



**Hewlett Packard
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THE FUTURE OF FINANCIAL SERVICES

HPE GreenLake for financial services

INTRODUCTION

The financial services industry has always needed to adapt to changing business conditions and customer demands. However, many organizations today are facing a greater and faster pace of evolution than ever before, with many requirements being accelerated by the global COVID-19 pandemic. As companies deal with these changes, a “digital divide” has emerged; organizations that have already embarked on their digital transformation journeys are likely to recover more quickly as the market enters the next normal.

Why is digital transformation—encompassing digital tools to enhance the customer experience as well as activities and process automation that support core banking applications—so crucial for organizations going forward? The marketplace is demanding it. Customer demand for digital services is growing, and financial products and services need to be reimagined with a digital mindset, allowing greater degrees of self-service and enhanced product functionality and fulfillment.

Companies now have to rapidly adapt to these changing market expectations. The growth of contactless payments, the sharing economy, and online-only institutions are causing the industry to reevaluate some core assumptions, with everything from service delivery models to branch network structures called into question.

As mobile and digital transactions become more common, cyber security and the protection of customer data have become more important than ever. Increasing compliance and regulatory demands, which become even more challenging for businesses that operate internationally, can significantly strain resources.

The rapid transition to remote and hybrid workforces spurred by the global COVID-19 pandemic is another factor, including a cross-industry “work-from-home revolution.” Companies need to identify the optimal mix for their operating models and ensure they have sufficient infrastructure to facilitate long-term, large-scale flexible working.

Article highlights

- As operating and delivery models rapidly evolve, IT needs solutions that enable their organizations to be agile and secure while reining in costs.
- Digital transformation can support a variety of workloads—from identifying and managing risk to transitioning an entire workforce to work in a remote capacity—plus enable the digitalization of core banking applications to support virtual customer interactions.
- HPE provides a range of solutions delivered as a service, helping organizations have the right IT infrastructure resources available to empower them to meet business objectives, keep their data secure, and manage up-front costs.

Along with the above challenges, digital-native financial technology companies (fintechs) are disrupting the market as new players in the competitive landscape. Goldman Sachs has predicted that these startups could account for upwards of \$4.7 trillion in annual revenue being diverted from traditional financial services companies.¹ Incumbent institutions must change strategy to remain relevant.

Some organizations already have IT in place that can better adapt to these shifts, while others have struggled to keep pace with the surge in demand for digital services—from customers and employees alike. Forward-thinking companies are seeking long-term, cost-effective solutions to drive agility and effectiveness.

Key trends shaping the financial services industry

- In August 2020, IDC reported that 57 percent of banks were operating in hybrid cloud environments. Another 40 percent planned to operate hybrid environments within the next 12–24 months.²
- Aite Group found that credit card losses from synthetic identity fraud reached \$968 million in 2018, with this figure projected to reach \$1.26 billion in 2020.³
- Mobile proximity payments rose rapidly due to COVID-19, and 74 percent of consumers in a MasterCard study indicated that they would continue to use contactless payments after the pandemic.⁴

THE NEED FOR DIGITAL TRANSFORMATION

As traditional banks face increasing competition—and evolving customer expectations—they are fast-tracking their digital transformations. The advantages of these efforts can be significant: reining in costs, reducing risk, speeding the adoption of new technologies, and providing a differentiated customer experience, among others.

The public cloud has helped accelerate the transition to digital. It offers scalability and elasticity that cannot be matched in a traditional IT procurement

model. Because cloud adoption greatly reduces the need for on-premises IT infrastructure, a common prediction was that all workloads would eventually move to the public cloud. It quickly became clear, however, that for financial services institutions there were significant barriers to wholesale public cloud adoption:

- Regulatory requirements and concerns about data privacy limiting what data and workloads can reside in the public cloud
- Data security concerns and an increase in instances of fraud causing organizations to reevaluate how they leverage public cloud resources
- Data egress costs quickly adding up with the huge amounts of data that banks store and process

Long-standing institutions with legacy infrastructures need the same speed, agility, and economics that digital-native competitors enjoy in order to meet consumer demand and stay competitive in an evolving marketplace. But they also need to maintain control of their apps and data to mitigate risk and comply with regulatory requirements. Adopting a hybrid cloud approach, encompassing a mix of public, private, and on-premises edge environments, offers a flexible platform with the best performance, management, control, and resiliency for varied workloads.

