

# Reshaping the Financial Industry in a Digitised Economy

## 在數碼經濟中重塑金融業

*Financial institutions, the backbone of the global economy, are facing unprecedented challenges – from keeping client data secured and complying with new regulatory guidelines to competing with agile Fintech start-ups and larger Techfins. To tackle the various challenges that arise from the new digitised economy, investment in technology and talent is paramount.*

環球經濟的骨幹金融機構，現正面對前所未有的挑戰：保障客戶數據安全、遵守新法規指引，以至與靈活的金融科技初創企業及較大型的科技金融機構競爭等。要應對由新數碼經濟帶來的種種挑戰，投資於科技和人才至為重要。

On the consumer front, digital finance is surpassing traditional brick-and-mortar banks and insurance broker relationships, allowing customers to satisfy their financial needs anytime, anywhere via mobile apps. Lucrative offerings such as loans, home and auto policies, and credit cards are also being disrupted.

Retail banks and insurers are not the only financial institutions being impacted. Since the COVID emerged in 2019, the world entered lockdown and investment banks

allowed their day traders to work from home, once bustling trading floors fell silent. While some financial institutions now require in-person work, others are considering whether a hybrid or spoke-and-hub model is possible and preferable given the increasing challenge of talent retention and acquisition. To remain competitive, banks and financial markets must automate labour-intensive operations to free up valuable human and technology resources and make significant investments in new technologies.

Consumers want to access their accounts, lock missing cards, make virtual payments and transfer money to others in a swift and secure manner. This means that financial institutions need to develop easy-to-use applications with superior uptime that can easily integrate with other applications. This need to seamlessly integrate and interact with other applications to demonstrate a shift in the financial services industry toward a new type of business model, which centred on platforms and underscores the importance of having access to a robust ecosystem.

**在** 消費者層面，數碼金融超越了傳統實體銀行及保險經紀與客戶的關係，讓客戶透過流動應用程式，隨時隨地解決財務需要。貸款、房貸、車貸、信用卡等可帶來盈利的業務，也受到衝擊。

受影響的金融機構，不限於零售銀行和保險公司。自2019年冠狀病毒疫情爆發以來，世界各地進入封鎖狀態，投資銀行容許交易員在家工作，昔日熱鬧的交易場所一下子靜了下來。現在有些金融機構已要求員工返回公司上班，但鑑於招聘及挽留人才日益困難，也有金融機構考慮混合模式上班或網絡工作模式是否可行甚或較佳。為保持競爭力，銀行及金融市場必須把人手密集的工序自動化，騰出寶貴的人力和科技資源，並大量投資於新科技。



Additionally, it is important to produce secular change by driving the creation of new digital assets. These emerging assets include stable coins, cryptocurrencies, non-fungible tokens (NFTs) and central bank digital currencies (CBDCs). Underlying all of these is the platform economy. A platform is a product that serves or enables other products or services that its members can access via APIs (application programming interfaces).

In the banking sector, this platform business model is known as Open Banking and it creates new revenue streams for financial institutions while increasing value for customers. Open Banking achieves this by making data available for regulated providers to access, use and share, it also allows customers to seamlessly interact with multiple forms of personal finance and payment service providers. Examples of transaction platforms include Amazon, Airbnb, Uber and Alipay. Another type is the “innovation platform,” which provides a common technology framework and allow others to build.

Adopting a data fabric architecture is one way to help banks facilitate these efforts to modernise applications. But banks and financial institutions must also consider their ecosystem. Assembling the right partners is critically important to the future of financial services.

