

# **An Industry Evolves: Digital Banking Transformed by Hybrid Cloud & AI**





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## Hybrid cloud is about enabling applications to be developed once and run anywhere, to integrate easily with other solutions, and to be securely managed from anywhere.



42 of the top 50 Fortune 500 Banks use IBM Cloud.

Even before 2020, the profit margins and business models of financial services firms were highly stressed. The pandemic worsened this environment, making it necessary to radically transform operations while addressing rapid shifts in customer needs. In some cases, two or three years of transformation took place in months. Despite aggressive changes, many banks still rely on inflexible, monolithic legacy systems that make it expensive to adopt new technologies or deploy innovative functionality.

Traditional approaches to IT are not well suited to the current era's digital realities. You can't compete by merely adding new features to legacy code. Business leaders demand rapid innovation, customer centricity, and mobile-first interfaces. Customers expect immediate results, for example, they want loans approved in hours not weeks. So new competitors like Rocket Mortgage—unconstrained by legacy systems—are capturing market share by meeting contemporary expectations.

With competitive pressures unchecked by the pandemic, and operational resiliency a daily issue, financial Services IT leaders find themselves in the eye of a storm.





## “The utopian future is an open, hybrid cloud architecture. It’s what we’re doing with Red Hat Openshift and Kubernetes.”

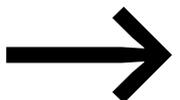
– Howard Boville *SVP, Hybrid Cloud IBM*

### **Extreme Digitization: Transforming operations end to end**

The pandemic’s impact on financial services includes business model changes that are here to stay. Banks have to act now to uncover new efficiencies, become more flexible, and respond to competitive threats. With the compression of net-interest margins, and the looming decline in fee income, financial institutions need to quickly and radically reduce operating costs to maintain profitability.

Traditional cost-saving areas, such as management de-layering, span-of-control optimization, fine-tuning budgets, and other traditional expense management techniques may still have a role to play. But post-COVID-19, cost savings will need to be:

- Substantial, reflecting new economic and competitive realities
- Structural, extending beyond capacity reduction to deliver more with less
- Sustainable, avoid compromising resiliency, compliance, security, and customer trust.



Delivering extreme digitalization requires a combination of hybrid multi-cloud, API platforms, microservices, blockchain, and AI at scale. Such transformation works best when accompanied by an agile approach to project management.

**[Learn about Santander's Cloud Journey →](#)**

### **Extreme digitization enabled by cloud**

Extreme digitization impacts virtually all aspects of the financial institution. Beyond the customer interface, digitization encompasses intelligent workflows—the next step after automation—as well as virtual assistants and the use of AI to support customers, employees, and partners.

By adopting a hybrid-cloud strategy, the business can create timely new services through cloud-native architectures and containerized applications. With containerization, an application can be run on-premise (in your data center), on a private cloud, or in public cloud environments.

#### **Containerization of software delivers:**

- Reduced cost
- Portability and agility
- Development efficiency
- Faster start up and scalability
- Improved security

A digital program involving app modernization based on hybrid-cloud architecture delivers multiple benefits. Now a bank can quickly integrate with fintechs, and accelerate the safe migration of workloads to an efficient cloud platform.

#### **Operational resiliency.**

Resiliency can be defined as the ability to rapidly adapt and respond to opportunities, demands, disruptions, and threats so as to limit business impacts. Resiliency spans people, processes, and IT.

Application modernization using open technology—along with digitization, enabled by a multi-cloud strategy— is the best way to address the resiliency challenges of the future.

The digitization imperative and the need for resiliency come together in the IBM Cloud for Financial Services. This offering is one of the world's first public clouds to address financial institutions' requirements for regulatory compliance and security.

**[Accelerate your digital transformation today →](#)**





**“It was a humongous thing when we started. To try a digital transformation like this, for a legacy bank like us...I still get goosebumps when I think about the start.”**

– Amit Saxena *Global Deputy CTO, State Bank of India*

## Reshaping Customer Experience

The Chief Digital Officer and heads of divisions are challenged by digital savvy customers who demand best-of-breed experiences that span all their interactions with their bank.

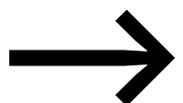
Financial services leaders must reshape their existing customer experience to exceed expectations for their current customers and for the next generation. They must earn and keep their customer’s trust, anticipate their future needs and make complex tasks, such as getting a loan, seem simple.

To adapt to this customer-centric view, leaders will analyze multiple data sources – from transactions, payment flows, and social sentiment – to better understand their customers.