Using a planned infrastructure of on-premises equipment, private cloud capabilities, and public cloud providers allows flexibility, but transforming to hybrid cloud-based IT requires more than an understanding of the technology. It requires a cultural shift that spans people and business processes as well as the technology stack. Specialized expertise is needed to transform critical workloads—such as payments, trading, customer engagement, and others—and evolve operations to realize the full value of a digital business.

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1. Heath P. Terry, Debra Schwartz, and Tina Sun, "The Future of Finance: The Socialization of Finance, Part 3," Goldman Sachs Global Investment Research, 2015

2. IDC report, August 2020

3. Aite Group, "Synthetic Identity Fraud: The Elephant in the Room," 2018

4. Mastercard, "Mastercard Study Shows Consumers Globally Make the Move to Contactless Payments for Everyday Purchases, Seeking Touch-Free Payment Experiences," 2020

Executing digital transformation effectively

Cloud services that span both public and private clouds, configured with the assistance of advisory and professional services leveraging proven frameworks for digital transformation, can significantly contribute to the success of IT modernization projects. [HPE Pointnext Services](#) experts can tailor a digital transformation strategy that meets the specific needs of financial institutions, addressing the design and implementation of technology solutions as well as supplying insight on how to streamline processes, smooth skill gaps, and identify an optimal financial model.

Technology solutions designed to meet the demand of continuous business and 100 percent fault tolerance, such as [HPE NonStop server solutions](#), can power mission-critical digital transactions. And composable infrastructure solutions, including those powered by HPE Synergy, enable the easy deployment of IT resources through a single interface.

DIGITAL TRANSFORMATION FOR CRITICAL WORKLOADS

Enabling real-time compliance and risk management

The near-instant ability to provision new resources via the public cloud provides teams with incredible agility and freedom to innovate. However, this benefit comes with increased risk and new exposure to a host of regulations governing technical and process controls, data protection and privacy, and more. Some enterprises are addressing compliance control and risk through approaches that employ artificial intelligence (AI) and machine learning (ML) to identify security and compliance gaps.

The challenges are daunting, requiring meaningful understanding of applicable regulations and staying up-to-date with their constant evolution. An organization's processes and behaviors must also be evaluated to identify possible areas of non-compliance. Finally, any identified compliance concerns

New requirements for forward-looking financial organizations

Market intelligence firm IDC has identified several critical considerations for financial organizations as the world transitions to a new normal.⁵

Resiliency will be the new transformation goal. The need for resilience will encompass all areas of operations, from fraud and risk to cloud and data.

Digital engagement will be needed for both consumers and staff. Having the right technology to enable seamless digital connections will be critical.

Security concerns due to a decrease in face-to-face interactions will drive a reconsideration of authentication and fraud practices.

Operational processes will rise to the top of the priority stack based on pain felt in 2020, with a particular focus on process automation.

Digital payments, which are already a driver, will gain in importance, especially anytime/anywhere and contactless transactions.

Cloud technologies are already being adopted at a healthy pace, and more banks will seek out software as a service (SaaS) solutions and other on-demand options to improve resilience and scalability.

must be remediated. These activities require multi-disciplinary expertise for enterprise-wide management of compliance and regulatory requirements.

Financial institutions are also frequent targets for fraud and security attacks due to the sensitive information they collect. With the use of digital services limiting or eliminating face-to-face interactions, a layer of authentication is removed from transactions, which creates new opportunities for hackers and scammers. And new technologies, such as AI-embedded voice systems like Alexa and Siri, are presenting additional targets for bad actors.

AI and ML can infuse insights and action into financial processes ranging from transaction monitoring and fraud detection to investment predictions and algorithmic trading. The power of AI/ML to quickly analyze data, find patterns, and take action is critical for financial organizations seeking to build a resilient, cyber-secure, connected enterprise. But as the rate of data growth exceeds an organization's ability to index, store, and analyze that data, security is compromised. Up to 55 percent of an organization's data is "dark"—unquantified and untapped, generated by systems, devices, and customer interactions.⁶ Bringing visibility to these blind spots is a top priority for IT security.

5. IDC Insights briefing, August 2020

6. Splunk, "The State of Dark Data," report based on a commissioned survey conducted by TRUE Global Intelligence, 2019

Reducing risk through improved data management

To help organizations index, store, and analyze the vast amounts of data they ingest on a daily basis, HPE offers a unique platform-as-a-service (PaaS) solution that allows for optimized delivery and consumption of Splunk analytics. It enables organizations to leverage critical data to get a full view of their IT security landscape. HPE provides workload-optimized infrastructure for Splunk indexing that eliminates input/output (I/O) bottlenecks and maximizes throughput and processing. By leveraging the HPE Ezmeral Container Platform, the solution can be scaled with cloud-like agility—at a fraction of the cost of alternatives.

