.

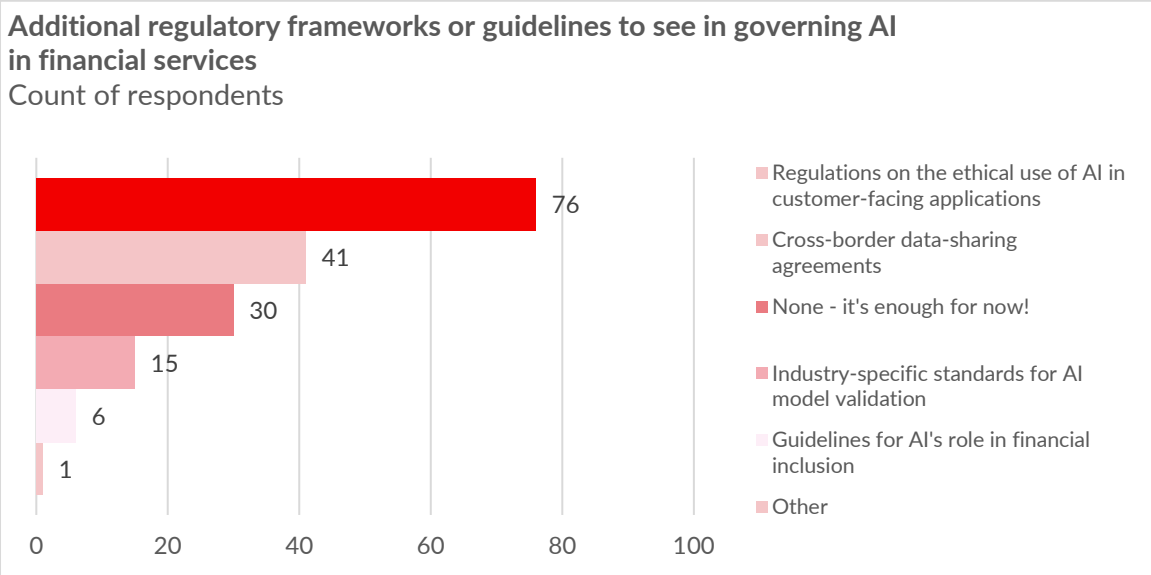


Figure 13 Additional regulatory frameworks or guidelines to see in governing AI in financial services

4.3.1 For financial institutions

- **Prioritise use cases:** Begin AI implementation with low-risk, high-impact use cases (e.g., internal process automation) before moving to complex, customer-facing applications.
- **Strengthen governance:** Establish dedicated AI governance committees with clear roles (manager-in-charge accountability) and integrate AI risk into existing enterprise risk management (ERM) frameworks, by e.g. referencing regulatory frameworks, guidelines and circulars from the HKMA, SFC, IA.
- **Invest in upskilling:** Partner with educational institutions and leverage government schemes to develop internal AI talent pools focused on identified skill gaps (e.g., AI ethics, model validation, data science).
- **Address SME needs:** Larger institutions should explore partnerships or shared platforms to support SME clients/partners in navigating AI adoption costs and compliance.
- **Engage proactively:** Actively participate in regulatory consultations and industry working groups (e.g., via FTAHK) to shape practical standards for model validation and explainability.
- **Promote the use of AI:** Advocate the benefits of AI via regular internal communications showcasing the value created, demonstrating the constant improvements to foster trust, combined with an active engagement from senior leaders to drive adoption.

4.3.2 For regulators (SFC, HKMA, IA, MPFA)

- **Provide targeted guidance:** Issue clearer, principles-based guidance specifically on AI model validation techniques, acceptable levels of explainability for different risk tiers, and data governance for AI training, addressing stakeholder concerns.
- **Enhance sandboxes:** Continue to expand the scope and accessibility of regulatory sandboxes (like the HKMA's GenAI Sandbox and subsequent successor Sandbox++) to facilitate testing, particularly for smaller institutions (e.g., through simplified application processes, dedicated support staff, pre-defined testing scenarios for common use cases, continued subsidised access to the Cyberport AI supercomputing centre). When participants exit, whether successful or not, sharing anonymised learnings widely.
- **Foster international alignment:** Increase coordination with APAC regulators (e.g., Singapore MAS, Japan FSA) on cross-border data transfer protocols (building on GBA initiatives) and AI governance principles to reduce fragmentation.
- **Develop supervisory capacity:** Invest in RegTech tools and training for regulatory staff to effectively supervise AI deployment and assess model risks within institutions.

4.3.3 For technology providers

- **Improve transparency:** Provide clear documentation on AI model capabilities, limitations, training data provenance, and potential biases to institutional clients.
- **Offer compliance features:** Develop AI solutions with built-in features supporting regulatory compliance (e.g., explainability logs, bias detection tools) – 'compliance-by-design'.
- **Tailor SME solutions:** Create scalable, cost-effective AI solutions suitable for the resource constraints of Hong Kong's SME-dominated financial services industries.
- **Provide multi-model architectures**: With a mixture of open and closed source models to provide resiliency, cost effectiveness and optionality for those consuming the models.

4.3.4 For Industry associations & educational institutions

- **Develop specialised curricula:** Create targeted AI training programs addressing financial services needs (e.g., AI ethics in finance, AI risk management, secure AI development).
- **Facilitate knowledge sharing:** Host forums and publish best practices guides to bridge the gap between AI experts, financial professionals, and regulators.
- **Support Standards Development:** Act as neutral platforms for industry collaboration on developing practical AI standards.

5 Roadmap for 2026 and beyond: Charting Hong Kong's AI leadership in financial services

Hong Kong's journey towards establishing itself as a global leader in responsible AI innovation within financial services requires a strategic, phased roadmap. The Council's intention with this roadmap is that it serves as a dynamic blueprint, subject to periodic reviews and adjustments, ensuring Hong Kong remains at the forefront of responsible AI innovation in the global financial landscape.

Within the roadmap we include concrete recommendations for all stakeholders. It calls on Hong Kong's regulators to continue to issue clear, principles-based guidance on AI model validation and to expand the accessibility of regulatory sandboxes, especially for SMEs. It also urges the government to streamline AI subsidy schemes and to initiate formal dialogues with GBA authorities to facilitate cross-border data flows for AI model training. All of these are underway to some extent as we conclude on writing our paper, but more can be done.

We first turn to the key milestones that we have defined as "success" for Hong Kong's AI adoption, based on the metrics introduced in Section 3.

