



Visa Consulting & Analytics (VCA)

Picking up the pace in real-time payments: Helping financial institutions achieve success

Why now is the time for real-time payments, and how financial institutions in North America can benefit



Real-time payments are changing the way money moves among consumers and businesses.

Are you ready?

Our view of the increasing momentum of real-time payments, key drivers, and considerations for financial institutions in North America.



Real-time payments' characteristics

Real-time payments' bring together the best of existing payment rails and add new capabilities (e.g., 24x7x365 clearing and settlement). The following is a summary of the key characteristics of real-time payments:



Immediate, any time

Consumers, businesses, and governments can securely send and receive money immediately using accounts held with financial institutions.



Clearing and settlement

Real-time payments clear and settle nearly instantly.



Credit transfers

The sender pushes the payment to the recipient, which provides the sender control over when and from which account to send the funds. Just-in-time payments can be made for a variety of use cases, such as gig payments, splitting bills for dinner or rent, or making disbursements for insurance claims. Use cases continue to expand as the payments ecosystem embraces the promise of real-time payments.



Bilateral communications

Real-time payments platforms support end-to-end communication. Historically, communication has been purely unidirectional from sender to recipient.



Global standards

Real-time payments connect the payment with the related payment data together through a two-way conversation that leverages the global ISO 20022 standard for electronic data interchange between financial institutions.



Irrevocable

Real-time payments are also irrevocable, meaning the payment cannot be canceled, recalled, or required to be returned once the transaction has cleared and settled.



Real-time payments transaction growth in the U.S. is expected to grow more than 600% between 2020 and 2025, with an estimated \$7.4B in transaction volume in 2025.

Source: Aggregated data from Prime-Time for Real-Time, ACI Worldwide, <https://www.aciworldwide.com/real-time-payments-report>



Real-time payments are initiated from an account, similar to batch payment systems that have existed for more than 30 years (e.g., Automated Clearing House (ACH) in the U.S. and Automated Clearing Settlement System (ACSS) in Canada). As technology has advanced, batch-based payment rails lack flexibility to meet the market needs, despite step-change improvements. For example, the ACH now supports same-day capabilities to expedite payments, but these payments do not meet the real-time payments characteristics such as, those listed in the following chart.

¹ Real-time payments include The Clearing House RTP and FedNow in the United States, and Real-time Rail (RTR) in Canada.



Account-based payment characteristics



Real-time payments

- Real-time clearing
- Immediate availability and inter-bank settlement
- Data-rich global standards
- 24x7x365
- Irrevocable

Batch payments

- Batch clearing
- Availability and inter-bank settlement within days
- Limited information, proprietary standards
- Business hours
- Subject to returns

Catalysts for modernizing payment systems

We see four primary catalysts fueling the modernization of account-based real-time payment systems.



Central banks and regulators are focused on creating new payment rails that will allow faster money movement and will stimulate innovation.



Customer expectations for new use cases, such as splitting a bill among friends, getting paid faster for gig work, or real-time disbursements in the case of a catastrophic event are creating the demand for scalable solutions.



Technological advances that rely on mobile-first solutions, cloud technology, connectivity using secure APIs, and global standards to facilitate cross-border commerce are enablers to make real-time payments the new way for transacting among consumers and businesses.



Consumers and businesses have become accustomed to instant gratification. The financial industry is building open networks to provide robust, secure capabilities that will foster innovation and serve the broader ecosystem.

