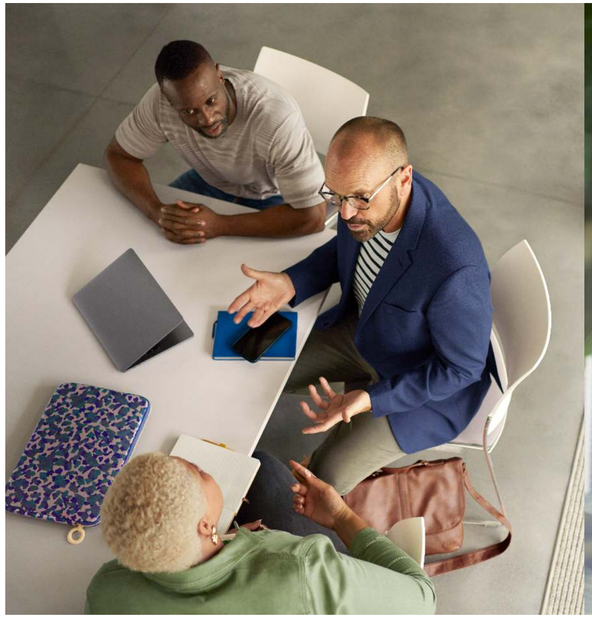


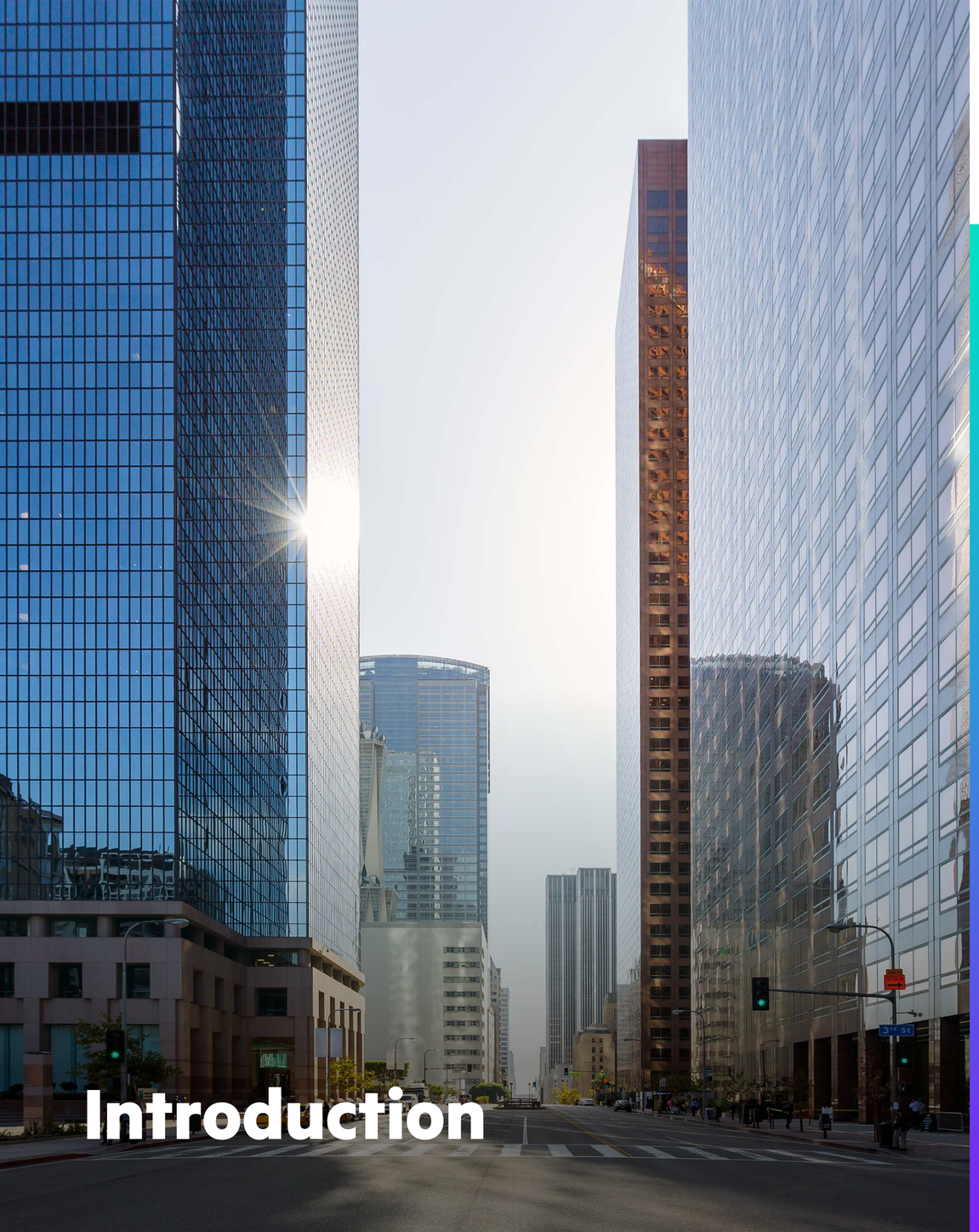




Respond to today's top payments challenges with HPE GreenLake

HPE GreenLake

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10 Competitive pressure from fintechs
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Introduction

The world is quickly adopting a digital economy. From online purchases to electronic funds transfer (EFT) to real-time payments (RTPs), payment processing represents a significant portion of a financial institution's workflow. HPE offers HPE GreenLake for Payments – a modern cloud payments platform that is high-performance, always-on, supremely secure, and built to evolve.

