



**WHITE PAPER**



Solving Real-Time Payment Adoption Challenges

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## Emergence of Real-Time Payments

Consumer payment patterns have dramatically evolved with the advent of e-commerce and other innovative payment options. Payments are no longer confined to regular business hours and traditional payment channels, creating new challenges for funds transfers. Similarly, merchants and emerging payment channels require faster and more reliable money transfer systems to keep up with consumers' demands.

Traditional electronic payments like wire transfers, which perform the electronic funds transfer within few business days, are not in line with consumer expectations. Fund availability is delayed pending the settlement between the sending and receiving institutions.

The payments industry recognized the need to evolve the traditional payments ecosystem to meet the evolving consumer patterns and continue to facilitate industry growth. This paradigm shift has led to the emergence of Real-Time Payments.

Real-time payment is a new way to exchange money and purchase goods and services in seconds. Compared with wire transfers, they allow the transfer of money from the payer bank account to the payee bank account almost immediately, instead of requiring a few business days. These payment systems have been developed (and are currently under development) worldwide since the need for a faster and more reliable transaction is the new economy's common requirement.

Real-time payment combines *immediate funds availability, settlement finality, instant confirmation, and integrated information flows*—all in a payment made in seconds.

*“Electronic retail payment solutions available 24/7/365 and resulting in the immediate or close to immediate interbank clearing of the transaction and crediting of the payee’s account (within seconds of payment initiation), irrespective of the underlying payment instrument used (credit transfer, direct debit or payment card, electronic money) and of the underlying clearing and settlement arrangements that make this possible.” – ERPB*

## Creating a Common Terminology

The appearance of new payments ecosystems has led to confusion over the terminology used to describe the concept of real-time payments. Some of this confusion is due to the definition of immediate payments across markets. The wording they elected to use may have been unique, though essentially all terminology sought the same end goal of faster payments.



This white paper has adopted Real-time Payments to foster a common vocabulary when describing immediate payments that meet the evolving consumer and market needs.

### Real-Time Payment Clearing Houses

The ability to settle funds between the sending and receiving institutions requires an intermediary that acts on their behalf to facilitate the settlement process in a real-time fashion.

While financial institutions could independently deploy such settlement practices, there are limitations and risks associated with that approach. Target institutions would need to agree upon the processes which could restrict access to smaller organizations. Likewise, central regulatory agencies wish to fundamentally change the payments landscape for all institutions and maintain a high level of control over payments (e.g., monitoring fraud, money laundering, etc.).

Many initiatives have been deployed or are in development across countries and regional central regulatory agencies, as illustrated below.



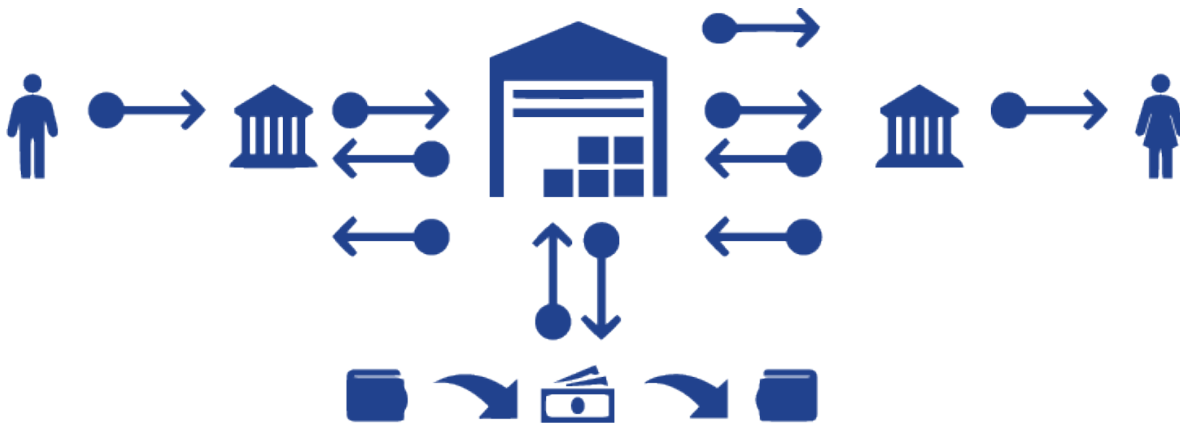
This document has adopted Real-Time Payment Clearing Houses as a common term to define the central intermediary, facilitating the instant payment model. The clearing houses could be central bank-driven or processor-driven initiatives that offer oversight and control over instant payments within a region or country.