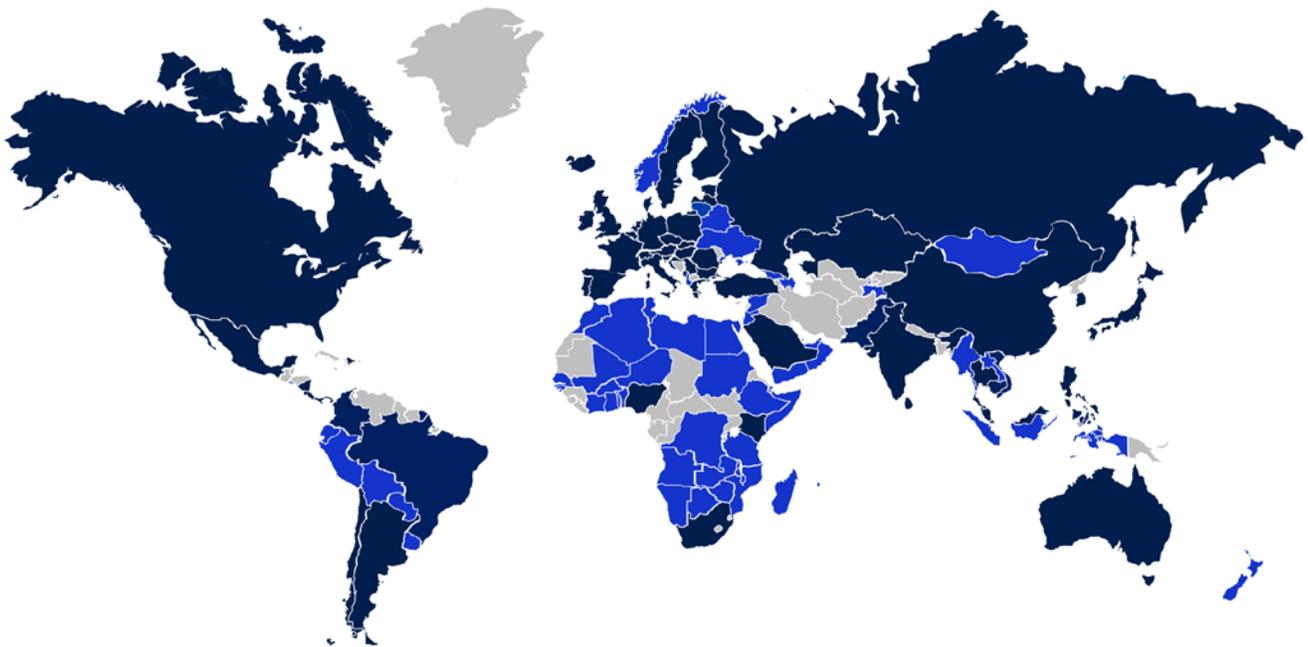


A seismic shift is underway to modernize payments around the world

Globally, there has been a concerted effort by payment networks to modernize their infrastructures to support clearing and settlement of irrevocable real-time payments using global messaging standards. There has been a rapid proliferation of real-time account-based payment systems being established globally – with 50+ infrastructure platforms around the world in place already and more planned.²

50+ real-time payment platforms (RTP) are already live – with many more planned

- RTP Live
- Planned



² Visa analysis



North America developments

Closer to home, the payments ecosystem is preparing to take advantage of real-time payment rails in North America.

The Clearing House

The Clearing House RTP network is a real-time payments platform provided by The Clearing House, a banking association and payments company. The platform was launched in 2017 for all U.S. banks. The platform is designed to address customer needs across all customer segments (B2B, B2C, C2B, P2P, A2A, G2C, etc.).

Today, RTP reaches 61 percent of U.S. direct deposit accounts. In Q2 2022, RTP processed 41.2M transactions for \$18B.³

FedNow

The FedNow Service is a new real-time payment service that the Federal Reserve Bank is developing.

The first new payment service to have been developed by the Federal Reserve in more than 40 years, it is due for launch in 2023.

To support its development, FedNow is running multiple industry engagement initiatives, and, by the end of 2021, had 208 members.⁴

Interac

Interac eTransfer supports senders using an email address or phone number for both individuals and businesses to request payments.

In addition to supporting the Payments Canada rail, Interac is modernizing its own infrastructure with plans to migrate to ISO 20022 for existing transactions.⁵

Payments Canada

The Real-Time Rail (RTR) will be Canada's first real-time payment system. The new national payments infrastructure will be operated by Payments Canada and overseen by Bank of Canada. RTR is scheduled to launch in 2023.