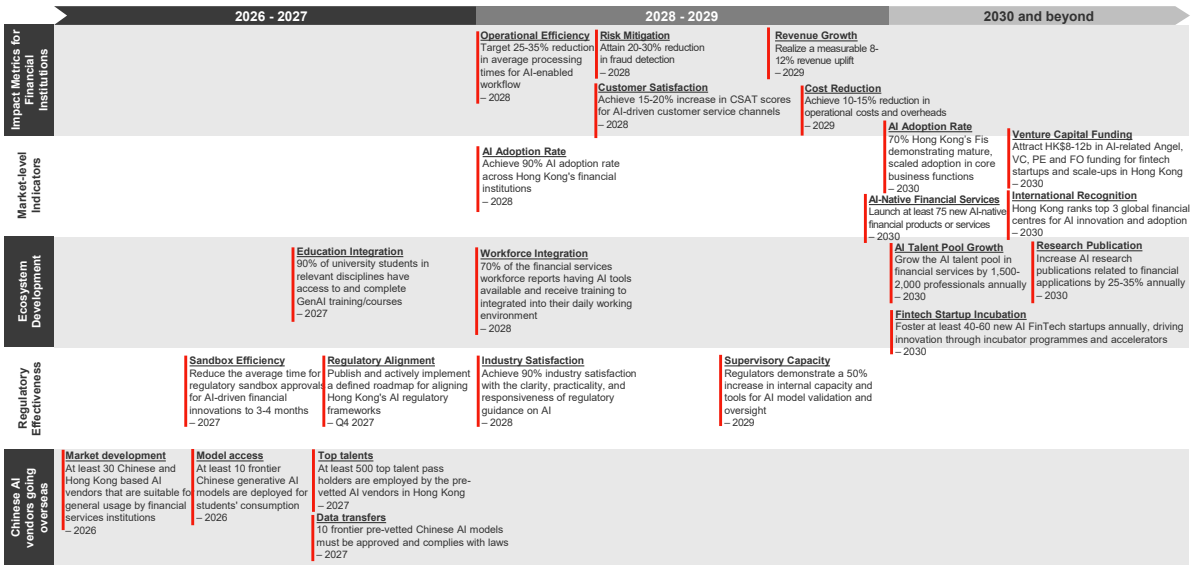


Figure 14 Proposed metrics improvement from 2026 until 2030 as part of attributes of a successful AI enabled financial services ecosystem in Hong Kong

To deliver on those metrics we suggest initiatives across near-term, mid-term, and long-term horizons, focusing on foundational capabilities, ecosystem scaling, and sustained leadership. Critical dependencies, potential blockers, and mitigating strategies are also identified to ensure progress continues, despite uncertainty.

5.1 I. Near-term priorities (2026-2027): Foundational capabilities & standards

The immediate focus is on solidifying the regulatory and infrastructural bedrock for widespread, responsible AI adoption.

❖ **Governance Frameworks:**

- ➢ **Initiative:** Finalise and promote the adoption of a common, principles-based AI governance framework template for financial institutions (FIs), incorporating and harmonising principles from HKMA, SFC, IA and MPFA. This will include clear guidelines on accountability, risk management, and ethical considerations.
- ➢ **Milestone:** Template published and accompanying industry workshops initiated by **Q4 2026**. Pilot adoption programmes with selected FIs by **Q1 2027**.
- ➢ **Rationale:** Provides a consistent baseline for FIs, improves regulatory clarity, and fosters a shared understanding of responsible AI.

❖ **Standards Development:**

- ➢ **Initiative:** Establish industry working groups (e.g., via FTAHK, HKAB, IA) to draft initial, practical standards for AI model validation (with a strong focus on model accuracy, bias detection and fairness metrics), explainability requirements and data privacy and security for medium-risk applications. These standards should be adaptable and technology-agnostic.
- ➢ **Milestone:** Draft standards released for industry consultation by **Q3 2026**. Finalised initial standards published by **Q2 2027**.
- ➢ **Rationale:** Addresses key industry concerns regarding practical implementation, promotes consistency, and builds trust in AI systems.

❖ **Talent Pipeline Enhancement:**

- ➢ **Initiative:** Establish internal reskilling and upskilling AI programs. Launch pilot AI talent development programmes through enhanced partnerships between universities, vocational training councils, and at least 10 leading FIs. These programmes will target training for **200 or more professionals** annually in critical areas such as AI risk management, AI ethics, data governance for AI, and advanced machine learning engineering with the purpose of deploying active solutions and setting industry benchmark, and as ambassadors to push innovative deployment industry-wide.
- ➢ **Milestone:** First cohort enrolled and programmes commenced by **H1 2027**.
- ➢ **Rationale:** Addresses the critical talent shortage, stretches talent, ensuring Hong Kong has the skilled workforce necessary for AI development and oversight and is able to support real industry impact.

❖ **Stronger Government Support for SMEs:**

- ➢ **Initiative:** We recognise the significant step forward taken by Hong Kong's regulators with the launch of the GenA.I. Sandbox++. Continuing to build on this, we suggest further review and significant streamlining of the Digital Policy Office (DPO) AI Subsidy Scheme (AISC) application process based on direct feedback from SMEs, reducing bureaucratic hurdles. Simultaneously, expanding the next iterations of the HKMA/Regulatory Generative AI Sandbox capacity to support **at least 20 concurrent SME projects related** to GenAI in banking and finance, offering dedicated support staff and pre-defined testing scenarios for common SME use cases.
- ➢ **Milestone:** AISC process streamlined by **Q1 2027**. Expanded HKMA GenAI Sandbox fully operational and accepting increased SME applications by **Q4 2026**.
- ➢ **Rationale:** Ensures inclusive AI adoption, supporting the backbone of Hong Kong's economy and fostering innovation across the entire financial sector that encourages SME/FinTech participation, as well as larger entities.

- **Cross-Border Data Facilitation:**
  - **Initiative:** Initiate formal, high-level dialogue with Greater Bay Area (GBA) authorities to expand the scope of the mutual recognition mechanism for personal data transfers. The goal is to include specific categories of anonymised and synthetic data used for AI training, potentially reducing reliance on costly and time-consuming Cyberspace Administration of China (CAC) reviews.
  - **Milestone:** Formal dialogue commenced and initial framework proposals exchanged by **H2 2027**.
  - **Rationale:** Crucial for leveraging the GBA's vast data resources for AI development, enhancing Hong Kong's role as a superconnector, and mitigating the impact of mainland China's data localisation laws.

- **Exploitable data sets**

  - **Initiative:** Unlock access to accurate and relevant enterprise data, via a clear data strategy supported by data experts (data architects, data scientists and engineers). Enable their use at scale by AI utilities and models. Promote their exchange at scale in a standardised manner.

  - **Milestone:** Draft an AI-ready data foundation playbook with a framework for responsible AI data use, data governance and data dictionary by Q2 2027. Drive consultation for initial view on Industry standardisation (e.g. as part of HKMA Open API Standards).

