The digital revolution is changing the way in which businesses are interacting with their customers, suppliers, and markets. Business models are evolving and new cash management solutions are playing an important role in this transformation.

The Drive for Business Transformation

If you doubt the importance of digital transformation for businesses today, then just look at the senior management team of almost any major business. Alongside the Chief Financial Officer, Chief Information Officer, Head of Human Resources and Business Heads, you will now invariably find a Chief Innovation Officer or Head of Digital Innovation directly accountable to the CEO for driving digital transformation of the business. The drive for business transformation is in response to a number of major trends:

- **‘Uberisation’ of Commerce**
  - Online consumer models moving into B2B markets
  - Real-time execution of commercial transactions
  - Compression in business cycle and delivery

- **Industry 4.0**
  - Automation of manufacturing processes
  - Sensors, IOT and AI to automate / manage supply chain
  - Just in time manufacturing and delivery of products

- **Sharing Economy**
  - Use of assets shared over platform
  - Pay-per-use models
  - Bundled service models

- **Data as a Business**
  - Data increasingly seen as a competitive advantage
  - Collect and utilise data from production to pricing
  - Outsource production and focus on data

- **Rise of Platforms**
  - Platforms becoming widespread in many industries
  - Ubiquitous availability of technology to support platforms
  - Evolution of fintechs, gateways and banks to support
Apart from the ubiquitous spread of low cost enabling technology, there is a strong trend towards the consumerisation or ‘uberisation’ of business wherein many business customers now expect to interact online and in ‘real-time’ for many of their needs, just like they do as ordinary consumers. What started in B2C and social media platforms like Amazon, Facebook and Expedia has now grown so vast that seven of the top 10 global companies by market capitalisation are essentially West Coast e-commerce, tech or social media platforms. Even their revenues dwarf many of the largest traditional ‘blue chips’ who formerly dominated the business landscape.

This has had a two-fold impact. One is to draw attention to these business models as the ‘way of the future’ in terms of driving business growth, customer reach, and shareholder value. The other has been in creating a new generation of business managers and customers who ask why similar approaches cannot be applied to traditional businesses. This ‘e-generation’ asks: Why can’t I buy business products and services online? Why can’t a business process be completed in seconds rather than days or weeks? Why can’t I get information I need instantly?

There is a strong trend towards the consumerisation or ‘uberisation’ of business wherein many business customers now expect to interact online and in ‘real-time’ for many of their needs, just like they do as ordinary consumers.
This is driving businesses to fundamentally re-examine the way they are operating and delivering their products and services to customers. Some are driving transformation projects aimed at digitising existing processes whilst others are developing entirely new ways of doing business. For example, replacing traditional sales with subscription or pay per use models. As a result, more B2B sales channels and supply chains are moving online, especially those connecting large businesses to small and medium enterprises (B2SME). This is not surprising as the behaviour and needs of these smaller enterprises more closely resemble that of consumers. For example, a small business owner who finds it much quicker and easier to buy supplies or parts using an app on their phone rather than raising a physical purchase order.

Financial Services Innovation

The same drive for digital innovation is reshaping financial services where the potential market size for successful new entrants is enormous. By some estimates there are more than 25,000 fintechs across the world vying for a slice of banking and finance related services. Some are focused on supporting enabling technology such as blockchain, big data, or robotic process automation (RPA) which can be applied to a broad range of financial processes whilst others are seeking to disrupt specific markets or services such as domestic and cross-border payments, debt capital raising or trade finance.

At the same time central banks and market regulators are actively encouraging innovation, competition and consumer choice by promoting so called ‘open banking’, creating regulatory sand boxes to support experimentation, developing flexible licensing regimes to permit entry of new competitors, and developing 24x7x365 clearing systems and ‘instant’ payments to support around the clock, real-time banking. Open banking in particular has the capacity to transform banking services by effectively enabling licensed third-party processors (TPPs) and account information services providers (AISPs) to connect directly to corporate bank accounts via open access APIs that banks must make available under a regulatory framework. PSD2 which went live in Europe on 14 September 2019 is an example of this, but similar regimes are being launched across multiple markets in Asia and Africa especially.

Banks have responded by embracing APIs, digitising their own processes, joining market platforms, and either partnering with fintechs or developing new ‘fintech’ services of their own.

The relevance of all this innovation to business is that there is now a raft of new financial services and tools that allow businesses to interact with their customers and suppliers in new ways, especially to support online and real-time transaction processing.

Just as credit cards were an enabler of the first wave of B2C e-commerce, new tools are emerging that enable businesses to move business into new online and in real-time channels. Traditional ‘procure-to-pay’ and ‘order-to-cash’ processes can now be digitised, eliminating the need for paper based purchase orders, good receipts, invoices, payments, and manual AP/AR reconciliation activities, thereby collapsing end-to-end process times.