Payments Canada is working closely with industry stakeholders to modernize the country's entire payments system to enable data-rich payments leveraging the ISO 20022 standards.⁶



³ The Clearing House: <https://www.theclearinghouse.org/payment-systems/rtp/institution>

⁴ FRB Services, About the FedNow service.: <https://www.frb-services.org/financial-services/fednow/about.html>

⁵ Interac Canada, <https://www.interac.ca/en/>

⁶ Payments Canada, <https://www.payments.ca>



Implications of the shift to real-time payments

Most new real-time payment rails have focused solely on introducing the core clearing and settlement payments functionality. Value-added services are then added after the initial launch of the platform. This has resulted in several challenges:

- Financial institutions having to retool their platforms after the fact
- Ever-increasing levels of fraud, particularly in the early years
- Lack of interoperability
- Slow adoption

Building a secure, convenient, high-trust ecosystem where consumers and businesses actively want to adopt and use the payment network requires value-added services beyond the core clearing and settlement infrastructure to drive uptake and innovation in an RTP ecosystem.

Authorized Push Payment (APP) fraud losses overtake card crime in the first six months of 2021

Source: Finextra.com, Sept. 22, 2021, <https://www.finextra.com/newsarticle/38884/app-fraud-losses-overtake-card-crime-in-h1-2021>

The global marketplace has demonstrated the importance of overlay services in expanding adoption, building trust, and delivering new payment products and experiences through technology and operational efficiencies.

1

Customer-focused capabilities

to drive adoption

It is essential to balance consumer-experience expectations with the payment services in a secure manner.

The use of aliases, such as mobile and email addresses, requires the quick and seamless validation of the sender and the receiver to achieve transaction fidelity.

2

Risk management capabilities

to enhance trust

The ability to instantly move money creates a prime opportunity for financial crime to increase sharply. Real-time payments introduce financial crime challenges, such as irrevocability and criminal / fraud sophistication.

Financial institutions need to deploy a multi-layered approach to mitigate fraud and risk.

3

Technical capabilities

to extend use cases

Real-time money movement enables new use cases, such as request to pay.

A survey of leading global banks by Icon Solutions⁷ revealed that request to pay is widely expected to have a lasting impact on the future of banking and payments.

Additionally, global standards will support common messaging protocols that will make it easier to facilitate cross-border money movement.

4

Operational capabilities

to optimize efficiencies

Operational efficiencies are necessary to accommodate the 24x7x365 needs and characteristics of real-time payments for today and the future.

While real-time payments have traditionally been considered the same as cash with no recourse, consumer protections for real-time payment transactions are gaining momentum.

Some real-time payment markets are introducing requirements for managing real-time payments problems, such as those caused by fraud, payment errors, and processing errors. For example, the UK Faster Payments System has a 15-day resolution period for fraud, mistaken/misdirected payments and processing errors, and the Australia New Payment Platform has a 10-day resolution timeframe for the same problems.

⁷ Icon Solutions, Demystifying Request to Pay: an Industry Perspective, <https://iconolutions.hubspotpagebuilder.com/demystifying-request-to-pay>



Driving adoption and usage

Experience from elsewhere in the world suggests that, on their own, the real-time payment core clearing and settlement services are not enough to drive uptake and adoption. In markets in India, Australia, Sweden, and the UK, value-added services and applications have enabled payments providers to do the following:

- Build trust and confidence in new payment types
- Give users the ability to request money easily and safely or send money to anyone
- Provide simple access that can enable innovation and scale



Case Study: New use cases drive adoption

Osko by BPAY is an overlay service developed for use on the New Payments Platform (NPP), Australia’s real-time payment platform.

Launched in February 2018, its first iteration enabled real-time peer-to-peer payments via the user’s regular online or mobile banking service. It also enabled users to include up to 280 characters to describe their payments.

As the first overlay service, Osko complemented the underlying payments infrastructure and facilitated many new use-cases.⁸

Case Study: Solving user pain points drives adoption

India’s Paytm was originally launched in 2015 as an easy-to-use recharging platform for prepaid mobile and satellite TV services. New use cases were progressively added, with a focus on solving consumer pain points.



Today, more than 20 million merchants in India accept Paytm payments, and more than 300 million consumers use the Paytm app - to make everyday payments, pay bills, select insurance, send money to family and friends, and more.

source: Paytm, <https://paytm.com/>



⁸ Osko, osko.com/au





Key considerations for financial institutions

Financial institutions have built organizations and processes around batch-based payment rails, such as the ACH in the United States and ACSS in Canada. As the payments ecosystem shifts to real-time payments, financial institutions need to expand their capabilities and operational support in new ways. For example, risk and compliance functions need to be adapted for a high volume, data rich ISO 20022 messaging, and operational models need to be adapted to support prefunded transaction-level interbank settlement in a 24x7x365 environment.