  - **Rationale:** Unlock heavily trapped data in unstructured formats. Supply the fuel to boost up the quality of AI solutions, achieving superior customer personalisation, operational efficiency, risk modelling and innovation speed.

5.2 II. Mid-term objectives (2028-2029): Scaling and deepening integration

The mid-term will focus on scaling successful initiatives, embedding AI deeper into core financial operations, and refining regulatory frameworks based on accumulated experience.

- **Sector-Specific AI Playbooks:** Develop and disseminate sector-specific AI playbooks (e.g., for banking, insurance, asset management) that provide detailed guidance on implementing AI governance, risk management, and ethical principles, building on the common framework.

- **AI Audit and Assurance Capabilities:** Foster the development of specialised AI audit and assurance capabilities within the professional services sector, and explore the feasibility of establishing an AI audit certification program.

- **Data Sharing Frameworks:** Explore and pilot secure, privacy-preserving data sharing frameworks (e.g., federated learning, secure multi-party computation) to facilitate collaborative AI development and research across institutions, while adhering to data privacy regulations.

- **Regulatory "Learning Loop":** Implement a formal mechanism for continuous feedback between industry and regulators, allowing for agile adjustments to AI guidelines based on real-world implementation challenges and technological advancements.

- **Regional AI Collaboration Hub:** Position Hong Kong as a regional hub for AI collaboration in finance, hosting annual APAC AI in Finance summits and fostering joint research initiatives with regional partners.

5.3 III. Long-term goals (2030 and beyond): Global leadership in responsible AI

By 2030, Hong Kong aims to be globally recognised as a leading centre for responsible, ethical, and cutting-edge AI in financial services.

- **Innovation Powerhouse:** Continue to investment in financial AI research and application, particularly in areas like agentic AI, quantum AI for finance, and explainable deep learning.

- **Ethical AI Standard-Setter:** Balance areas for regulatory convergence and deregulation for Hong Kong's AI regulatory framework to achieve innovation with societal well-being and financial stability.

- **Seamless Cross-Border AI Ecosystem:** Ensure full realisation of secure and efficient cross-border data flows within the GBA and with key international partners, enabling seamless AI-driven financial services across jurisdictions.

- **Future-Proofed Workforce:** Promote integrated AI education, capable of leveraging AI for enhanced productivity and value creation.

- **Resilient Financial System:** Build and sustain AI-enabled financial systems that are robust against cyber threats, systemic risks, and unforeseen challenges, contributing to global financial stability.

5.4 IV. Critical dependencies, potential Blockers, and mitigating strategies

Achieving this roadmap requires proactive management of various factors.

5.4.1 Critical dependencies, that need to be monitored

- **Sustained Government Commitment & Funding:** Continued investment in AI infrastructure, talent development, and regulatory capacity.
- **Industry Collaboration & Adoption:** Active participation and commitment from financial institutions of all sizes.
- **Talent Availability:** A continuous influx of skilled AI professionals and a robust local upskilling ecosystem.
- **Data Access & Quality:** Availability of high-quality, relevant data for AI training, coupled with strong data governance.
- **Regulatory Agility:** The ability of regulators to adapt frameworks swiftly to keep pace with technological advancements.
- **International Alignment:** Cooperation with other jurisdictions on cross-border data and AI governance.

5.4.2 Potential blockers, that will need to be mitigated

- **Geopolitical Tensions:** Escalating international conflicts or trade disputes impacting technology transfer and talent mobility.

- **Slow Regulatory Response:** Inability of regulatory frameworks to evolve at the pace of AI innovation, stifling development.
- **Cybersecurity Threats:** Sophisticated and persistent cyberattacks undermining trust in AI systems and data integrity.
- **Lack of Industry Collaboration:** Siloed approaches to AI development and risk management preventing collective progress.
- **Brain Drain:** Loss of top AI talent to other global hubs due to more attractive opportunities or living conditions.
- **Public Mistrust:** Concerns over AI ethics, bias, and job displacement leading to public resistance.

5.4.3 Mitigating strategies

- **Proactive Policy & Dialogue:** Regular public-private dialogues to anticipate and address emerging challenges, ensuring regulatory frameworks are enabling rather than hindering.
- **International Partnerships:** Actively engage in bilateral and multilateral discussions with key financial centres and regulatory bodies to foster harmonisation and reduce fragmentation.
- **Continuous Upskilling & Reskilling:** Implement aggressive, government-subsidised programmes for workforce transformation, coupled with initiatives to attract and retain global talent.
- **Robust Cybersecurity Infrastructure:** Invest heavily in national cybersecurity capabilities, promote best practices for FIs, and foster public-private information sharing on threats.
- **Incentivise Collaboration:** Create platforms and funding mechanisms that encourage FIs, tech providers, and academia to collaborate on AI research, development, and standard-setting.
- **Public Education Campaigns:** Launch comprehensive public education campaigns to demystify AI, highlight its benefits, and address ethical concerns transparently.
- **Sovereign AI Initiatives:** Continue to support and invest in local AI model development (e.g., via HKUST, Cyberport) to reduce reliance on external providers and enhance data sovereignty.

Appendix AIndustry guidance and recommendations

Our survey has shown great interest in implementation guidance and "how to" guides, Figure 15. Hence this section provides advice from the council that is designed to stimulate discussion on how to successfully implement AI within an organisation – large or small. Many similar guidance and recommendations are available, including an increasing number provided by the Hong Kong's government and regulators that have been released during this paper's drafting and towards the end of our survey period. We would particularly like to highlight The Hong Kong Generative Artificial Intelligence Technical and Application Guideline from the Digital Policy Office as a helpful addition to the industry's adoption of AI.