By adopting design thinking techniques and using data and AI insights, business and technology leaders can re-imagine the banking experience from the customer’s point of view and create compelling new ways to engage. This approach can also be used to improve the experiences of employees (e.g. in a call center) and trading partners as well.



*IBM teams with Adobe, Salesforce and Fenergo to help banks deliver great customer experiences.*



## **Banks are pursuing multiple paths to drive customer centricity:**

***State Bank of India** chose to partner with IBM to launch an all-digital bank, YONO (You Only Need One) that acquired over 20 million customers in just 18 months.*

Marge, a Watson Assistant-based chatbot at Royal Bank of Scotland (now NatWest) was built with an impressive knowledge center of 200 questions and over 1,000 responses. “She” routinely fields 35–40% of all customer service inquiries, and successfully resolves 85 percent of them without a hand-off to a live agent.

Since implementing the digital mortgage support tool, NatWest has seen a 20% improvement in customer NPS, and a 10% decrease in call duration. As Marge evolves, NatWest employees will be empowered to focus on more complex tasks in a timely fashion—even as the bank continues on its digital transformation journey.

The “Marge” chatbot, powered by IBM Watson AI technology, helps thousands of clients per month get quick answers to their banking questions.

[\*\*Learn more →\*\*](#)

[\*\*Create seamless banking customer experience →\*\*](#)





**“Companies have had to turn to more technology to help them through the immediate crisis and technology is absolutely going to lead them out of it.”**

– Sarah Diamond *Global Managing Director, Financial Services, IBM*

## **Security, Risk & Compliance**

While a bank’s leadership focuses on revenue, and the IT department works to enable growth, the Chief Compliance and Security Officers are challenged by a world where regulatory scrutiny, fraud and criminal attacks are increasing exponentially.

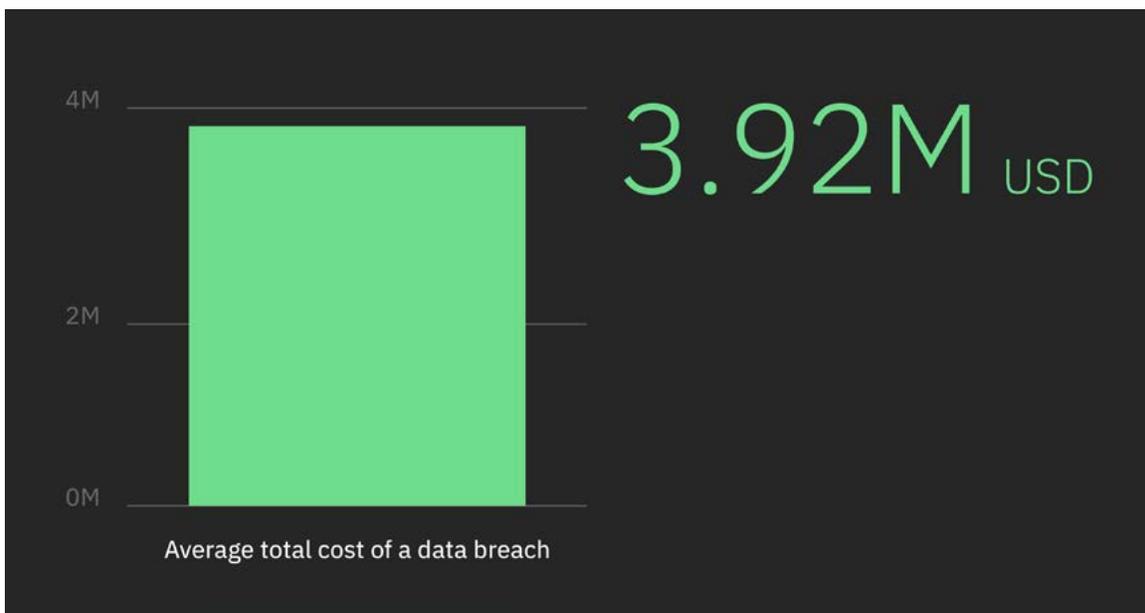
CEOs and senior executives of major banks around the world have lost their jobs because they failed to identify or act on money laundering connected to trafficking, fraud and criminal enterprises. No amount of hiring will enable the institution to keep pace with these rising threats. Instead, banks need AI-driven regulatory compliance and fraud detection solutions. These tools give the bank visibility, control and decision support to manage risks, reduce unexpected losses and fulfill regulatory requirements across multiple jurisdictions.

The bank’s modern regulatory regimen must of course be accompanied by a holistic, multi-layered cyber-security defense. Security teams identify and resolve threats at speed and at scale so as to avoid catastrophic breaches that can compromise customers’ trust and indelibly harm the bank’s brand.