## Real-Time Payments Create Challenges

Real-time payment initiatives have seen a slower-than-anticipated adoption rate globally – even when mandated by a central regulatory agency.

The slow adoption rate may be due to the nature of real-time payments themselves. They are not simply an extension of traditional payment specifications such as ISO 8583. Instead, many real-time payment initiatives have adopted ISO 20022 because of added messaging and data requirements that unsupported through conventional channels.

Real-time payment processing flow is also more complex compared to traditional payments. Processing requires complex message orchestration and added message timer management to meet the clearinghouse requirements.



Real-time payments also require additional consumer KYC data to be part of the payment and need an enhanced payment flow and timing constraints to adhere to the regulatory requirements. These data requirements vary by message and payment type and frequently change as the market requirements evolve.

The advent of these next-generation real-time payment capabilities forces financial institutions to adapt their legacy systems to fit into the new payments model. These changes in systems and processes are often expensive, difficult, and may not be possible with their legacy solutions. Therefore, the adoption rate has suffered in many markets as financial institutions struggle to adapt.

## Real-Time Payment Challenges Foster Innovation Opportunities

RTP payment schemes have complex, multi-step orchestration flows to facilitate the unique non-reputability and settlement aspects of real-time payments. This complexity is one of the challenges financial institutions face when enabling real-time payments in their current legacy environments.

The results of these challenges also foster an opportunity for financial institutions to offer innovative real-time payment services. Real-time payment Overlay Services can deliver a value-added consumer experience and present revenue and client-retention benefits to financial institutions to help offset the challenges of enabling real-time payments.

Digital Overlay Services are extensions to real-time payments and are innovation drivers which introduce unique business use cases to meet consumer and business demands. Digital Overlay Services offer the

consumer alternate payment methods and payment channels beyond traditional models. The changing payments landscape and unique and emerging demands from consumers and payment service providers drive today's payments evolution.



### Introducing REN Connect – Your Gateway into Real-time Payments

Real-time payments involve new messaging standards, enhanced consumer-level data requirements, and payment options (e.g., channel, payment instruments, etc.). Additionally, real-time payments expanded message flows to address real-time settlement, message and payment confirmation, processing time requirements at the overall and individual message leg level, and payment non-reputability.

These requirements represent fundamental changes in the payments processing model, and many legacy systems are ill-prepared to meet these challenges.

REN Connect provides a simplified interface into the real-time payment clearing house(s). Institutions may enter into real-time payments and minimize changes to their legacy systems by leveraging REN Connect simple access channels through traditional payment channels.



REN Connect helps institutions solve the technical challenges faced by integrating their legacy systems into the next generation model mandated by many real-time payment schemes. REN Connect also positions institutions with a future-proof payment gateway, extending as the payment industry continues to evolve.

REN Connect leverages the many next-generation REN Foundation building blocks which serve as the basis for the real-time payment gateway, such as:

- 100% uptime satisfies the need for 24/7/365 real-time payment requirements
- REN Data Transformer supports ISO 20022 messaging and flexible message and data element mapping
- REN API Gateway easily integrates with widely differing systems
- Flexible rules-based routing manages the unique message routing required by real-time payment schemes
- Micro services-based architecture enables the easy introduction of new services and functions to address unique real-time payment scheme requirements

REN Connect includes value-added features which further benefit institutions, including:

- Pre-existing interfaces to global real-time payment clearing houses
- Simplified access channels institutions which use traditional channels such as REN-standard and custom APIs, web services, and ISO 8583 messaging
- Pre-existing message processing, routing, timer management, limits monitoring, and data handling specific to real-time payments
- Built-in support for message security and digital signature requirements specific to each clearing house
- Pre-configured message type and data element mapping specific to each clearing house using REN Data Transformer
- Unilateral settlement functions between the financial institutions and clearing houses
- Access to multiple real-time payment clearing houses and other next generation payment schemes through a single REN Connect gateway
- Reduced legacy system integration effort and a smaller footprint for the financial institutions to support real-time payments
- Position the financial institutions to leverage other REN Foundation features for digitization, modernization, and incremental innovation of their payment systems
- REN Connect offers a robust overlay services catalog which institutions may introduce to their real-time payment services offered to their key stakeholders and consumers