



ISO 20022: Data Rich Messaging Advances Top Cross-Border Real-Time Payment Use Cases

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In today's fast-evolving financial ecosystem, ISO 20022 has emerged as a foundational standard driving greater efficiency, transparency, and innovation across global payments. Whether enabling seamless buyer-to-supplier transactions, powering mobile banking apps for real-time foreign exchange and travel payments, or streamlining regulatory compliance, ISO 20022 provides the structured, data-rich messaging that modern finance demands. Its universal language not only reduces friction in cross-border commerce but also enhances fraud detection, customer experience, and operational resilience. As governments, banks, and fintechs increasingly collaborate through public-private partnerships, ISO 20022 becomes a critical enabler—empowering businesses and entrepreneurs to connect with global markets securely, efficiently, and with confidence.

The evolution of global payment systems is transforming the way individuals and businesses move money across borders. Three compelling use cases highlight the broad impact of instant payment innovations:

- Use Case #1: Buyer-to-Supplier Payments
- Use Case #2: Tourism and Retail Transactions
- Use Case #3: Financial Inclusion

USE CASE #1: Buyer-to-Supplier Payments: *Instant payments reduce transaction costs and settlement times, benefiting businesses by improving cash flow and operational efficiency.*

Imagine a bustling electronics manufacturer based in the U.S., eagerly awaiting a shipment of semiconductor components from a trusted supplier in Japan. The manufacturer, keen on maintaining a seamless production line, initiates a cross-border payment to settle the invoice. As the finance team prepares the payment, they leverage the power of ISO 20022, a global **standard for electronic data interchange** between financial institutions. This decision transforms what could be a cumbersome process into a streamlined, efficient transaction.

The journey begins with the manufacturer's bank **converting** U.S. dollars into Japanese yen at the current exchange rate. Thanks to ISO 20022, the payment message is rich with structured data, ensuring every detail is accurate and transparent. This clarity **reduces the risk of errors and disputes**, providing peace of mind to both the buyer and the supplier. As the payment travels through intermediary banks, the structured format of ISO 20022 allows for **faster processing**. Enhanced data quality means **fewer false positives** during compliance screenings, minimizing delays and ensuring the funds reach the supplier promptly.

The benefits do not stop there. The manufacturer enjoys significant **cost savings**, as the streamlined process reduces transaction fees and operational costs. Automation and interoperability mean less manual intervention, freeing up the finance team to focus on more strategic tasks.

With detailed transaction data at their fingertips, the manufacturer gains valuable insights into their financial operations. **Enhanced reporting capabilities** aid in financial planning, helping the company make informed decisions and tailor their strategies.

Moreover, ISO 20022 supports stringent regulatory compliance, ensuring the manufacturer adheres to Know Your Customer (KYC) and Anti-Money Laundering (AML) standards. This compliance not only protects the company but also builds trust with their international partners.

The adoption of ISO 20022 transforms a routine cross-border supplier payment into a smooth, efficient, and cost-effective process, highlighting the profound impact of this global standard on modern business transactions.

Beyond operational gains, ISO 20022 empowers better financial planning and supports innovation through scalable, future-ready architecture. It enables a **frictionless B2B payment experience**, strengthening supplier relationships and ensuring uninterrupted production.

USE CASE #2: Tourism and Retail: Systems like PIX, Brazil's instant payment system, enable tourists to make payments in their home currency, boosting local economies and providing convenience.

As **global tourism** rebounds after the pandemic and becomes increasingly digital, ISO 20022 is playing a transformative role in simplifying and securing cross-border payments for travelers and businesses alike. From enabling mobile banking apps to support real-time purchases abroad utilizing local instant payment systems, to improving the transparency and efficiency of foreign exchange (FX) transactions, ISO 20022 creates a seamless financial experience for tourists.

The messaging format's structured data enhances **fraud prevention, ensures compliance, and reduces transaction errors**—key benefits for both traveling consumers and local vendors. Importantly, public-private partnerships with fintechs and small business owners in the travel and hospitality sectors are leveraging this standard to expand financial access, reduce dependency on cash or costly card networks, and deliver a modern, inclusive payment experience across borders. Here is a specific use case for an international application:

Customers traveling in Brazil will find a native advantage using the PIX faster payment system. PIX helps provide speed, convenience, cost efficiency, security, and reliability. When a customer steps into an airport shop and picks up a bottle of water and a snack, the customer initiates payment by accessing their banking application and using smart phone technology to read the displayed QR code. The mobile banking processor validates this is a legitimate QR code and sends an authorization approval message to the customer to complete the purchase and initiates the payment. The customer receives notification of the receipt and text confirmation for the merchandise purchased.

In this situation, the customer's bank has enabled cross-border payments via its mobile banking application. Technology providers have solved domestic connectivity to another country's instant payments system and calculated an FX conversion rate.

Obtaining foreign currency at a reasonable rate requires forethought and planning to order currency from a financial institution. While ATMs are increasingly networked across borders, the fees and exchange rates associated may be significant.

On the credit card side, travelers often face challenges such as limited card acceptance abroad or encountering merchants that only accept local payment methods. Even where cards are widely accepted, foreign transaction fees and unfavorable exchange rates are common. Many vendors also increase prices on card payments to offset processing costs. For high-value purchases, credit card companies may require real-time confirmation via mobile device—posing a problem if the traveler lacks service or connectivity.