IBM is ranked #1 in cyber risk management  
-Chartis RiskTech100 2021





Research by IBM shows that the average total cost of a data breach has now climbed to USD 3.92 million, and the effects last for years.

**IBM Cloud for Financial Services™** is the only public cloud platform whose policy framework is purpose-built to support financial services regulated workloads with proactive and automated security while leveraging the trusted encryption services of the IBM public cloud.

Working with Promontory Financial Group—an IBM company that helped author many cloud regulations in the United States and the European Union—IBM and Bank of America created a policy framework. This framework contains numerous public cloud controls, architecture patterns and guidance for implementation and evidence, all of which support the regulatory and security needs of financial institutions.

Promontory Financial Group is a global consulting firm that advises clients on Regulatory issues, compliance, risk management, liquidity, restructuring, acquisitions, due diligence, internal investigations and cyber security.

[Learn more →](#)

[Mitigate your risks →](#)





“Cloud is not just a place, it’s a plan.”

– Hillery Hunter, *VP & CTO IBM Cloud; IBM Fellow*

## Why IBM Hybrid Cloud

IBM’s approach to hybrid-cloud has unique attributes that are optimized for the resiliency and regulatory requirements of financial services. IBM understands a bank’s reluctance to move mission critical applications to the cloud because of the security and regulatory compliance factors that must be addressed.

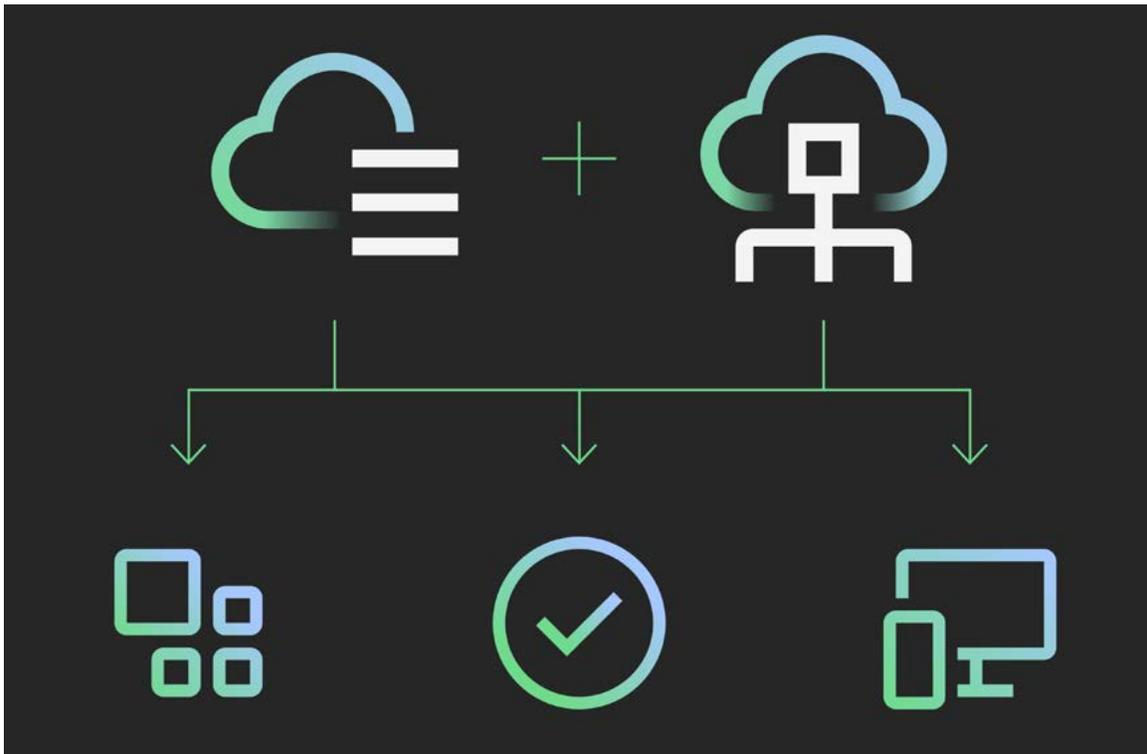
Today, less than 20% of workloads have been moved to the cloud. To enable increased cloud adoption in regulated industries, such as banking, IBM launched IBM Cloud for Financial Services. This offering comes with several hundred security and regulatory compliance controls that are engineered into IBM’s public cloud platform.

[Learn more →](#)

The IBM Cloud Framework for Financial Services comes with over 280 security and compliance controls. This means you can move sensitive workloads to the cloud and run them with as much confidence as if they were installed in your data center. ICFS is based on IBM public cloud, which in IDC’s 2020 Industry CloudPath survey of more than 2100 companies received the highest IAAS customer rating—9 out of 10—in the financial services industry (4Q20).