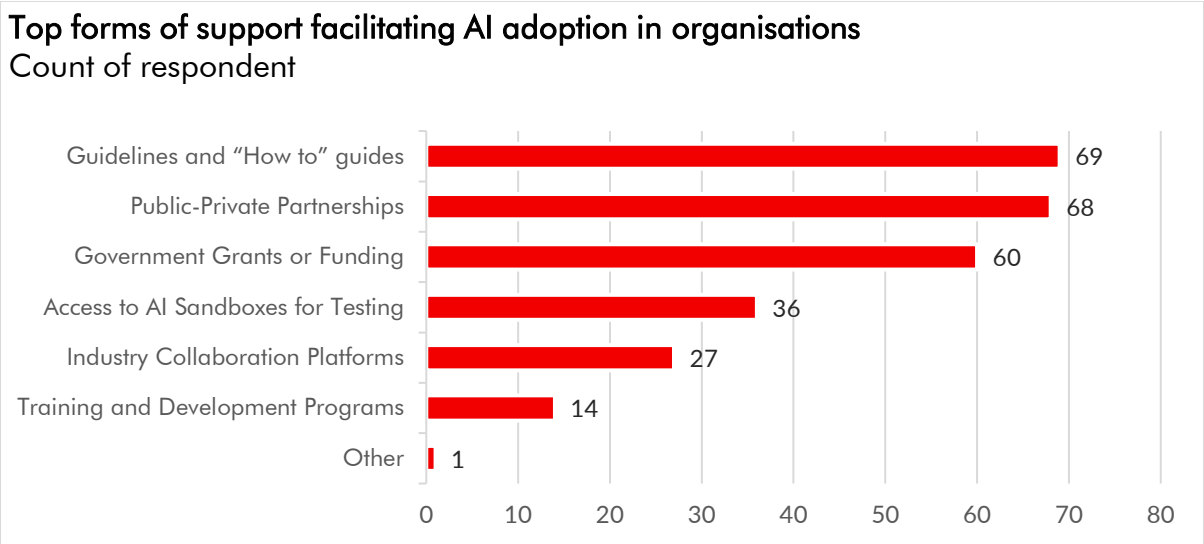


Figure 15 Top forms of support facilitating AI adoption in organisations

A.1 Implementation guidance for the industry

The transformative potential of Artificial Intelligence in financial services is undeniable, yet its successful realisation hinges not merely on technological prowess but on a strategic and practical approach to implementation. While theoretical frameworks and ethical guidelines are essential, the true measure of AI's impact lies in its effective, responsible, and scalable deployment within real-world operational contexts. This section provides actionable guidance, drawing from industry best practices and the unique characteristics of Hong Kong's financial ecosystem, to empower institutions of all sizes to navigate the complexities of AI adoption. From foundational data management to the nuanced oversight of advanced agentic systems, these recommendations aim to bridge the gap between AI aspiration and tangible business value, ensuring that innovation is underpinned by robust governance, security, and a commitment to human-centric design.

A.2 Foundation

- **Prioritise Data Management and Quality:** A robust data governance strategy aligned with business objectives is crucial. This includes managing the source and quality of data through enhanced data quality controls and checks. Practical implementation requires addressing data privacy, including seeking consent and communicating intended usage, and potentially implementing data masking techniques. Security safeguards are paramount. The quality of data will have a direct impact on the effectiveness of AI, which in turn impacts the potential ROI from AI.

- **Implement Comprehensive Risk Management and Safety Measures:** Identify and manage potential risks throughout the AI lifecycle. This involves conducting risk and impact assessments to evaluate potential harms and guide mitigation efforts, documenting these assessments for accountability. Before deployment, conduct baseline evaluation tests for models and establish incident reporting structures and processes. Post-deployment, implement monitoring systems to identify and mitigate vulnerabilities and incidents based on real-world use. Address risks such as bias, discrimination, and factual inaccuracies through effective governance and technical measures.

- **Ensure Transparency and Explainability:** Provide clear information to individuals interacting with AI, informing them they are doing so. For high-risk systems, provide deployers with clear, comprehensive instructions to understand and use system outputs correctly, ensuring the system's decision-making is understandable. This includes explaining the criteria used to infer outputs and the training data utilised, documenting data provenance and design choices, and tailoring explanations to the intended audience. Disclosures are particularly important when adverse actions are taken based on AI decisions. Transparency regarding safety practices can be likened to providing "food or ingredient labels".

- **Integrate Human Oversight and Foster Skills:** Ensure human oversight in AI systems, recognising that humans should remain at the service of AI, not the opposite. Integrate subject matter experts into the innovation process. Crucially, implement 'human-in-the-loop' mechanisms, especially for high-risk use cases and to mitigate unpredictable behaviour like hallucination. Ensure that an authorised individual or team retains final decision-making authority and accountability, empowered to override the AI model's decisions. Invest in building a skilled workforce through education and training on AI, including practical applications, use cases, and mandatory responsible use.

A.3 Governance / control framework

Key principles on governance and control frameworks for AI implementation

- **Establish Clear Accountability and Management Oversight:** Governance and accountability are consistently highlighted as critical themes for AI systems. The financial regulatory framework is built on the principle of accountability, requiring activities to be attributable to a natural or legal person. Transparency in how AI models work and the

control processes around them facilitates the assessment of accountability. **Board and senior management bear ultimate accountability** for AI-related outcomes, including GenAI-driven decisions and processes in customer-facing applications. They must ensure potential impacts are thoroughly considered, oversee model development and procurement, and implement effective policies, procedures, internal controls, and adequate oversight by qualified individuals. Senior management should also have a clear understanding of the AI use cases being explored.

- **Implement Robust Structures, Policies, and Procedures:** Organisations intending to invest in AI should establish a governance structure with sufficient resources, expertise, and authority. This includes formulating appropriate policies, practices, and procedures for procuring, implementing, and using AI technologies. Developing a robust internal AI policy and strategy is considered a good practice to foster responsible innovation. Governance principles and goals should be set, integrating ethical guidelines, risk management protocols, and compliance measures. Policies should cover areas such as user safety, privacy, terms of use, content guidelines, and impact assessments. Adopting or publishing an AI framework can guide implementation and usage, helping to manage privacy, security, and compliance for ethical AI use. Practices like establishing an AI advisory board or defining AI design standards, including an ethical code of conduct and design principles, can contribute to a responsible AI ecosystem.

- **Define and Allocate Roles and Responsibilities Across the AI Lifecycle:** Governance frameworks should ensure a clear assignment of roles and responsibilities across the entire AI lifecycle, from design and implementation to optimisation, deployment, management, and delivery. This includes specific accountabilities for roles such as model owner, developers, and users, whose tasks are expected to align with the firm's AI risk management framework and risk appetite. Clear articulation and delineation of responsibilities across various risk management functions (e.g., model risk, validation, compliance) are necessary. Responsibilities maps can be used within firms to detail stakeholder roles, ensuring clarity in governance, compliance, and risk management by clearly identifying and assigning accountability for potential failures. The concept of a shared responsibility framework, potentially based on the level of control each party has in the AI value chain, can also help clarify responsibilities.

- **Integrate Risk and Data Management into the Framework:** Governance frameworks must incorporate robust risk management processes. This involves conducting comprehensive risk and impact assessments to systematically identify, analyse, and evaluate potential harms and guide mitigation efforts. These assessments should be documented to facilitate transparency and accountability. A strong data governance strategy, aligned with business objectives, is crucial. Organisations need robust data governance frameworks and appropriate management tools and procedures to enforce policies regarding the lawful, ethical, and secure collection, storage, processing, and sharing of data. Strengthening model risk management, particularly for GenAI, requires incorporating governance and accountability, including senior management oversight and considering enhancements to existing risk and control processes. AI risk management frameworks, such as the NIST AI RMF, include "Govern" as a core function alongside mapping, measuring, and managing risks.