HPE GreenLake for Payments (see Figure 1) brings the following components together to help solve financial institutions' most pressing challenges:

- Trusted, mission-critical technology that is used to process 65%+ of all card transactions globally.[1]
- Modern payments solution with rapid deployment capabilities for new services.
- A flexible consumption model based on the number of transactions enables customers to manage costs by paying only for what they use.

Customers can choose between two deployment approaches:

- Software as a service (SaaS) model, including the **Lusis TANGO payment software solution**, deployed either on-premises or through co-located data center.
- Platform as a service (PaaS) model, where the customer can choose a different payment software solution, but still benefit from all HPE GreenLake for Payments platform benefits.

In either case, customers retain complete control of their data and environment and benefit from a cloud-like consumption-based charging model.

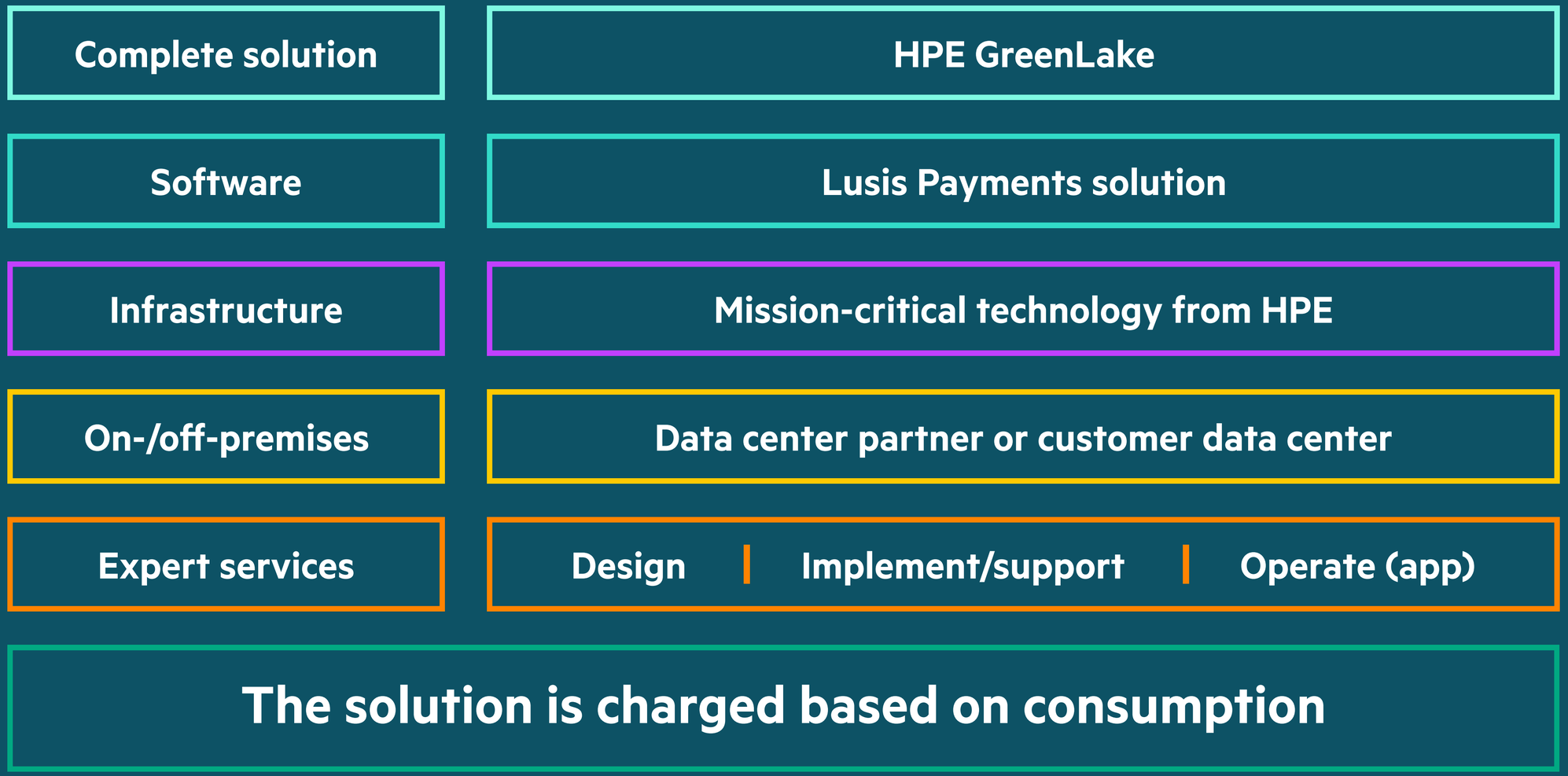


Figure 1. The HPE GreenLake for Pyaments solution stack



Fast-changing regulatory environment

Industry and governmental regulations are a constant concern for financial services organizations and fintech providers. New requirements are regularly issued, and firms are legally obliged to meet them, usually against a deadline. Being able to respond quickly and smoothly to changing requirements is and will remain crucial.