The first clients for IBM Cloud for Financial Services include Bank of America, BNP Paribas, MUFG, and Bradesco—with more to be announced. An ecosystem of over 80 IBM Business Partners plan to leverage the Framework for Financial Services, which greatly reduces the burden of oversight for their banking clients.





*A bank in the UK successfully migrates more than 250 applications, achieves a 100 percent success rate and completes technology separation with almost zero impact on its business or customers when it works with IBM Services and IBM Cloud Garage services to separate its IT systems and operations from its parent company to run independently.*

The industry advisory council has representation from major financial institutions that will help guide the platform's long-term success.

In addition to a modern IT architecture, the complexity of today's digital business imperatives requires a solid hybrid-cloud foundation.

Hybrid cloud is about enabling applications to be developed once and run anywhere, to integrate easily with other solutions, and to be securely managed in one place. Applications are "containerized," that is, configured according to set standards that enable the software to be run on any type of physical infrastructure.

Having acquired Red Hat, IBM is now a leader in hybrid cloud. We embrace open standards, and give clients the ability to orchestrate all types of IT environments. With a Red Hat-based hybrid-cloud you can modernize applications and innovate without the operational friction so often associated with legacy systems.

A hybrid cloud strategy gives the bank a modular, interoperable, intelligent infrastructure with embedded risk management, security, and compliance.

**[Try a no-cost virtual IBM Cloud for Financial Services framing session →](#)**





“If you don’t put humans at the heart of everything we think and we do, we are missing something big.”

– Jean-Phillippe Desbiolles, *global VP for data, cognitive and AI for Financial Services at IBM*

## Why IBM for Data & AI

Scale the value of your data and accelerate the journey to AI. Fueled by data, AI is transforming how businesses operate and deliver value. With workflows becoming more intelligent, future outcomes can be shaped, interactions can become more personalized, and organizations can adapt quickly to customer needs.

To successfully scale AI throughout your organization, data complexity, talent scarcity and a lack of trust in AI systems must be overcome. Whether you are just getting started, experimenting, or fully operationalizing AI throughout your business, IBM can help. With the AI Ladder, a prescriptive framework we’ve developed based on thousands of AI engagements, IBM can help you determine where you are in your AI journey, and the next steps you need to take to turn your AI aspirations into business outcomes.

IBM’s open, extensible data and AI platform automates the AI Ladder within a team-based experience that can be deployed on any cloud.





72% of outperformers expect results from AI  
-IBM Institute for Business Value, 2021 CEO Survey

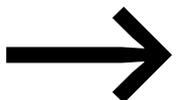
With over 5,200 branches, Bradesco is one of Brazil's largest banks. It was looking for a way to increase the speed of service and also improve the level of personalization for each client. The bank turned to IBM Watson technology for help. IBM Watson was trained in banking as well as Portuguese and programmed with 10,000 customer questions that were eventually made available to the employees of all 5,200 branches nationwide.

- Watson is trained on 62 products and answers 283,000 questions a month.
- Only 5% of the questions require calls for further assistance.
- Response times have been reduced from 10 minutes to just seconds.<sup>1</sup>

Banks' secret to the best AI? Embracing their humanity:

How "cognitive factories" help banks and insurers build AI solutions for a post-COVID-19 world

**[Read the data & AI for financial services blog →](#)**





## Getting started:

The IBM Garage™ methodology is an end-to-end model for accelerating digital transformation. It helps you generate innovative ideas and equips you with the practices, technologies and expertise to rapidly turn those ideas into business value.

When you work with IBM Garage you bring *your* customer pain points into focus. You include and build on the insights of your business and technology leaders. You empower your team to take manageable risks. Together, you adopt leading technologies, speed up product development and measure the value of everything you do. We support you in your business goals, whether that's helping you respond quickly to disruption or guiding your full-scale transformation.

IBM Garage clients experience 10 times more innovative ideas, 67% faster speed to outcomes, 6 times as many projects into production and 102% ROI.<sup>2</sup>

**Are you ready to take the next step now?  
[Sign up for your virtual Garage session →](#)**

**[Schedule a meeting with IBM →](#)**



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-Forrester TEI, October, 2020

<sup>1</sup> *"IBM Watson Assistant Continues to Drive Global Business Transformation," PR Newswire, 19 February 2019*

<sup>2</sup> *"The Total Economic Impact Of IBM Garage", a commissioned study conducted by Forrester Consulting, October 2020*

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