- **Ensure Coherence, Transparency, and Adaptability:** A comprehensive AI governance approach is urged. Tactical approaches need to conform to overarching frameworks like cybersecurity governance, risk management, and compliance (GRC). Frameworks should promote alignment and interoperability to counter potential policy fragmentation. Transparency measures within governance include publishing clear policies and documenting risk and impact assessments. While rules-based frameworks address known risks, principles-based frameworks can be valuable in guiding behaviour for "unknown unknowns" as technology evolves. Different operating frameworks for GenAI governance exist, such as centralised, decentralised, or federated models. Larger institutions may adhere to group-level policies adapted to local regulations, potentially involving multi-layer review processes. Establishing strong risk management infrastructures, including governance frameworks, responsibilities, and controls, is essential for companies at all levels, from the board to operations.

A.4 Change management and talent management

Key principles for change management, training, and upskilling relative to AI implementation:

- **Change Management Requires Oversight and Adaptability:** Successful AI deployment involves change management, with some organisations establishing taskforces including subject matter experts to oversee projects and facilitate coordination. Integrating applications involving artificial intelligence can be complex and requires higher levels of expertise compared to simpler automation. Agility and adaptability are crucial for managing the risks associated with using AI, as the technology evolves rapidly and can change how businesses operate and make decisions. Organisations may need to adjust existing processes and structures to leverage the benefits of AI. AI leaders also conduct change management programs.

- **Prioritise Comprehensive Training and Upskilling Across the Organisation:** Investing in employee training is essential for successful AI adoption. Many firms are significantly increasing efforts in this area, aiming to quickly upskill existing staff, raise the baseline understanding of AI, dispel myths, reduce unwarranted fear, highlight key risks, and facilitate cultural changes associated with new ways of working enabled by AI. Training should cover the purpose, privacy, security, ethical obligations, standards, criteria for reviewing, handling output, monitoring, managing, and maintaining AI systems. It is important not only to train employees on using the technology for productivity but also to train them to recognise its gaps and the risk mitigation mechanisms needed. This training helps employees better identify and mitigate risks, as well as explain and oversee the operation of AI systems.
    - Due to the rapid advancements in AI, organisations need to invest in ongoing education and training programs to ensure employees stay up to date with the latest trends and optimal techniques. Training should also be tiered based on the requirements of different roles, including mandatory AI responsibility, ethics, and compliance training. Developing necessary expertise in understanding AI models is important for senior management oversight and the development of internal systems and controls. This expertise is crucial for governance

responsibilities, such as challenging AI-driven decisions. Upskilling includes raising the general knowledge level to ensure staff are comfortable using AI tools and learning new skills. It involves identifying skills gaps and requirements and enhancing expertise and sector specialisation.

- **Address Workforce Impacts through Job Redesign and Redeployment:** As AI adoption broadens, there can be workplace tension between confidence in the technology and concern around worker displacement. Organisations should anticipate and plan for changes in job responsibilities and roles caused by automation, providing employees with the essential support and training to adapt to these new roles and responsibilities. To fully leverage AI's potential for job augmentation and productivity growth, organisations must equip workers with the necessary knowledge, skills, and capabilities, while simultaneously managing workforce redeployment and redesigning job roles. This includes identifying roles affected and jobs displaced, and considering transferring employees into different jobs or reshaping roles while reskilling them to avoid further displacement. Redesigning jobs can involve embedding AI tools into existing processes to streamline workflows, allowing employees to focus on tasks requiring strategic, interpersonal, and creative skills. Creating job adjacencies can promote internal mobility and the development of parallel career pathways.

A.5 Model dependency mitigation

Financial institutions must address dependencies on specific AI models and providers. This section covers resilience planning including fallback systems, exit strategies for vendor-provided AI solutions, geopolitical considerations in AI supply chains, and approaches to diversifying AI assets to reduce concentration risk.

Based on the sources and our conversation, addressing dependencies on specific AI models and providers is a key concern for financial institutions implementing AI.

Financial institutions are increasingly using third-party AI services, including external GenAI service providers, and intend for this trend to continue in the longer term. Examples of these services can range from providing the AI model itself to processing data using AI models or providing AI model output as input for the institution's own models. A significant percentage of financial organisations are implementing or planning frameworks to govern how AI from third parties will be built, trained, and used to adhere to business principles and relevant regulations.

However, this reliance, particularly on a concentrated number of dominant AI firms and cloud service providers, presents several significant challenges and risks that financial institutions must address:

- **Operational Risks and Systemic Vulnerability:** Dependencies expose financial institutions to operational risks from unregulated external systems. The increased interconnectivity resulting from reliance on a few highly concentrated third-party providers could lead to systemic risk if these providers experience cyber attacks or operational failures, potentially affecting multiple financial institutions and markets simultaneously. Contingency plans are necessary to ensure operational continuity in such events.

- **Concentration Risk and Vendor Lock-in:** The market dominance of a limited number of large global technology firms providing AI services creates concentration risks. For financial institutions, this can lead to vendor lock-in, particularly with proprietary models.

- **Data Security and Privacy:** Using third-party AI, especially for sensitive data in areas like credit and insurance underwriting, raises data security and privacy concerns. Risks include data breaches, unauthorised data sharing, processing issues, and data poisoning attacks.
- **Model-Related Risks:** Over-reliance on similar AI models or third-party AI providers can exacerbate risks like herding behaviour in financial markets, potentially leading to pro-cyclical market behaviour and systemic events. Difficulty in detecting errors or biases in third-party models can also be heightened.

Despite using third-party providers, the regulatory principle is clear: the **board and senior management of financial institutions remain ultimately accountable** for activities, functions, products, or services provided by third parties, including those involving AI. This means financial institutions cannot simply delegate responsibility when outsourcing AI-related functions, especially for high-risk use cases.

To manage these dependencies and associated risks, financial institutions should implement robust processes:

- **Due Diligence and Selection:** Conduct thorough due diligence on third-party AI providers' compliance. Establish appropriate processes for selecting third-party AI models.

- **Contractual Arrangements:** Enter into legal arrangements that clearly outline obligations and ensure accountability. Contracts should require third parties to provide evidence that the model is appropriate for the financial institution's intended use, supply testing results, and provide information on the model's limitations and assumptions. Seeking indemnities where possible is also recommended. Master service agreements can set out requirements relating to data handling, access, rights, ownership, intellectual property, and security.