In an environment of such change and disruption, financial organizations need to be able to not only meet today's challenges, but also to ensure the solutions they have in place are able to evolve with future technology and regulatory requirements.

Here are two examples of recent regulatory changes that affect financial organizations:

1.

Cyber resilience.

The Digital Operations Resiliency Act (DORA) aims to safeguard sensitive data and protect financial institutions against cyber-threats by ensuring they can withstand, respond to, and recover from information and communication technology (ICT)–related disruptions. Organizations must ensure they have systems in place to support the five pillars of DORA, which are as follows:

ICT risk management. Covers business continuity and disaster recovery plans, including identification, protection and prevention, detection, response and recovery, learning and evolving, and communication.

ICT incident reporting. Covers cybersecurity and reporting processes.

Digital operational resilience testing. Covers annual testing of ICT tools and systems as well as remediation plans.

ICT third-party risk management. Covers registration and risk assessment for third-party technology providers.

Information and intelligence sharing. Covers guidelines for sharing cyber threat information and intelligence on tactics, techniques, procedures, alerts, and configuration tools.

2. Open banking and instant payments.

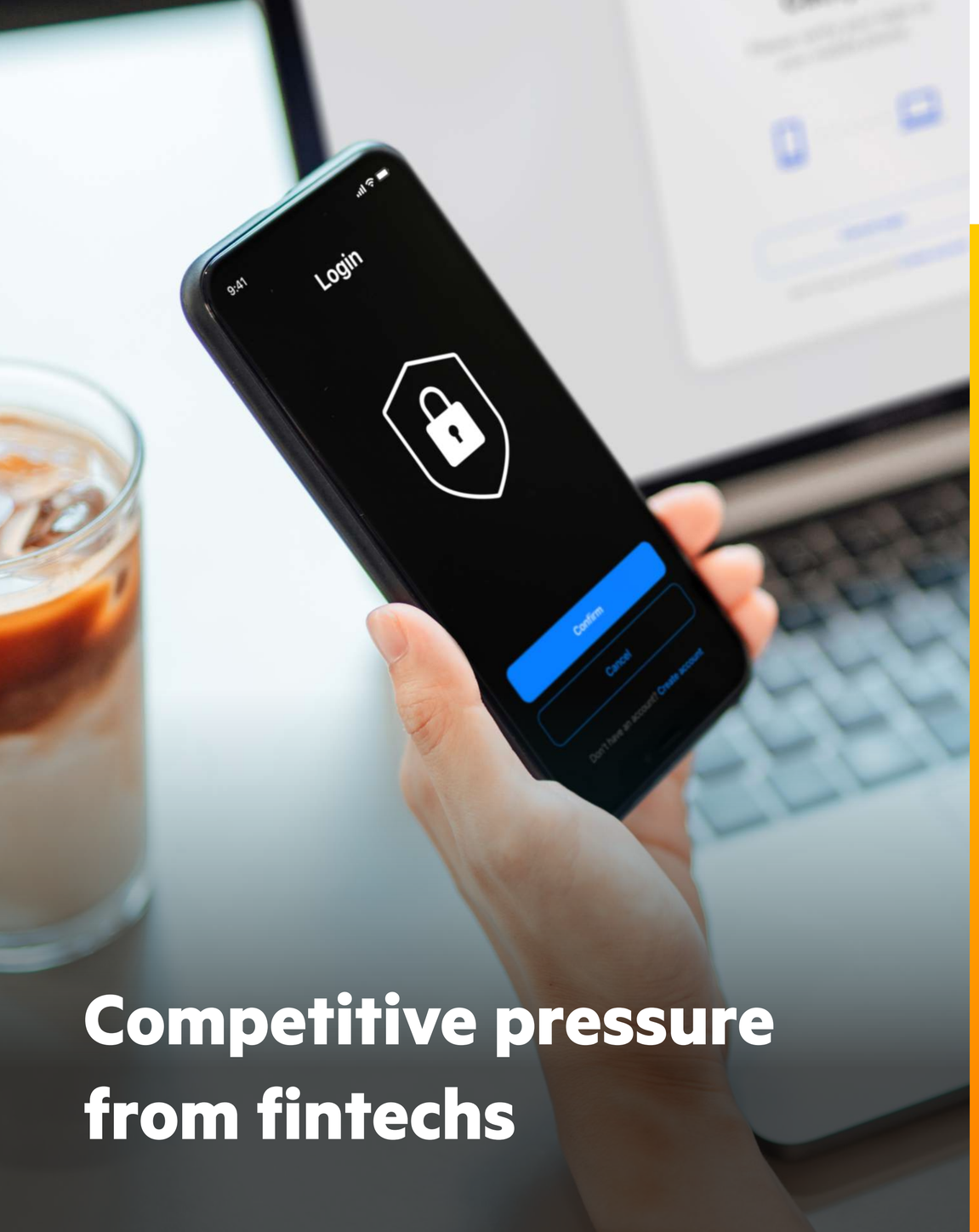
In the European Union (EU), the Payment Service Providers Directive 2 (PSD2) has been in place since 2019[2], and the Single Euro Payment Area (SEPA) Instant Credit Transfer regulation will go into effect in November 2023.[3] The U.K. has embarked on its New Payments Architecture program, which aims to modernize the country's RTP infrastructure ("rails" in financial parlance). In the U.S., the Federal Reserve recently announced the launch date for its highly anticipated FedNow service to expand RTP access in the U.S..[4]



Public cloud-based solutions may not be the best choice for financial institutions, from a regulatory perspective. For example, public cloud may not be able to meet DORA requirements, and the public cloud can also prove extremely costly as organizations are required to pay for the reserved capacity that is essential for a highly available and DR-provisioned system. Data governance and control are also concerns in the public cloud.