The financial innovation supporting these transformed processes is not just limited to providing online settlement through new so called ‘instant’ payment methods, but includes other innovations in real-time FX engines, automated reconciliation tools, e-wallets, dynamic credit scoring, and associated technology. The different technologies work harmoniously together via APIs that push and pull critical data through different elements of the underlying process in milliseconds. This enables various ‘build blocks’ or foundational technologies to be assembled in new and interesting ways to deliver bespoke solutions.
Implications for Cash Management

This is giving rise to a new generation of bespoke and tailored cash management solutions to support these digitised processes. Rather than traditional payments and collections services being hooked up to ERPs and treasury systems via traditional host to host and SWIFT based channels, we are seeing the rise of bespoke solutions tightly integrated into core business processes and systems via real-time APIs. These new cash management solutions have a number of common elements.

- **Alternative payment methods**
  - Mobile money, instant payments, P2P payments and debit cards as alternative to credit cards
  - Target broader base of unbanked consumers but also SMEs

- **Multi-market payment gateways**
  - Support multiple markets and payment channels through single back-end integration
  - Support pre and post aid solutions, QR codes, request for pay, etc.

- **Automated reconciliation**
  - Real-time matching of payments to order for immediate release of goods
  - Reconciliation of daily settlement to completed sales and ERP

- **Dynamic FX pricing and execution**
  - Real-time FX pricing to enable conversion from base currency pricing into local currencies
  - Daily settlement of all transactions at executed prices

- **Real-time end-to-end processing**
  - Real-time process flow between orders, pricing, payments and reconciliation using API architecture
  - Ability to integrate with a variety of back end systems via APIs
Solutions in practice
The best way of demonstrating how these solutions help to power new real-time, digitised business processes is working through different business scenarios.

Scenario 1: Last Mile Solutions
Solving for digitisation of the ‘last mile’ is one of the biggest problems in emerging markets. This challenge is common to most businesses selling to consumers, distributors and small retailers such as fast moving consumer goods, clothing and footwear, pharmaceuticals, consumer electronics, home appliances, etc. The problem arises because the typical mode of settlement for purchasing goods is cash collection at the time the goods are delivered. This ‘cash on delivery’ model creates a headache in terms of delivery staff having to collect and deposit cash. Reconciliation of the cash collected to original purchase orders and cash ‘leakage’ are also a constant challenge.

Last mile cash collections

Goods dispatched → Goods delivered → Cash collected → Manually banked → Manually reconciled

B2C e-commerce platforms have a similar challenge in these markets. The standard model for players based in the US or Europe is selling to consumers online using credit cards. However, in many emerging markets credit cards have a low market penetration. Consumers also prefer to pay in cash when they see the goods as there is lower implied trust in these platforms due to weaker consumer protections. Therefore, fast growing local players have emerged to support cash on delivery models, i.e. the consumer orders online but then pays in cash at the point of delivery.

Even where a consumer can pay online with a credit card, there are often local customs duties or taxes levied on the goods which need to be collected separately. In many cases, the parcel delivery companies who deliver the goods on behalf of the e-commerce platform must then collect the customs duties at the time the goods are handed over to the consumer. When consumers are not home this becomes even more problematic as the goods can’t be dropped until the duties are collected.
This does not mean there are no alternatives to cash. In many emerging markets there are mobile money or peer-to-peer payment systems that consumers and SMEs are widely using to make and receive electronic payments for many types of day-to-day transactions. Examples include M-PESA in Kenya, MoMo in Vietnam or Alipay / We Chat Pay in China to name just a few out of more than 250 alternative payment systems already operating around the world. There is therefore an opportunity to integrate these so called ‘alternative payment methods’ into the process, thereby enabling cash to be replaced either at the point of ordering or delivering the goods.

---

**Online payment**

**Payment Gateway**

- Amount: USD1,595.00
- Order No: CXN9JUX
- Payment options:
  - Credit card / PayPal
  - Debit card
  - Mobile money
  - Instant payments
  - Business wallets
  - Request for payment

**Payment channels**

**Collections**

**Last mile digital collections**

- Goods dispatched
- Goods delivered
- Payment accepted
- Auto banked
- Auto reconciled
Cash management solutions

The solution lies in integrating these alternative payment types into the online site or app being used by the consumer or small business to order goods.

Alternatively, where payment needs to be accepted on delivery, the same gateway can be integrated with a smart phone app or hand held device used by the person delivering the goods.

The key components of the solution include:

- A payment gateway connected to the merchant’s online site or app via APIs thereby enabling real-time processing of alternative payment methods to settle the transaction
- Access to the most commonly accepted payment options in the local market including credit cards, debit cards, instant payments, mobile, or peer-to-peer payment options
- The use of QR codes, ‘request for pay’, virtual account numbers or other mechanisms that enable transactions to be initiated by the end customer and matched automatically at the back end to the underlying purchases using the unique reference date these transactions generate
- Regular settlement of funds collected to the merchant’s bank account including reconciliation of the funds received to orders processed and settled.

The benefits of these types of solution are that:

- Last mile cash delivery can be digitised with an electronic payment reducing cash handling and leakage
- Delivery resources are freed up to deliver goods thereby reducing delivery costs
- Reconciliation is fully automated eliminating manual processes
- Market reach is expanded to anyone who likes using alternative payment methods. This is particularly relevant to emerging markets where credit card penetration is low but these other payment options are widely used for day-to-day transactions.
Scenario 2: Wallet Based Solutions

Another area which is developing is the use of proprietary wallets to enable customers to interact with businesses online, even where ‘instant’ forms of payment are not available.