客戶希望能快捷安全地處理帳戶交易、凍結遺失了的信用卡、處理電子付款、轉帳給他人；也就是說，金融機構有需要開發簡單易用的應用程式，這些程式要能長時間運行，也可容易與其他程式融合。與其他程式無縫配合和交流的需要，顯示金融服務業正轉向新的商業模式，以平台為中心；這突顯了穩健的生態系統的重要性。

此外，促進推出新的數碼資產，逐漸帶來改變，也十分重要。這些新資產包括穩定幣、加密貨幣、非同質化代幣和央行數碼貨幣。這些資產的基礎，就是平台經濟。平台是指透過應用程式介面(API)服務客戶，或讓客戶透過API接觸其他產品或服務。

在銀行界，這種平台商業模式稱為開放銀行，為金融機構帶來新的收入來源，也為客戶增值。開放銀行讓受規管的服務提供者接觸、使用及分享數據，也容許客戶與多個私人財務及支付服務提供者無縫交流。交易平台的例子有亞馬遜(Amazon)、愛彼迎(Airbnb)、優步(Uber)、支付寶等。另一類是創新平台，提供共用的科技框架，讓他人在其上建立服務。

In 2017, DBS Bank launched a banking API developer platform with 155 APIs across 20 categories, including funds transfers, rewards, real-time payments and PayLah!. More than 50 companies – including AIG, McDonald’s, MSIG, PropertyGuru, Activpass, FoodPanda, Homage and soCash – have their services on the DBS platform.

As the industry continues to transform operations to a hybrid cloud environment in order to take advantage of cost efficiencies and agile enhancements, it must continue to invest in people, partners and technology, focusing on security aspects, to keep customers’ sensitive data safe and meet regulatory expectations.

The industrialisation of cybercrime has led to shorter attack cycles, which put more pressure on security teams for quicker response time. According to the IBM Security and Ponemon Institute *Cost of a Data Breach Report* in 2021 and 2022, the use of stolen or compromised credentials remains the most common cause of a data breach. IBM Security recommends that the financial sector adopt a zero-trust security model, which operates under the assumption that security may already be compromised, and therefore continuously validates the conditions for connection between users, data and resources, preventing unauthorised access to sensitive data.

### The need for end-to-end digitisation

“Digitisation can unlock value across an entire organisation and ecosystem – from the customer interface to middle and back-office operations,” notes the recently released IBM Industry Academy *2022 Global Outlook for Banking and Financial Markets*. What else could financial institutions do to leverage the platform economy?

To begin with, they should adopt end-to-end digitisation to reshape operations and drive innovation. Deploy AI and data environments that put data in action to accelerate transformation. Parallely, seek out new business models to drive incremental revenue gains. They should also build new platform business models to integrate the needs of ecosystem participants in a frictionless environment.

It is important to find viable sustainability models so financial institutions can launch initiatives to meet market expectations, regulatory requirements and corporate ethical objectives. While most banks have made significant progress radically transforming their customers’ digital experience through rapid digitisation in recent years, it remains just as critical to meet sustainability milestones as well.

採用數據經緯結構，是幫助銀行把應用程式現代化的一個方法。但銀行和財務機構也應考慮其生態系統。集合適當的夥伴，對金融服務業的未來至關重要。

2017年，星展銀行推出銀行業務API開發平台，當中有20個類別，並有155個API，包括轉帳、獎賞、即時支付和PayLah!。超過50家公司，包括美國國際集團(AIG)、麥當奴、三井住友保險、PropertyGuru、Activpass、FoodPanda、Homage和soCash，都在星展的平台上提供服務。

業界持續把業務遷移至混合雲環境，以提高成本效益，加強靈活性之際，必需繼續投資於人才、合作夥伴和科技，特別是保安層面，以確保客戶的敏感資料安全，並符合法規。

網絡犯罪產業化，縮短了網絡攻擊周期，保安團隊承受更大壓力，必須更快速作出反應。IBM Security和Ponemon Institute在2021及2022年發表的《資料外洩成本報告》表示，用戶憑證被盜用或遭洩露，是資料外洩的最普遍原因。IBM Security建議金融界採用零信任保安策略，該策略假設保安已可能受破壞，因此持續核實用戶、數據與資源的連繫，以防有人未經授權而取得敏感資料。