- **Validation and Monitoring:** Validate third-party models to the same standards as internally developed models. Implement protocols for continuous performance monitoring of deployed models. This might involve relying more on sensitivity analysis and benchmarking when full visibility into proprietary models is not possible. Monitoring third-party designed AI systems through a periodic reporting system can also be implemented.

- **Data Management and Security:** Assess the risks of sharing data with third parties. Conduct due diligence on third parties to assess their data controls and ethical reviews. Ensure stringent data security requirements for vendors.

- **Risk Allocation and Transparency:** Ensure clear risk allocation between the financial institution and third-party providers. While delineating responsibilities based on control (like a shared responsibility model) is proposed, financial institutions must consider if this is sufficient to meet expectations for transparency and accountability to customers.

Managing these dependencies can be challenging, particularly because third-party models may not provide full visibility into proprietary information, such as computer coding and other details. This opacity can make it difficult for financial institutions to adequately explain AI-driven decisions to customers, especially when outcomes are heavily influenced by the foundational model rather than the institution's customisation.

Given the concentration and potential systemic impact of third-party AI providers, there is an increasing argument for putting in place **direct oversight frameworks for these critical service providers**. Some jurisdictions are moving towards this direct approach, while others continue to reinforce the financial institutions' responsibility to manage risks stemming from these relationships.

Financial institutions are actively seeking more comprehensive regulatory guidance on these matters, including standardised guidelines around the due diligence process and on-boarding of GenAI service providers. There is also a desire for more detailed guidance on accountability between developers and end-users, particularly concerning data quality, data ownership, data localisation, residency, sharing, and traceability.

A.6 Recommended technology solutions

Regulators or government-initiated bodies should *provide* resources or tools that support AI development and responsible deployment:

- **Governance Testing Frameworks and Toolkits:** Some regulators, such as Singapore's AI Verify Foundation (a government-initiated project), provide **AI governance testing frameworks and toolkits**. These toolkits comprise technical and process checks, including open-source testing solutions, to enable AI system developers and owners to self-assess and verify the claimed performance of their AI systems in an objective and verifiable manner. This is a form of technology solution provided to help firms meet governance standards, rather than providing the core AI system itself.

- **Regulatory Sandboxes and Innovation Hubs:** Jurisdictions are establishing **regulatory sandboxes** to encourage innovation while ensuring compliance. These sandboxes are environments for testing AI systems, sometimes providing participants with **access to datasets** or **costly physical and digital infrastructure**. The UK's DRCF AI and Digital Hub is mentioned as aiming to **assist AI innovators**. Thailand's "Innovation Sandbox" aims to support novel technologies involving multiple regulatory domains, and Member States in the EU must establish at least one AI regulatory sandbox. These initiatives provide resources and testing environments to facilitate development and responsible deployment, but they are not typically providing the ready-to-use operational AI solutions for firms' core business activities.

- **Open-Source Models and Infrastructure:** There are instances of collaborative efforts with government involvement providing foundational resources. For example, an initiative in Thailand involving BDI, NSTDA, and VISTEC established **ThaiLLM**, an open-source Gen AI model and open data for organisations in Thailand to **use** in their applications. Similarly, HKUST is fostering the development of localised models and is providing **computing resources** for fine-tuning models, encouraging financial institutions to **make use of** these models and infrastructures. These are examples of providing foundational technology or infrastructure, rather than ready-to-deploy commercial AI solutions.

- **Tools and Methodologies for Evaluation/Supervision:** For illustration, the EU AI Act mentions the AI Office/Commission may develop **tools and methodologies for evaluating capabilities** of general-purpose AI models. These tools are aimed at supporting regulators and market surveillance authorities in their oversight functions, rather than being provided to financial institutions for their operational use.

A.7 Data privacy / quality specific to AI

While artificial intelligence (AI) holds transformative potential for Hong Kong, its effectiveness fundamentally depends on these same pillars: data privacy and data quality. Safeguarding privacy remains a non-negotiable imperative. Financial institutions must navigate stringent regulations while adopting privacy-preserving technologies—such as federated learning or anonymisation—to protect sensitive customer information.

Simultaneously, high-quality data serves as the bedrock for reliable AI-driven insights, enabling applications like risk modelling, fraud detection, and personalised financial services. Without rigorous governance frameworks to ensure data integrity—including accuracy, completeness, and consistency—even the most advanced algorithms risk producing biased or misleading outcomes. Safeguarding these "national treasures" is essential; it is the cornerstone for preserving their worth and ensuring our security.

- **Data Privacy and AI** - AI-driven firms introduce unique data privacy challenges that extend beyond traditional financial data protection, requiring safeguards for both the training data used in machine learning models and the outputs generated by these systems. A critical concern is preventing users from extracting sensitive information through carefully crafted prompts or repeated queries that could “tease out” proprietary data, personal details, or insights about the underlying model architecture. This risk is particularly significant with GenAI systems that may unintentionally reveal patterns from their training data or produce synthetic outputs that could be reverse-engineered. Financial firms must implement robust guardrails including input and output filtering, differential privacy techniques, and strict access controls to mitigate these risks while maintaining the utility and transparency of their AI systems.

- **Data Quality and AI** - In the FinTech sector, AI is revolutionising data quality management through three transformative applications: Leading institutions now leverage AI-powered anomaly detection systems to automatically scan massive transactional datasets for inconsistencies, duplicates, and missing values with

unprecedented speed and accuracy. Simultaneously, AI-powered integration platforms are overcoming data fragmentation by seamlessly unifying records from diverse sources, including legacy banking systems, blockchain ledgers, and real-time third-party APIs. Enhancing these advancements, organisations are adopting intelligent visualisation tools that leverage machine learning to create interactive, self-updating dashboards, which dynamically trace data journeys from extraction to analysis, ensuring real-time monitoring and impeccable data quality across the entire lifecycle.

- **The Synergy Between Data Privacy & Quality** - Data privacy and quality are interdependent in FinTech. High-quality data enables effective privacy protections, while strong privacy practices improve data governance. The synergy between data privacy and quality delivers key benefits for FinTech, including stronger compliance with regulations like HKMA BDAI, more reliable AI outcomes through clean and well-governed data, and enhanced customer trust via transparent data handling practices. For financial firms, this translated to practical imperatives, where integrating privacy safeguards into data quality processes, ensuring AI training datasets maintain both accuracy and ethical sourcing, and developing systems that balance regulatory compliance with competitive innovation. With this interconnected approach, SMEs can transform routine data management from a compliance obligation into a competitive advantage that drives both operational efficiency and customer confidence.