[HPE GreenLake for Splunk](#) enables organizations to reduce infrastructure footprint by up to 17 times, allowing them to realize more value from their existing Splunk investments by eliminating infrastructure constraints.⁷ With enhanced visibility into critical operations, the IT organization can streamline operations through automation, alerting, and process improvements. And HPE fully manages the Splunk environment—including the servers, storage, and containerization—as a service, providing ease of access, resiliency, and economies of scale.

Transforming to a hybrid workplace

Along with the increasing use of digital services by customers, the pandemic also required financial organizations to quickly shift many of their staff to remote work. With more services being offered outside brick-and-mortar locations, financial institutions have the opportunity to rethink the purpose and design of their branch networks. Even as these organizations begin reopening branch locations and offices, many are investing in a hybrid working model, with some employees continuing to work remotely at least part of the time.

A successful transition to a hybrid workplace offers advantages such as increased employee productivity, an agile and resilient workplace strategy that promotes a positive culture, and a safe return-to-work environment for staff and customers alike. Alternative workplace strategies can also reduce the

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real estate and energy costs for financial organizations, potentially delivering significant operations cost savings.

This shift to remote services and workplaces increases the requirements and security risks from untrusted devices using critical apps with sensitive data. In addition, finance IT departments need to have the resources on hand to enable employee productivity wherever they are. Addressing these challenges requires many organizations to rethink the way employees work and how to deliver exceptional digital experiences for both staff and customers.

An effective hybrid workplace needs to be adaptive and interchangeable, meeting the needs of many different kinds of workers, from branch employees to financial traders to app developers. Financial IT departments must ensure that workers have anywhere, anytime, any-device access to the apps and data they need. Virtual desktop infrastructure (VDI) is one technology that provides access to the applications and data that workers need regardless of location.

The role of network infrastructure must also change to accommodate this new normal. Seamless, easy-to-use connectivity will be the foundation of the hybrid workplace. Ensuring the network can meet new requirements and handle increasing variability is crucial to providing users the secure access to the data and applications they need, both within and outside the office.

7. Based on Splunk, Intel®, and HPE testing conducted in August 2020 with up to 12 indexers per host. Results may vary.

Supporting a hybrid workforce with flexible IT

The latest approach to VDI offered as a service through HPE GreenLake provides financial institutions the flexibility to choose from specialized offerings to support specific roles and use cases—including traditional VDI for line-level employees as well as “bare metal” VDI that delivers high-performance VDI to power users such as traders, analysts, and modelers. VDIs are optimized for the performance and data retention requirements of specific workers, and critical data is secure in the data center, where it is close to applications for minimum latency.

Creating a hybrid workplace requires a blended approach to privacy and security, meeting organizational control and compliance needs as well individual workers’ requirements. Supporting such a blended security environment requires a new generation of networking products, such as those offered by HPE and Aruba. [Aruba ESP](#) (Edge Services Platform) powers the hybrid workplace with built-in network intelligence and cloud-native capabilities to keep workers safe and productive. It delivers the solutions needed to drive digital transformation and remain in full compliance with safety, security, and regulatory requirements, while keeping pace with ever-increasing business demands.

DELIVERING DIGITAL TRANSFORMATION AS A SERVICE WITH HPE GREENLAKE

Even if convinced of the need to undertake digital initiatives, many organizations may be unsure how to get started or wonder if they have the right equipment and personnel to support these efforts. Plus, traditional capex purchase processes can be time-consuming and complex, with IT departments having to research and design a solution based on both current and predicted future needs.

Consumption-based IT offers an attractive alternative to the traditional capex model for IT equipment. This agile environment allows companies to innovate at



the speed of customer expectations. HPE GreenLake brings the cloud experience to current and future workloads that cannot or will not move to the public cloud in a self-serve, scalable, pay-per-use model at a company’s location in the data center, in a colocation facility, or at the edge, all managed by HPE and our partners.

Achieve true time to value

In order to compete with digital-native fintechs, many incumbent financial companies are developing new IT projects. However, their legacy infrastructure may not be sufficient for the task, and new procurement cycles can require up to six months to implement. In today’s rapidly evolving market, these delays can significantly hamper innovation efforts.