As a global messaging standard, ISO 20022 facilitates the integration of instant payment schemes across borders as all parties are "speaking the same language." The extensive mapping which was previously required to move data accurately from one system to another is eliminated as terminology and field usage are consistent. Sanctions scanning is also improved using structured data fields – particularly for elements such as addresses.

This shift highlights the **inefficiencies of traditional cash and credit card usage abroad**, including high FX rates, limited acceptance, and authorization hurdles. ISO 20022 enables cross-border interoperability by standardizing data formats, improving AML/BSA compliance, and allowing real-time communication between financial institutions. The result is a safer, more efficient, and user-friendly payment experience for global travelers.

USE CASE #3: Financial Inclusion: *By connecting various payment systems, projects like Nexus¹ and Mandala² promote financial inclusion, allowing more people to access fast and secure payment methods.*

Maria started a craft shop in a developing country and has been a small business owner for a few years. She regularly buys materials from suppliers in other countries and has recently expanded her business to selling both locally and internationally through a website. Maria manages many of her international payments through credit cards and wires. In reviewing her books recently, she has found that her profit margins are lower than she expected from her recent increase in sales. There seems to be more fees with each of her international transactions.

In many developing countries, women, younger generations, and small business owners have challenges with accessing the financial system in a way that best serves their daily lives. With the use of real-time payments, these people see a significant improvement in financial inclusion and benefits to economic growth which is further enhanced when expanded to cross-border real-time payments that use the ISO 20022 messaging format.

Many governments and regulators are actively promoting real-time payments initiatives that mandate low-cost, real-time payment transactions to incentivize the use of digital payment methods. By 2028, these initiatives are expected to enable millions of previously unbanked individuals across various countries to gain access to bank accounts. The widespread adoption of real-time payments allows individuals and businesses to **transfer money instantly, improving accessibility to financial services**. Such accessibility is especially beneficial for those in remote or underserved areas who may not have easy access to traditional banking services. Financial institutions should consider looking to develop SMB-focused solutions like **multi-currency digital wallets and instant FX conversion tools** that utilize ISO 20022 messaging to help small businesses manage data rich, cross-border transactions efficiently and cost effectively.

A global consensus is forming with **stablecoin adoption**, leading to what the future of blockchain represents to cross-border payments. ISO 20022 and blockchain complement each other by enhancing payment standardization, efficiency, and transparency. Their integration can help bridge the gap between traditional finance (TradFi) and decentralized finance (DeFi), driving an improvement in financial inclusion and real-time global money movement.

[1] BIS. (2024, Nov. 4). *Project Nexus: enabling instant cross-border payments*. <https://www.bis.org/about/bisih/topics/fmis/nexus.htm>.

[2] BIS. (2024, Oct. 28). *Project Mandala: shaping the future of cross-border payments compliance*. <https://www.bis.org/about/bisih/topics/cbdc/mandala.htm>.

Financial literacy programs are essential to educate entrepreneurs on cost-effective digital payment strategies, reducing fees and improving profitability. By combining tailored financial products with education initiatives, small business owners can navigate global markets more effectively, enhance financial inclusion, and maximize growth opportunities in the digital economy.

As businesses and consumers see their financial activity grow, the importance of efficiency continues to become a key factor. The use of ISO 20022 messages for cross-border real-time payments promotes seamless and efficient international transactions, **reducing the cost and complexity of remittances**. This improves how people send money across borders, enhancing financial inclusion. The integration of advanced technologies like AI and machine learning with real-time payment systems further enhances security and efficiency. These technological advancements encourage greater adoption and trust in digital financial services.

By streamlining international transactions and using innovative technology, ISO 20022 helps create a more accessible and reliable financial ecosystem. This fosters economic growth and provides individuals and businesses with secure, instant access to funds. Overall, the combination of ISO 20022 and advanced technologies is transforming the reach of cross-border payments for the unbanked and underbanked population.

Summary

ISO 20022 is redefining the global payments landscape by standardizing data-rich messaging that enhances transparency, efficiency, and interoperability across financial systems.

From buyer-to-supplier payments and mobile-enabled tourism transactions to initiatives driving financial inclusion, this universal standard is streamlining cross-border operations while improving compliance and customer experience.

Use cases like international real-time payments, powered by systems such as PIX, show how ISO 20022 simplifies travel purchases and boosts local economies. Simultaneously, projects like Nexus and Mandala leverage ISO 20022 to connect payment systems and serve underbanked populations.

Small business owners benefit from improved affordability and access, while financial institutions, fintech firms and policymakers collaborate through public-private partnerships to support financial inclusion efforts and enhance cross-border payment infrastructures.

Together, these innovations are building a more inclusive, efficient, and secure global financial ecosystem.

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About the Faster Payments Council and Cross-Border Payments Work Group

The Faster Payments Council (FPC) is an industry-led membership organization whose vision is a world-class payment system where Americans can safely and securely pay anyone, anywhere, at any time and with near-immediate funds availability. To further this vision, the Faster Payments Council established the Cross-Border Payments Work Group to cover global industry initiatives, gathering information on various models and use cases for real-time payments across borders with the long-term goal of cross-border interoperability.