Having multiple options for implementing real-time payments create a very rich environment for financial institutions. However, this level of choice can create confusion on where to place their bets. Strategy and execution/operational questions are the areas of concern most frequently raised by financial institutions, such as the following:

Strategy

- Which network(s) should we connect to?
- What are the implications of payment rails converging?
- What use cases should we support?
- What is the business case for real-time payments?
- What valued-added services do we need and why?
- How does open banking relate to real-time payments?

Execution/Operations

- How do we create an intuitive customer experience?
- How do we effectively support a 24x7x365 payments system?
- What is an appropriate go-to-market approach for our financial institution?
- How do we address back-office support to accommodate 24x7x365 processing?
- What tools should we consider for fraud and risk mitigation?

Business Performance Improvements

- How can we tune and refine our risk models?
- How can we increase adoption by consumers and businesses?



How Visa can help

Visa's value-added services for real-time account-based payments

Visa has decades of experience in enabling the success of financial institutions for card-based payments. With our proven expertise, we can help financial institutions accelerate their real-time payments journey – at whatever point they may be.

For example, Visa has built a robust ecosystem with more than 200 value-added services successfully deployed for high-payment volume card-based authorizations 24x7x365. As the global marketplace has evolved to launch real-time payments, so too have our value-added services.

Visa's primary account-based value-added services span the transaction lifecycle to ease adoption, increase security, optimize efficiency, and expand use cases. Currently they include the following:

 **Directory Services** to allow the use of valid aliases, such as mobile numbers and email addresses, thereby enhancing the consumer experience. The Directory Network Manager effectively sources aliases, and business and biller proxies from existing directories and/or modernized local directories using a single access point.

 **Risk Analytics Service** provides advanced real-time account-based AI analytics risk tools to augment existing risk processes and better manage risk. This service supports scoring real-time transactions and monitoring transaction behaviors.

 **Request to Pay Service** supports ISO 20022 RfP messaging for bill payments and other digital payments use cases that require an electronic request for a payment. This service is payment-rail agnostic and allows financial institutions to use APIs to facilitate messages among creditors (billers) and debtors (consumers).

 **Exception Management Service** automates the exchange of information between financial institutions for payments for exception items.

 **Cross-border Service** through our Visa Direct solution requires a single API connection to simplify the complexities for global money movement.

 **Payment Account Tokenization (PAT)** enables banks to manage account-to-account payment fraud risk exposure according to payment use case (person-to-person, consumer-to-business, request for payment, open banking, mobile wallets, etc.) by replacing account numbers with account tokens linked to attributes and token rules.

In addition, Visa Consulting & Analytics (VCA) can provide customized consulting services for bespoke engagements. Sample engagements include the following:

- Strategy planning and assessments
- Prioritization of use cases based on data-driven business case
- Deep assessment of technical and organizational capabilities
- Development of a comprehensive execution roadmap
- Differentiated customer experience with our Marketing and Innovation Lab
- Tailored go-to-market plan
- Assessment of Visa's value-added services



Our focus on enhancing real-time processing with value-added services has contributed to the Visa brand that represents innovation, trust, and convenience.



About Visa Consulting & Analytics

We are a global team of hundreds of payments consultants, data scientists, and economists across six continents.

- Our consultants are experts in strategy, product, portfolio management, risk, digital, and more with decades of experience in the payments industry.
- Our data scientists are experts in statistics, advanced analytics, and machine learning with exclusive access to insights from VisaNet, one of the largest payment networks in the world.
- Our economists understand economic conditions impacting consumer spending and provide unique and timely insights into global spending trends.

The combination of our deep payments consulting expertise, our economic intelligence and our breadth of data allows us to identify actionable insights and recommendations that drive better business decisions.

We can help you to improve your digital offering and design, sharpen your targeting and acquisition strategy, and transform your customers' digital experiences.

For help addressing any of the questions raised in this paper, please reach out to your Visa Account Executive to schedule time with our Visa Consulting & Analytics team or send an email to VCA@Visa.com or visit us at Visa.com/VCA

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