HPE GreenLake offers a pay-per-use model and preconfigured solutions, streamlining the procurement process. It is enabling financial organizations around the world to adopt transformative technology faster and simplify their operations. According to a Forrester study, HPE GreenLake decreases the time required to launch a new product by 75 percent.⁸

Leading organizations are already seeing the benefits of the HPE GreenLake approach. [au Kabucom Securities Co., Ltd.](#), a Japanese online securities company, sought to completely revamp their system infrastructure and build a “Next-Generation Infrastructure System” capable of supporting their digital innovation efforts for the next 20 years. The company has a goal of developing services that use advanced technologies, such as AI and blockchain, while managing risk.

8. Forrester Consulting, “The Total Economic Impact™ of HPE GreenLake,” June 2020

“The challenge is how to balance system reliability and speed, mission-critical demands, and business agility while keeping costs down” says Kiyoshi Miyamoto, General Manager, System Engineering Department at au Kabucom Securities. “We applied the greatest possible technology available to date to the Next-Generation Infrastructure System to deliver products and services that give us a competitive edge, securely and safely, and that enable us to capture a range of new customers flexibly and swiftly.”

Secure data and workloads on-premises

While the public cloud offers a number of benefits, many workloads simply cannot reside there, whether due to latency concerns, performance considerations, or regulatory requirements. With HPE GreenLake, the IT infrastructure is installed in on-premises data centers or colocation facilities. Within this single operating model, organizations can easily add resources when needed, avoid data movement and egress charges, and comply with data sovereignty requirements.

[YF Life Insurance International Ltd.](#), a fast-growing fintech company in Hong Kong, recently selected HPE GreenLake for their digital transformation. The solution will operate YF Life’s applications and data on premises in a scalable, self-service model. And with the HPE GreenLake Central self-service platform, the company gains visibility and ensures compliance with local regulations.

“We need direct control of the IT infrastructure, and the ability to design and enforce the company’s own policies, rather than depending on a cloud provider. A public cloud could not provide that assurance,” said Daryl Cheng, Senior Vice President of Management Information Systems at YF Life. “As a long-term, reliable IT partner, HPE provides the flexibility we need to scale as business demands change, but with control to manage and secure our data on premise.”

Optimize costs and efficiency

HPE GreenLake is delivered in a pay-per-use model that helps organizations free up their cash flow for transformation projects—and improves the bottom line on the balance sheet. Pre-configured modules for multiple workloads,

resource requirements, and budget levels allow organizations to select and price the optimal solution for their needs.

Another advantage is that HPE GreenLake makes it easy to scale up and down capacity as business needs change. Every configuration comes with built-in buffer capacity, and HPE monitors consumption so additional resources can be added before they are needed. With HPE GreenLake, organizations can achieve 30 to 40 percent capex savings due to the eliminated need for overprovisioning.⁸ And because HPE manages the infrastructure, IT teams can spend less time keeping the lights on and instead focus on new innovations.

Again, financial institutions are already achieving quantifiable benefits from their HPE GreenLake implementations. “We needed a dynamic infrastructure that would allow us to quickly provide IT resources for new startups associated with our fintech or to create a new development environment internally. And we had to manage more accurately the use of infrastructure—operational systems and shared resources—to control our costs better,” says Krisztian Ban, IT operations director at [MKB Bank](#).

According to Ban, the consumption-based model reduced operational and support fees by 20 percent compared to the bank’s previous infrastructure. He expects a full return on investment within three to five years. “HPE GreenLake enables us to easily add a server or additional CPU and memory to support a new startup or internal development project. With consumption-based IT, we can dynamically manage our resources with much greater certainty.”



WANT TO LEARN MORE ABOUT HOW HPE GREENLAKE CAN DELIVER EXCEPTIONAL OUTCOMES?

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Support sustainability goals with IT asset lifecycle solutions

HPE Financial Services can facilitate your transition to an as-a-service business model with responsible options for managing your legacy infrastructure. We can help you streamline your IT asset retirement process in a manner that supports of your organization’s sustainability goals. We prioritize reuse over recycling, keeping technology in use for as long as possible. Our circular-economy approach and revenue-sharing capabilities allow you to recover value from legacy data center, workplace, print, and edge technology—regardless of manufacturer—in a secure, globally consistent, and environmentally friendly manner.

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