HPE GreenLake for Payments helps allay regulatory concerns because the data and infrastructure remain either in an on-premises data center or in a co-location data center chosen by the financial institution, and therefore is completely within the institution's control. HPE GreenLake for Payments is compliant with all payment standards such as Payment Card Industry Data Security Standard (PCI DSS), as well as industry-standard protocols such as ISO 8583 and ISO 20022. It also features hardened enclaves to protect code and data during use.

To neutralize the effects of cyber-threats like ransomware attacks, HPE follows the digital resilience framework as set by the **National Institute of Standards and Technology (NIST).** The goal of this framework is to protect IT environments to help minimize downtime, allowing customers to bring up their mission-critical workloads quickly and efficiently in case of a ransomware attack. To know more about the details of the framework and how HPE delivers this as part of HPE GreenLake for Payments, refer to **"Digital resilience against ransomware for payment switching providers."**



Competitive pressure from fintechs

Cloud-native financial services providers (such as Monzo, Klarna, and Revolut) have revolutionized the payments space. Their focus on fast innovation and outstanding customer experience has raised the competitive bar for everyone in the industry. These nimble newcomers can develop and launch new services to market in days or weeks. For older banks with legacy systems, time to market (TTM) can often be measured in months. Introducing the flexibility to respond more quickly to evolving customer preferences and regulatory changes is essential to remain competitive.

HPE GreenLake for Payments delivers the speed, agility, and economics that cloud-native competitors enjoy, while enabling financial institutions to maintain control of their applications and data. HPE GreenLake provides secure on-premises IT with cloud-like flexibility, and offers unparalleled security, scale, and performance across compute, storage, memory, and network.

The Lusis TANGO payments software solution supports the flexibility and modernization that is necessary to compete with fintechs. TANGO is built on a highly performing micro-services architecture providing agile delivery for business. The collection of autonomous services works together to provide a global service and can be developed separately and deployed and run independently. Lusis' component-based software development (CBSD) approach leads to reduced development and maintenance costs which provide faster time-to-market and an ongoing, cost-effective payments solution.

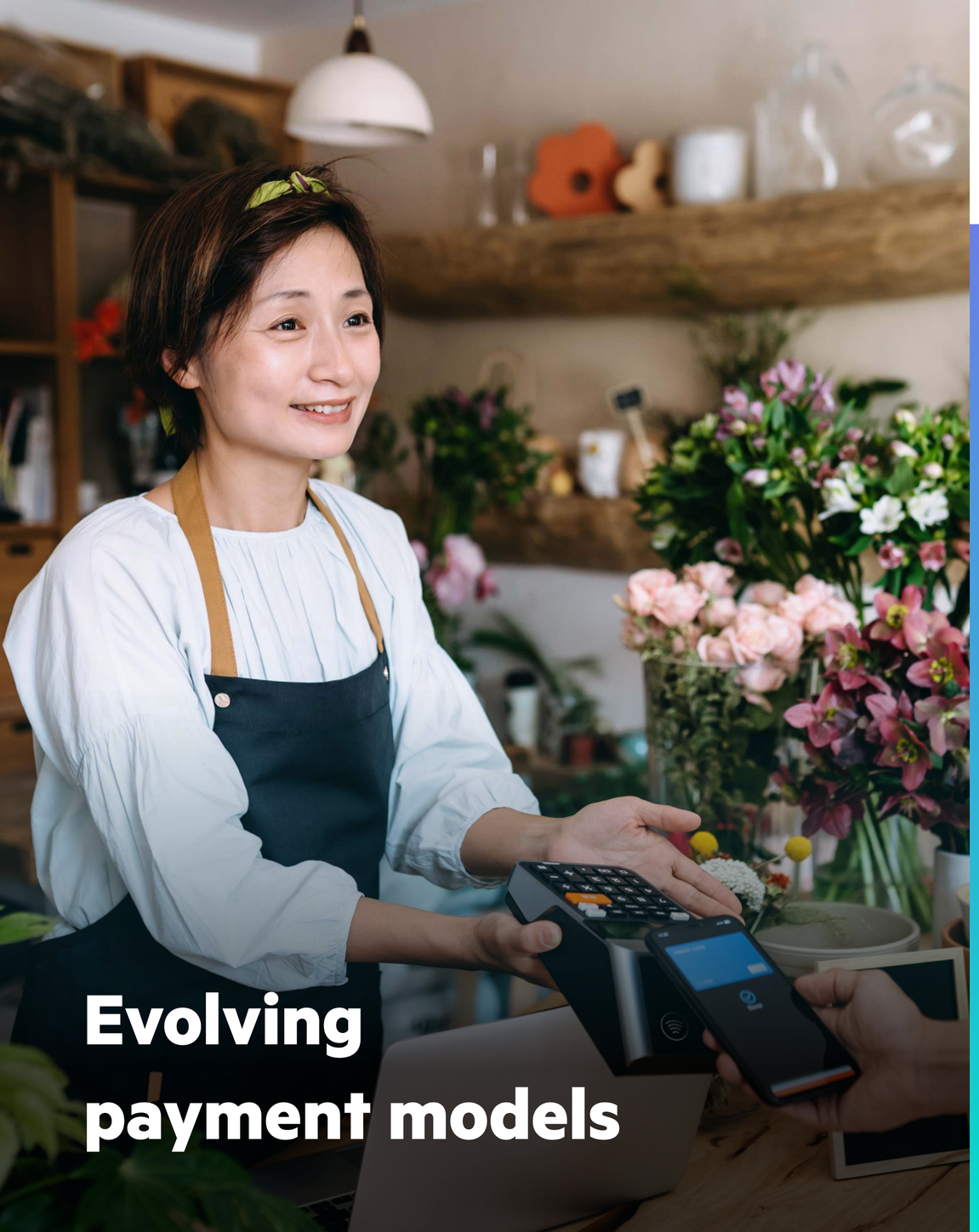
TANGO is database-agnostic and provides a modern, open service-oriented architecture (SOA) for acquiring, routing, switching, authenticating, and authorizing transactions across multiple channels — including ATM, point of sale, internet and mobile banking — in a multi-institution environment across different geographies.