### 端對端數碼化的需要

IBM Industry Academy最近發表的2022年《環球銀行及金融市場展望》指出：「數碼化可釋放整個機構和生態系統的價值，包括客戶介面以至中後勤運作。」金融機構還可以做些什麼，以把握平台經濟的機遇？

首先，他們應從事端對端數碼化，以重塑運作，驅動創新，運用人工智能和數據環境，利用數據加速轉型；同時探討新的商業模式，逐漸提高盈利。他們也應建立新的平台業務模型，把生態系統內參與者的需要，在全無障礙的環境中結合起來。

尋求可行的可持續模式，讓金融機構推出措施符合市場期望、法規要求和機構的道德目標，是十分重要的。近年來，透過快速數碼化，大部分銀行都已根本改變了客戶的數碼體驗；下一步是要達到可持續發展的目標，這方面同樣重要。





While these are changes the financial sector and banks should work towards at a consumer or retail level, at a macro level the hottest discussion is about CBDCs. These are digital tokens, like cryptocurrency, but issued by a central bank and pegged to the value of that country's fiat currency. The International Monetary Fund reported that 110 nations were considering plans to issue CBDCs.

The e-HKD system – which Hong Kong plans to launch a trial by the end of this year – is an example of how a jurisdiction or country can accelerate CBDCs. Protecting user privacy and achieving the highest level of cybersecurity will be two key concerns for the development of e-HKD. This platform has the potential to make payments more efficient and increase integration in the global payment landscape.

### Building and managing a skilled workforce is key to digitisation

The shape of the post-pandemic recovery will not be identical across industries and regional economies. As they move forward, financial institutions will need to explore and implement a new blueprint, one that propels operations, customer relationships, security and compliance towards a different normal.

Financial institutions across Asia-Pacific need to master extreme digitisation to succeed. Organisations need to adopt both a holistic perspective and a granular approach. To achieve their goals, innovative financial institutions will need to redesign and build trusted digital relationships, through secured cloud access, advanced automation, Artificial Intelligence (AI) and the simplification of processes and products.

Pandemic recovery has accelerated digitisation, with 65% of APAC GDP now coming from digitally transforming enterprises and governments, spending more than USD1.2 trillion by 2023. This sends a strong signal that the pace of digital acceleration and demand for core technical and professional skills will continue to increase. According to the World Economic Forum 2020 *Future of Jobs* report on workforce trends across 26 economies, by 2025 85 million jobs may be displaced by a shift in the division of labour between humans and machines. Moreover, 97 million new roles may emerge that are more adapted to the new division of labour between humans, such as data scientists and AI specialists.

A key need of digitisation is a skilled workforce that can work on new technologies. Arguably, one of the greatest threats

這些改變，都是銀行金融業在客戶或零售層面要做的；而在宏觀層面，目前最熱門的話題是央行數碼貨幣。央行數碼貨幣和加密貨幣一樣，都是數碼資產，但由中央銀行發行，與本國法定貨幣的價值掛鉤。國際貨幣基金組織報告，110個國家正考慮發行央行數碼貨幣。

香港準備在今年年底試行數碼港元；這是國家或地區加速推出央行數碼貨幣的例子。保障用戶私隱，以及做到最嚴密的網絡保安，是開發數碼港元的兩個主要關注點。這平台有潛力使支付過程更有效率，加強香港融入全球支付的環境。

### 培育及管理技術人才：數碼化的關鍵

不同行業和經濟體的疫後復甦情況都不一樣。在復甦過程中，金融機構有需要探討和實施新藍圖，把業務運作、客戶關係、保安及合規推進至不一樣的新常態。

亞太區的金融機構有需要高度數碼化，才可成功，既要縱覽全局，也要深耕細作。要達到目標，創新金融機構有必要重新設計和建立有互信的數碼關係，運用安全的雲端儲存、先進的自動化程序、人工智能，以及簡化程序和產品。

facing the financial sector today is the talent shortage. Executives recognise the skill gaps. They know it's both real and problematic, but most don't appear to be actively or effectively tackling the issue.