Adopting harmonised privacy and quality practices offers strategic advantages such as enhanced security, streamlined compliance, and strengthened customer trust. However, organisations must also address short-term hurdles including resource constraints, high upfront costs, and regulatory complexity. Despite these implementation challenges, long-term benefits significantly outweigh the obstacles: proactive management of cyber threats and optimised resource allocation not only mitigate operational risks but also solidify competitiveness in the market and reinforcement of trust and resilience throughout the industry.

A.8 Provision for emerging technology & patterns

A.8.1 Agentic architecture

As autonomous AI systems, or "agentic architectures," become increasingly sophisticated, their safe and responsible implementation is paramount, particularly within the sensitive financial services sector. These systems, capable of acting independently to achieve predefined goals, require meticulous design, rigorous oversight, and continuous monitoring to mitigate risks ranging from unintended actions to adversarial attacks. This section outlines key considerations for the secure and ethical deployment of agentic AI.

A.8.2 Strategic mix of Small Language Models (SLMs) and Large Language Models (LLMs):

- **Tiered Approach**: Design agentic architectures with a hierarchical structure that leverages the strengths of both SLMs and LLMs. SLMs, being more specialised and computationally efficient, can be deployed for routine, high-volume tasks with well-defined parameters (e.g., initial data classification, simple query routing). LLMs, with their superior reasoning and generalisation capabilities, should be reserved for complex

decision-making, nuanced problem-solving, and tasks requiring extensive contextual understanding or creative generation.

- **Cost and Efficiency Optimisation**: This tiered approach optimises computational resources, reduces operational costs, and minimises the latency associated with LLM inference, while ensuring that complex, high-stakes decisions benefit from the most advanced reasoning.

- **Security Segmentation**: By segmenting tasks, the attack surface is reduced. A compromise of an SLM performing a low-risk function does not necessarily grant access to the more critical LLM-driven components, enhancing overall system resilience.

A.8.3 Explainability and auditability:

- **Transparent Decision Paths**: Agentic systems must be designed to record and log every decision, action, and the rationale behind them. This includes inputs received, internal states, models consulted, outputs generated, and any human interventions.
- **Post-Hoc Analysis Tools**: Develop robust tools and interfaces that allow human auditors to reconstruct an agent's decision path, understand the contributing factors, and identify potential points of failure or bias. This is crucial for forensic analysis in case of errors, regulatory inquiries, or unexpected outcomes.

- **Explainable AI (XAI) Techniques**: Integrate XAI methods (e.g., LIME, SHAP, attention mechanisms) where feasible to provide human-understandable explanations for critical agent decisions, particularly in high-risk financial applications like credit underwriting or fraud detection.

- **Human-in-the-Loop (HITL) for Critical Decisions**: Implement mandatory human review and approval checkpoints for high-impact or irreversible actions (e.g., large-value transactions, significant policy changes, customer-facing advice with financial implications). The agent should present its proposed action and rationale to a human operator for final authorisation.

A.8.4 Adversarial attack assessment and robustness:

- **Continuous Red-Teaming**: Subject agentic systems to continuous "red-teaming" exercises, where security experts simulate adversarial attacks (e.g., prompt injection, data poisoning, model evasion, denial-of-service) to identify vulnerabilities before deployment and throughout the lifecycle.

- **Robust Input Validation and Sanitisation**: Implement stringent input validation and sanitisation layers to filter out malicious or malformed inputs that could manipulate the agent's behaviour or expose sensitive information.

- **Output Guardrails and Content Filtering**: Deploy robust output filters and content moderation mechanisms to prevent agents from generating harmful, biased, or factually incorrect information, especially in customer-facing interactions.

- **Anomaly Detection and Behavioural Monitoring**: Implement real-time monitoring systems that detect anomalous agent behaviour, deviations from expected performance, or sudden shifts in output patterns that could indicate a successful adversarial attack or model drift.

- **Regular Model Retraining and Updating**: Continuously retrain and update models within the agentic architecture with diverse and validated datasets to improve their robustness against known and emerging adversarial techniques.

A.8.5 Other relevant considerations for multi-agent architectures:

- **Defined Action Spaces and Constraints**: Clearly define the permissible actions and operational boundaries for each agent. Implement technical guardrails and policy-based constraints to prevent agents from performing unauthorised or unintended actions.

- **Secure Communication and Data Provenance**: Ensure all communication channels between agents, models, and external systems are encrypted and authenticated. Maintain clear data provenance, tracking the origin and transformations of all data consumed and generated by the agent.

- **Access Control and Identity Management**: Implement granular access controls, ensuring that only authorised personnel and systems can interact with, configure, or deploy agentic components. Strong identity management is critical for accountability.

- **Version Control and Rollback Capabilities**: Maintain strict version control for all agent code, models, and configurations. Implement robust rollback capabilities to quickly revert to a previous, stable version in case of critical failures or security incidents.

- **Ethical Alignment and Bias Mitigation**: Integrate ethical principles into the design phase, continuously assess for and mitigate biases in training data and model outputs, and establish mechanisms for addressing fairness concerns.

- **Incident Response and Recovery Plan**: Develop a comprehensive incident response plan specifically for agentic systems, outlining procedures for detection, containment, eradication, recovery, and post-incident analysis in the event of a security breach or operational failure.

- **Regular Audits and Certifications**: Subject agentic systems to independent security audits and, where applicable, pursue relevant certifications to demonstrate adherence to industry best practices and regulatory requirements.

A.8.6 Voice AI and avatars

Voice interfaces and digital avatars represent a rapidly growing segment of customer-facing AI in financial services. This section explores applications including virtual assistants,

authentication systems, and customer service avatars, alongside specific considerations for voice data privacy, identity verification, and emotional intelligence in financial contexts.

The key use cases for Voice AI and Avatars that we observe in Hong Kong are as follows

- **Revenue Generation:** Voice AI and digital avatars offer companies significant opportunities for revenue generation by enhancing customer engagement through personalised financial advice, proactive engagement, and retargeting. These technologies can make financial services more intimate and humane, attracting a wider customer base, including tech-savvy users and elderly individuals. Voice AI can interact with customers, offer tailored financial solutions, and comply with regulatory requirements, while digital avatars can combine voice, video, and text to create a memorable customer experience. By leveraging these technologies, companies can increase customer satisfaction, attract more customers, and ultimately boost their revenue. Typical use cases include *personalised financial advice, proactive engagement and retargeting*.