TANGO's unique design removes complexities and reduces migration time frames. Off-the-shelf functionality and rapid development capability means that standard card types, international card schemes and devices, national switches, and hosts can be deployed easily, within the standard product.

Software as a Service (SaaS) Option

Many financial institutions may choose to deploy HPE GreenLake for Payments on-premises or in a co-location data center, via a SaaS model. The Lusis TANGO software runs on the institution's own infrastructure, but HPE manages the system so that bank personnel can focus on core business tasks instead of IT system management. With a cloud-like consumption model, customers pay only for what they use (e.g., charges based on number of transactions). This helps keep costs under control and predictable.





Evolving payment models

The way we pay has diversified massively in recent years. A Forbes Advisor survey from February 2023 shows that just 9% of Americans primarily use cash to pay for purchases. Debit cards and credit cards are the primary payment method used, with 54% of consumers using a physical or virtual debit card and 36% of consumers using a physical or virtual credit card.[5] Globally, cash accounted for only 18% of point-of-sale (POS) transaction value in 2021 and is expected to decline to 10% by 2025.[6] Consumers and businesses alike are seeking cheaper, faster, and more efficient ways to pay, and merchant acceptance of RTPs is increasing[7].

Other emerging payment methods include the following[8]:

'Buy now pay later' (BNPL) – delay or spread card payments over multiple instalments.

Mobile wallet – in Europe 41% of consumers used mobile wallet in 2022, compared to 31% in 2021 and 12% in 2018.[9]

Account-to-account (A2A) – move funds directly from one bank to another without the need for additional intermediaries or payment instruments.

Contactless payments – using an RFID sensor in a payment card or other devices (like watches) to tap to pay.

Unified payments interface (UPI) – merging funds from multiple accounts.

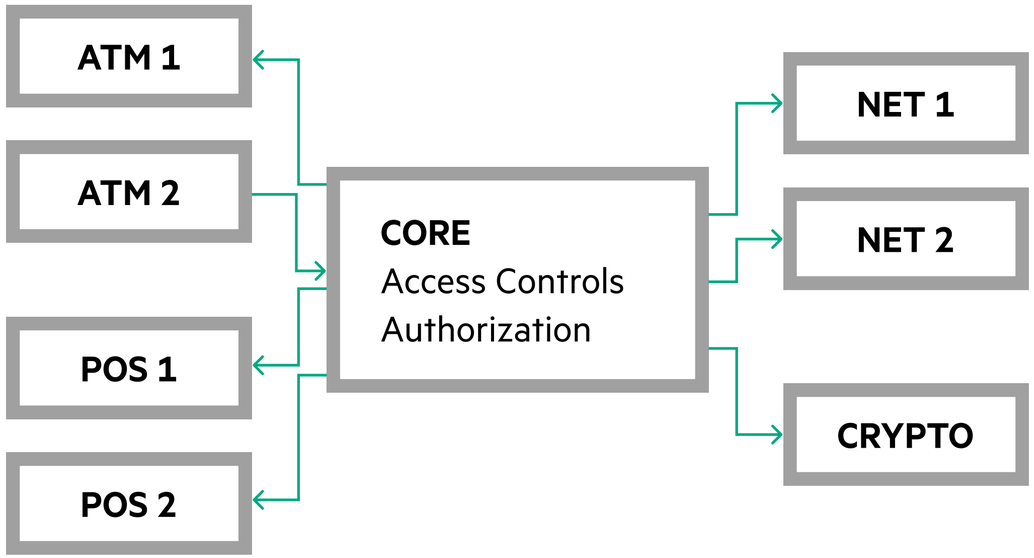
Cryptocurrencies – the crypto payment gateway market was valued at $1 billion in 2021, and is estimated to reach $5.4 billion by 2031, growing at a CAGR of 18.7%.[10]

The payments field is poised for further innovation and disruption. HPE GreenLake for Payments can help financial institutions keep up with changes as they happen and prepare for the future. The platform runs Lusis TANGO, the modern payments platform used by four of the world's ten biggest banks[11] and supports core card payments and fast-emerging alternative payment types such as RTPs and BNPL.