IBM has conducted significant research on the topic for a number of years and found that many organisations are merely running in place. In fact, IBM research reveals that the vast majority have not moved beyond traditional hiring and training strategies. The result of this is a looming global talent shortage with the power to severely impact the financial industry.

### Skills availability and quality are in jeopardy

A 2022 *Digital Talent Insight* report by international consultant Korn Ferry estimates a shortage of 47 million tech talents by 2030 in the Asia-Pacific region. The skills challenge will not dissipate; in fact, it is increasing in severity. Global labour markets are only tightening as unemployment rates continue to decline. Adding a further challenge, the half-life of skills continues to shrink, while the time it takes to close a skill gap has ballooned. As organisations scramble to meet their talent needs, many are making adjustments to their education and experience requirements, just to fill roles. The financial sector must find new ways to stay ahead of skills relevancy.

疫後復甦，數碼化的過程得以加快：亞太區的國內生產總值當中，65%來自企業和政府的數碼轉型；至2023年，這方面的消費超過12,000億美元。這發出了強烈的訊號：數碼化的速度和對於核心技術和專業技能的需求將繼續增加。世界經濟論壇《2020年未來就業市場》報告介紹26個經濟體的人力市場趨勢，顯示到了2025年，8,500萬個職位將因人類與機械分工的改變而消失。此外，將增加9,700萬個新職位，例如數據科學家及人工智能專家，配合人類新的分工情況。

數碼化的一個重要需求，是具備相關技術的人才，擔任有關新科技的工作。人才短缺可說是金融業今天面對的最重大威脅之一。企業行政人員知道有這個技能缺口，也知道這問題很實在，也着實棘手；但似乎大部分企業都沒有積極有效地解決這問題。

對於這個課題，IBM多年來做了大量研究，發覺許多機構都只是原地踏步，大部分都只維持傳統的招聘和培訓策略；結果是全球將面臨人才短缺，並會嚴重影響金融業。

### 技術人才供應和質量堪憂

國際顧問Korn Ferry的《2022年數碼人才展望》報告估計，到2030年，亞太區的科技人才短缺約達4,700萬人。技術人才缺乏的情況不會改善，實際上日趨嚴重。隨着失業率繼續下降，環球勞動市場只會更形緊張。另一項挑戰是，技能的半衰期越來越短，而填補技能缺口所需的時間則大幅延長。機構爭奪人才之際，許多機構都調整對應徵者學歷和工作經驗的要求，只求填補空缺。金融業必須尋求新方法，在解決技能需求方面保持領先。

“近年來，透過快速數碼化，大部分銀行都已根本改變了客戶的數碼體驗；下一步是要達到可持續發展的目標，這方面同樣重要。”





“Hiring alone is not a sustainable solution to the talent crisis. Successfully navigating this new environment requires fundamentally reshaping how organisations manage skills, talent, and culture.”

### Intelligent automation is an economic game changer

According to an industry study by McKinsey, automation is expected to disrupt up to 40% of all banking activities and affect half of banking jobs by 2030. As business platforms mature and organisations continue to introduce new intelligent workflows, the need for continuous reskilling in the workforce will be paramount to remain competitive. Executives recognise that advances in intelligent automation will bring multiple benefits. At the same time, they also realise millions of workers may require retraining or reskilling.

Hiring alone is not a sustainable solution to the talent crisis. Successfully navigating this new environment requires organisations to fundamentally reshape management skills, talent and culture.

### How can banks and financial institutions close the talent gap?

A focused approach can help the financial industry build and maintain a skilled workforce.

**Make it personal** — Employees expect personalised experience in their workplace. Employees want career, skill and learning development uniquely tailored to their experiences, goals and interests. Employee skill and learning experiences that are tailored both to customer and market needs, and to employee goals and interests, can help retain the best and brightest, and build a future workforce.