- **Operational Efficiency:** Companies can significantly enhance their operational efficiency by leveraging voice AI and digital avatars. These technologies help automate repetitive tasks, streamline complex workflows, and provide faster and more accurate customer service. They also improve employee training and onboarding, and facilitate voice-activated data retrieval and analysis. By integrating these technologies, FinTech companies can reduce operational bottlenecks, increase customer satisfaction, and boost overall profitability. Typical use cases include *automated customer support, voice-enabled employee training and onboarding, voice-activated data retrieval and analysis.*

- **Risk Management:** Voice AI and digital avatars can play a crucial role in enhancing risk management in the FinTech sector. These technologies help minimise financial loss, safeguard sensitive customer information, prevent fraud, and ensure compliance with regulatory standards. By using voice AI for biometric authentication and fraud detection, companies can quickly identify irregularities, detect potential security threats, and enforce compliance protocols, thereby significantly improving their risk management capabilities. Typical use cases include *fraud detection and prevention, identity verification using biometrics*.

However, there are challenges that need to be overcome. These include:

- **Multi-lingual discussions:** In Hong Kong's multilingual environment, where Cantonese, English, and Mandarin are commonly spoken, this poses challenges for enterprises using voice AI and avatars. To provide effective voice AI services, such as managing finances and transferring funds, AI must accurately understand mixed languages and dialects. Solving the problem of multilingual recognition and dialect understanding will enable companies to break language barriers, increase customer satisfaction, and enhance profitability.

- **Unsophisticated algorithms:** Most of today's AI systems primarily focus on selling products that meet immediate customer needs, effectively addressing direct demand. However, this approach often overlooks the potential of cross-selling and upselling opportunities. By integrating sophisticated data analytics and machine learning

algorithms, AI can be leveraged to identify and recommend complementary products (cross-selling) or encourage the purchase of higher-end options (upselling).

- **Deep-fakes:** There are concerns that malicious actors will use voice and avatar AI technology to create particularly realistic fake voices and fake avatars that may be used to defraud, spread fake news or otherwise damage a company's reputation. There is an arms race and future AI development will try to identify deepfakes and further improve biometric identification, adding new actions that are hard for an AI to simulate.

- **Privacy and security:** Small and medium-sized enterprises in Hong Kong should pay attention to the problem when using traditional voice networks, that is, the network itself has some shortcomings in encryption. To solve this problem, enterprises should put user authentication first, such as the use of multi-factor authentication.

- **Human overrides:** when the user feels that the voice system is not working well, they can immediately switch to manual services or switch to other operating methods. In fact, they can leave a way for users to use manual operation at any time, so that everyone can trust the system more, and avoid users being particularly troubled or helpless because of occasional problems with the voice system.

Appendix B Supporting Information

B.1 Glossary of key terms and technical concepts

Term	Definition
AI (Artificial Intelligence)	Technologies enabling machines to perform tasks requiring human intelligence.
Agentic Architecture	Systems where AI agents can act autonomously towards predefined goals within constraints (e.g., executing trades based on market signals).
AML (Anti-Money Laundering)	Processes to detect and prevent money laundering.
AUM (Assets Under Management)	Total market value of financial assets managed for clients.
Bias Mitigation	Techniques used to identify and reduce unfair systematic errors in AI model outputs.
CAC	Cyberspace Administration of China, regulator overseeing cybersecurity and data governance.
Customer Satisfaction (CSAT)	Metric assessing how well services meet customer expectations.
Data Dictionary	Reference containing definitions and metadata of datasets.
Data Governance	Policies ensuring proper data usage, quality, privacy, and compliance.
Explainability	The ability to describe how an AI model reached a particular decision or output in understandable terms.
Federated Learning	A machine learning technique that trains an algorithm across multiple decentralised devices or servers holding local data samples, without exchanging the data itself.
FinTech	Technology-driven financial products and services.
Foundation Models	Large-scale models adaptable to multiple AI tasks.
GBA (Greater Bay Area)	Region linking Hong Kong, Macao, and Guangdong cities for cross-border collaboration.
GenAI (Generative AI)	AI systems that generate text, images, and synthetic data.
Hallucinations (GenAI)	Instances where a Generative AI model produces plausible but factually incorrect or nonsensical outputs.
HKAB	Hong Kong Association of Banks.
HKIA / IA	Hong Kong Insurance Authority regulating insurance sector.
HKIMR	Research institute providing insights on financial trends.
HKMA	Regulator supervising Hong Kong banks and issuing AI guidance.

Term	Definition
HITL (Human-in-the-loop)	Human oversight required in AI-driven processes.
KYC	Processes verifying customer identity and risk.
LLM (Large Language Model)	AI model trained on large datasets with reasoning capability.
Model Drift	The degradation of an AI model's performance over time due to changes in the underlying data patterns or environment.
Model Risk Management	Framework for validating and monitoring AI models.
NIST AI RMF	Risk management framework for trustworthy AI.
PDPO	Hong Kong Personal Data (Privacy) Ordinance.
Predictive Analytics	Forecasting outcomes using historical and real-time data.
Prompt Injection	A cybersecurity attack vector where malicious inputs trick a language model into performing unintended actions or revealing sensitive information.
RegTech	Technology improving regulatory compliance and risk monitoring.
Regulatory Sandbox	Controlled environment for testing AI and FinTech solutions.
SFC	Securities and Futures Commission regulating Hong Kong markets.
SMEs	Small and Medium Enterprises forming majority of HK ecosystem.
Synthetic Data	Artificially generated data that mimics the statistical properties of real-world data, often used for training AI models while preserving privacy.
Voice AI	AI that processes and understands spoken language.

B.2 Literature review

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B.3 Detailed survey results

Detailed survey results from financial institutions across banking, insurance, asset management, and FinTech sectors are available on request to researchers. Please contact FTAHK, via our website.

B.4 About the Fintech Association of Hong Kong

The FTAHK is a not-for-profit, independent, member-driven association representing Hong Kong's vibrant and diverse fintech community. Its mission is to foster innovation, collaboration, and advocacy to position Hong Kong as a leading global fintech hub.

B.5 About the FTAHK Strategic Advisory Council on AI in Financial Services

Chaired by FTAHK current and previous board members Chris Barford & Guillaume Huet, the initiative's mission is to promote and steer responsible AI adoption by bringing together FTAHK and the broader Hong Kong financial services industry.

The council is made up of the following members for the 2025/26 cohort (in surname alphabetical order):

Maxim Afanasyev	Google	Ashley Sin Yu Ma	DBS Bank
Chris Barford	Fintech Association of HK	Vivienne Wai Man	Bank of East Asia
Julien Bernard	First Abu Dhabi Bank	Sarah O	Citibank Hong Kong
Claudio Caula	AIA Group Ltd.	Garry Sien	Ant Digital Technologies
Guillaume Huet	Fintech Association of HK	Brian Tang	University of Hong Kong (HKU)
Kazimierz Kelles-Krauz	Fintech Association of HK	Miles Wen	Fanolab
Jessica Lam	WeLab		

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