Lusis TANGO adheres to the principle of "configuration not code." As a result, customers can easily adapt the solution to accommodate new business opportunities, partners, and services, without writing a lot of new code. Additionally, TANGO's microservices architecture and robust data bus make it an extremely extensible payments platform. The SOA approach means that when changes are made to the system, only the modules directly affected are enhanced (see Figure 2). TANGO's state-of-the-art technology and unparalleled configurability due to its microservices-based architecture foster creation of new business services rapidly, enable interoperability with in-house and third-party applications, and facilitate support for current and future payment components.

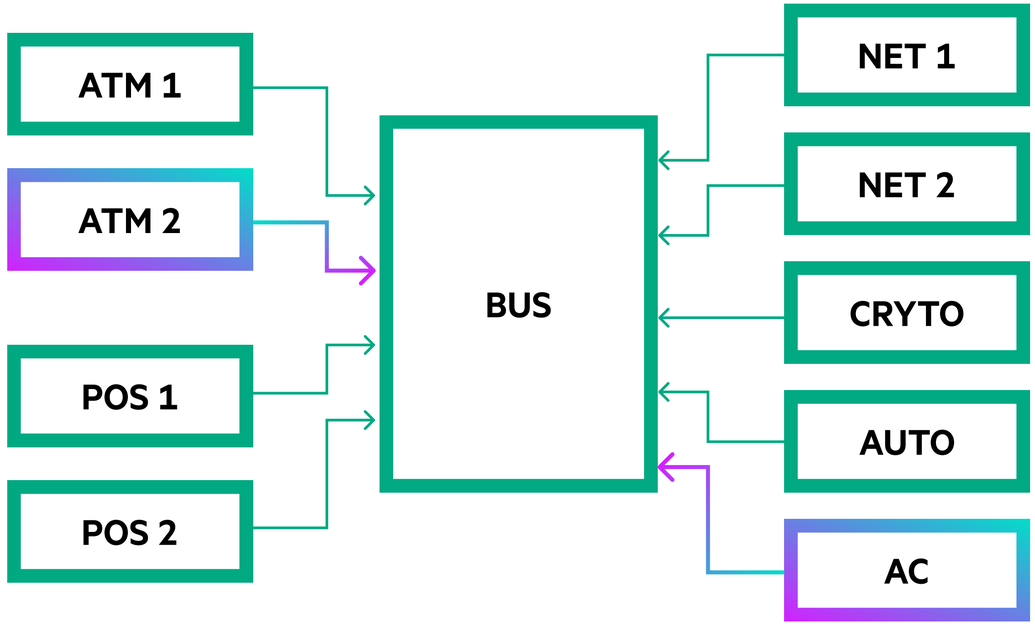
Tango Core Architecture

Classic approach



Software changes in one place will impact a lot of different modules - adding a field in one message causes most of the application to be recompiled and re-linked.

Lusis BUS + SOA Approach



Only directly impacted modules have to enhanced. There is no need for a full validation of the application.

Figure 2. The Lusis TANGO service-oriented architecture supports fast, reliable changes to accommodate emerging business opportunities and payment models.



Technical debt

Established banks have made massive investment in core technology to run their mission-critical services over many years – in some cases, decades. Typically, upgrading or replacing these legacy payment switches, mainframes etc. is seen as too risky, complex, and expensive. As a result, the more established banks tend to be hampered by aging technology that inhibits innovation while competitors with modern technology stacks can respond to regulatory changes faster and offer customers more appealing services.

Banks realize they must act to modernize their infrastructure, despite the challenges. Gartner identifies the following as top business priorities for financial services organizations in 2023[12]:

Modernizing legacy systems/technologies

Minimizing operational risk

Improving/reengineering processes via automation

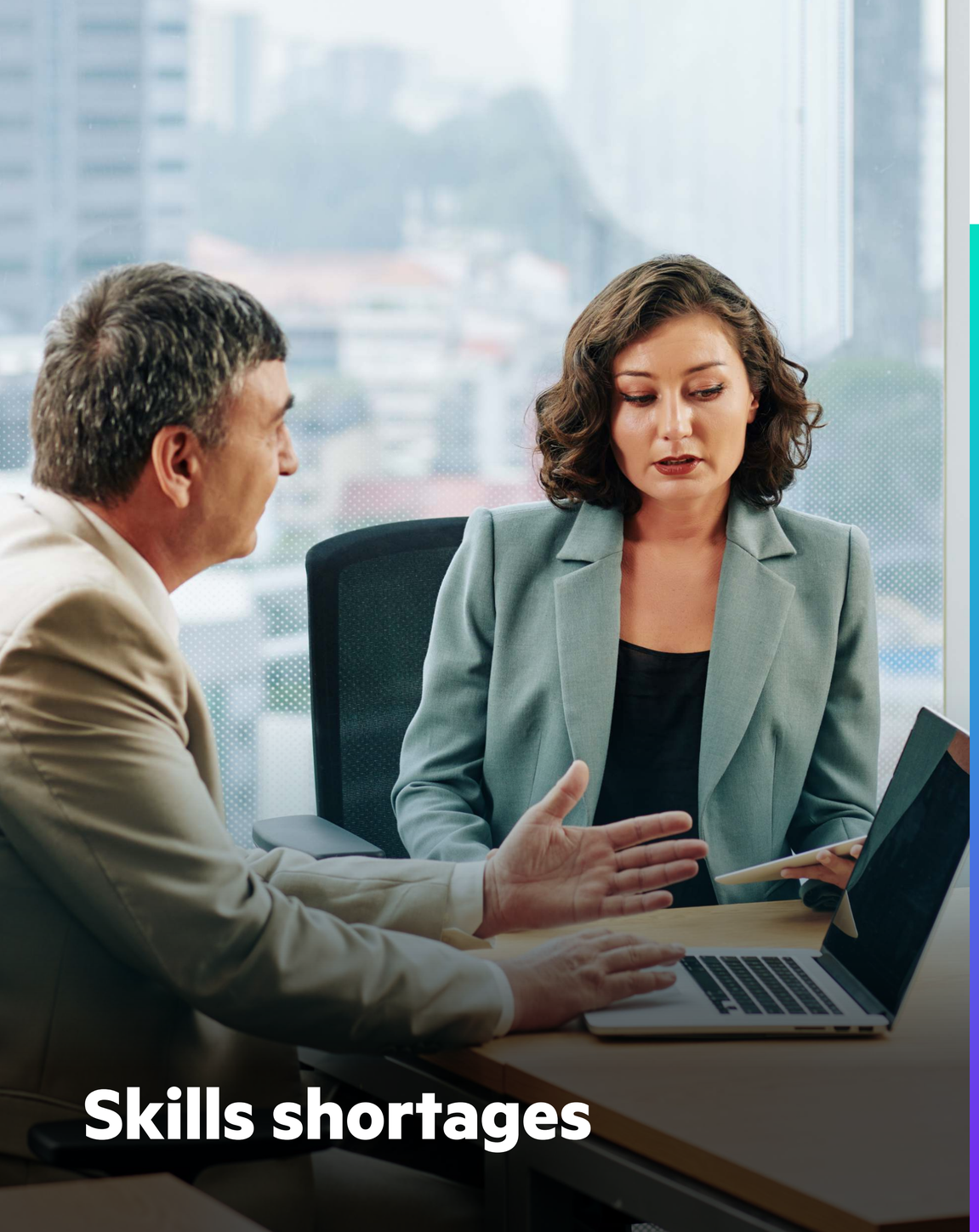
Evolving products and/or channels to meet changing customer needs

As legacy technology contracts expire, financial services organizations are taking the opportunity to explore more flexible, cost-effective alternatives using modern platforms, hybrid cloud solutions, and AI-enabled applications. Careful planning is key to success in migrating to more modern platforms without disrupting business.

By deploying HPE GreenLake for Payments, customers gain the combined experience of both Lusis and HPE – a trusted partnership that can guide customers through the challenging and potentially risky journey of migration to a new payments system. Lusis is very experienced at migrating customers and systems, while HPE has been helping financial institutions with their IT needs for more than 40 years. With HPE GreenLake for Payments, HPE Services experts, working with Lusis staff, provide guidance before, during, and after the migration so that the process is rapid, low-risk, and hassle-free. And because HPE handles everything, customers can focus on their business, not just keeping the lights on. What's more, financial institutions migrating to HPE GreenLake for Payments pay nothing until the migration is complete and systems are up and running. There are no upfront license purchase or payments for professional services along the way.

Platform as a Service (PaaS) Option

HPE GreenLake for Payments can be adopted in a PaaS model. This deployment option provides the flexibility for the organization to choose whichever payments software it prefers, while still taking advantage of the predictable costs of a cloud-like consumption model running on a robust platform.



Skills shortages

The specialists who designed, built, and managed the legacy technology that established banks rely on are starting to retire, and taking their outdated-but-still-crucial expertise with them. When the skills are needed (such as modifying the system to align with new regulation), firms must hire outside consultants at a very high cost. Meanwhile, competition remains strong to attract and retain the talent needed to design and run modern cloud environments and AI workloads. With HPE GreenLake for Payments, HPE provides the skilled labor to manage the underlying platform, patches, upgrades etc. so customers can focus on growing their business not on IT operations.