**Look inside and out** — Gone are the days when a traditional bank or a financial service provider had all the answers. Gone, too, is the ability to solve the skills challenge without the partnerships of broader ecosystems. To remain competitive,



### 智能自動化改變遊戲規則

McKinsey的一項行業研究顯示，到2030年，自動化將影響近四成的銀行業務及一半銀行職位。業務平台日趨成熟，機構繼續引進新的智能工序，便須持續重塑員工的技能，以保持競爭力。機構的行政人員認識到，智能自動化可帶來多方面的好處；他們同時瞭解到，數以百萬計的員工或須再培訓，學習新技能。

面對人才危機，單靠招聘並非長遠的解決方法。若要好好應對這個新形勢，機構便須根本改變管理技巧、人才及文化。

### 銀行及金融機構可如何填補人才缺口？

採用針對性的方法，可以幫助金融業建立和維持技術團隊。

**配合員工個人化發展** — 員工期望在工作中得到個人化的體驗，希望事業、技能和學習方面的發展能配合個人的經驗、目標和興趣。若能因應客戶和市場需要，配合員工的目標和興趣，為員工量身裁定技能培訓及學習體驗，便可留住最好、最聰明的員工，建立適合未來發展的團隊。

**放眼向外** — 傳統銀行或金融服務機構應付一切需要：這樣的日子已經一去不復返。不靠大環境中的合作夥伴便能解決對技能的需求，這也都不再可能。若要保持競爭力，銀行及金

banks and financial institutions need to adopt an open technology architecture and embrace partners to be able to take advantage of the latest advancements. Culture shifts are also required to welcome third parties as part of the team.

One such key industry initiative is the Industry Project Masters Network (IPMN), led by the Hong Kong Monetary Authority. Under the “Fintech 2025” strategy, the IPMN program aims to groom postgraduate students in technologies like AI, cybersecurity, blockchain, etc., and work on a bank’s Fintech or industry project, to gain hands-on experiences and skills.

This new initiative is in addition to the various Fintech programmes that are already being offered in collaboration with the Hong Kong Institute of Bankers, as well as other organisations and universities such as ASTRI, Cyberport, Hong Kong Science and Technology Parks Corporation, The Chinese University of Hong Kong, The University of Hong Kong, Hong Kong University of Science and Technology and The Hong Kong Polytechnic University.

The skills shortage doesn’t show any signs of easing up, and the heat is on for organisations to actively address the challenge both now and in the future. According to the World Economic Forum, closing the global skills gap could add USD11.5 trillion to global GDP by 2028. And this will require collaboration across ecosystems that span, not just the financial sector, but across industries, education and governments. **BT**

“面對人才危機，單靠招聘並非長遠的解決方法。若要好好應對這個新形勢，機構便須根本改變管理技巧、人才及文化。”

融機構有需要採用開放技術結構，引入合作夥伴，好能利用最先進的技術。文化上也應要改變，要接受第三者加入團隊。

**業界在這方面的一項重要舉措**，就是香港金融管理局牽頭的金融科技先鋒聯網計劃。這是「金融科技2025」策略下的一項計劃，旨在培育掌握人工智能、網絡安全、區塊鏈等技術的金融科技專才，提供機會予研究生參與銀行的金融科技或業界項目，協助他們取得實際經驗和技能。

這是與香港銀行學會及其他機構及大學合作推出的多個金融科技項目以外的一項新舉措。其他金融科技項目的合作夥伴包括香港應用科技研究院、數碼港、香港科技園公司、香港中文大學、香港大學、香港科技大學及香港理工大學。

技能短缺的情況沒有絲毫改善的跡象，機構必須積極應對這項挑戰，此刻如是，將來也如是。世界經濟論壇指出，到2028年，填補全球的人才缺口，將使全球的國內生產總值增加115,000億美元。而這需要整個生態系統的合作，不限於金融業，也跨越多個行業、教育機構和政府。 **BT**

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