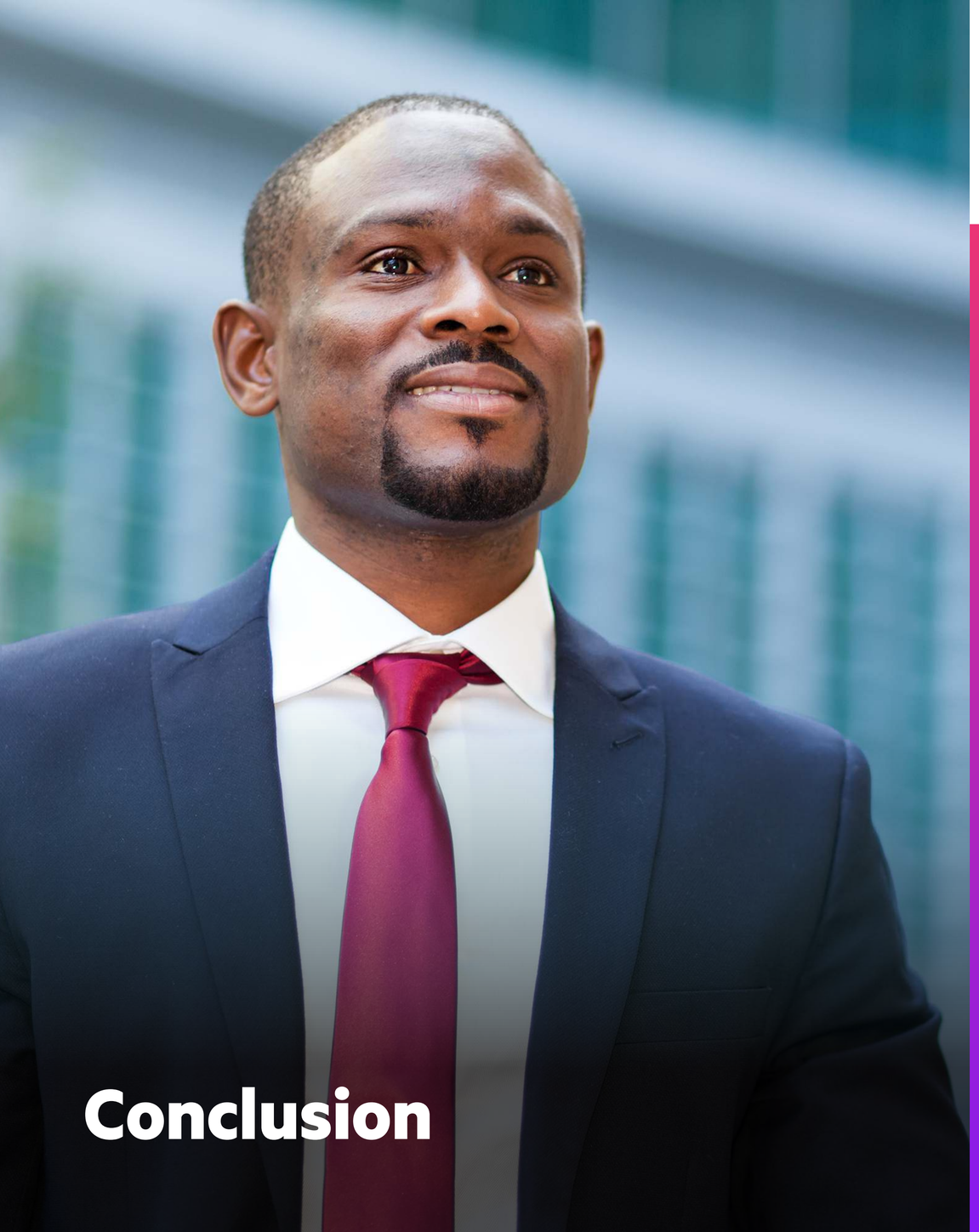
Customer retention

Consumers today expect a much more personalized and immediate service from their banks than previously. They are also much more willing to switch service providers if they don’t feel their expectations are being met. In this increasingly competitive environment, retaining customers (to then up-sell more services) is a top priority, since it costs customers virtually nothing to switch providers. Delivering an excellent customer experience can have a huge impact on the bottom line.

Every point of friction in the payment process is an opportunity for the customer to abandon a transaction, so all payment providers are focused on making the payment experience as smooth and easy as possible for the end user.

HPE GreenLake for Payments supports a variety of payment options, including open banking account-to-account transactions such as request to pay, instant payments, RTPs, and BNPL. The ability to provide faster and easier access to products and services, and support better customer engagement means HPE GreenLake for Payments can ultimately increase customer stickiness.





Conclusion

With the combined strengths of HPE GreenLake, Lusis TANGO, and HPE NonStop, HPE GreenLake for Payments is a complete solution all in one place that delivers the performance, security, ease, and control that financial institutions need to overcome their biggest pain points. Want to learn more? Read the solution overview, **“Modernizing the World of Payments with HPE GreenLake.”**

Learn more

HPE GreenLake

[1] Based on the list of top payments processors market share WW from Nilson Report, issue 1214, Feb 2022 matched against HPE NonStop install base customer list (internal).
[2] BBVA, February 2023, "Everything you need to know about PSD2."
[3] European Payments Council, 2022, "SEPA Instant Credit Transfer Scheme Rulebook."
[4] March 2023, ACI Worldwide, "World's Major Economies Playing Catch-Up as Widespread Adoption Drives Global Real-Time Payments."
[5] April 2023, Forbes, "Credit Card Statistics and Trends 2023."
[6] Insider Intelligence, April 2022, "A snapshot of cash usage around the world."
[7] March 2023, ACI Worldwide, "World's Major Economies Playing Catch-Up as Widespread Adoption Drives Global Real-Time Payments."
[8] 2023, WorldPay, "2023 Global Payments Report."
[9] March, 2023, ACI Worldwide, "World's Major Economies Playing Catch-Up as Widespread Adoption Drives Global Real-Time Payments."
[10] April 2023, Global Newswire, "Global Crypto Payment Gateway Market Report to 2031: High Growth Potential in Developing Economies Drives Growth."
[11] Claim from Lusis website
[12] May 2023, Gartner, "Financial Services Business Priority Tracker 1Q23."