Wallets have been in use for a long time. Mobile money wallets are pre-paid value accounts that exist on a ledger maintained by a mobile phone operator. Other providers like Alipay and WeChat in China have created wallets as part of their market place or social media platforms.

These wallets can be accessed via an individual’s mobile phone or app to transfer value to another wallet holder. Value can be ‘topped up’ or withdrawn via an agent of the mobile operator or increasingly via a bank transfer or debit from the wallet holder’s personal bank account.

As the popularity of these mobile and peer-to-peer wallet systems has grown, so have the number of consumers and businesses accepting these payments, developing into mature ecosystems.

The next generation of wallets are now being developed by businesses who wish to set up their own wallets to support their own market place, online site or app. The concept is that these wallets can be topped up by customers through a bank transfer and then used to buy products via the online site or app. Discounts, rebates and marketing incentives can also be credited to the customers wallet to encourage repeat business and develop greater loyalty.

Wallets are particularly useful in markets where there are no real-time or instant payment systems that would otherwise limit the development of real-time,
online commerce. The wallet enables this to happen by creating a pool of pre-funded value that can be used by the customer online.

Of even greater value for the business is access to customer data. Transaction history can be gathered via the wallet to create a picture of customer buying patterns over time which can then be used to determine demand for certain products or to identify repeat purchases of the same products.

It is also possible to extend credit to the customer via the wallet and monitor subsequent payment history to determine if further credit should be extended. This process can be supported by dynamic credit decisioning tools which are now widely available in the market and can utilise purchase and payment history data to evaluate credit risk over time. In this way purchase activity can move from a pre-paid to post-paid model over time, enabling the business to gradually provide extended credit terms to target customers to increase sales.

This enables the business to bypass the traditional paper based processes involving purchase orders, invoices, collections, receipts and reconciliation. It also enables businesses to bypass traditional distributors and go direct to the end customer by creating an efficient way of reaching these customers as well as mitigating and managing risks.

Transaction history can be gathered via the wallet to create a picture of customer buying patterns over time which can then be used to determine demand for certain products or to identify repeat purchases of the same products.
Cash management solution

The solution supporting wallets is relatively straightforward, with the key elements being:

- The merchant establishes a wallet platform as part of its core online infrastructure. There are a number of third-party fintechs that can provide these platforms including cloud hosted options or they can be developed inhouse using ledger based systems.

- Individual customers register on the online sales platform or app and provide bank details or direct debit authorities where an automated wallet top up is offered. Alternatively, the bank can provide virtual accounts that can be associated with each individual wallet holder and used to pay in funds.

- The bank debits the customer’s account according to a predetermined limit established for each wallet. Alternatively, customers can push funds to the wallet via an ACH type payment using a virtual account number as the payee account number. The virtual account number can be used to match incoming payments to the underlying wallet linked to the virtual account.

- The wallet can then be used by the customer to purchase goods or services via the online platform or an app. The wallet is integrated directly with the app or online site so that purchases are made directly from the wallet upon checkout. Purchases are debited from both the wallet and the matching virtual account and credited to the merchant’s virtual account or a separate bank account depending on the structure.

- If the merchant wishes to extend credit to the customer, a dynamic credit scoring tool can be integrated with the platform that uses purchase and payment history date to determine a credit limit and enable the wallet to be overdrawn. Repayments can then be triggered automatically by a debit or ‘pull’ transaction for the customer’s bank account or accepted as a ‘push’ payment into the wallet.

- API connectivity between the bank and back end platforms provides data to support reconciliation activities.

The benefits of this solution are that:

- New customer segments can be reached directly via an online offering.

- Wallets can be easily topped up in market where there are real-time or instant payment systems.

- Wallets can be combined with alternative payment methods to capture the widest possible market.

- Cash conversion cycle is drastically shortened leading to higher cash flow and working capital.

- Data can be mined to target special offers or dynamically extend credit terms.

- Incentives and rebates can be paid directly into the wallet to encourage repeat purchases.

- Reconciliation is fully automated eliminating manual processes.
Scenario 3: Real-Time FX Management Solutions

One of the big challenges in moving from local distributors towards a direct sales model is that for businesses with centralised manufacturing and distribution operations, the business could now be selling directly into many markets without local distributors to take on the FX risk.

Many businesses source or manufacture their products in a limited number of production sites. Goods are typically sold ex-factory in US dollars to the local distributors either directly ex-factory, via a Centralised Trading Centre (CTC), or via sales and marketing entities established in the country which takes on the local inventory management and FX risks. Direct models often involve shipping goods directly ex-factory to individual customers in a country via a logistics provider who manages the supply chain and delivers the goods.

Selling cross-border into another country under the direct sales model therefore often requires dynamically pricing the goods in local currency and managing the cross-border FX exposures remotely.

The same issue applies to existing centralised e-commerce sites that want to give customers the ability to pay in local currency using alternative payment instruments. Rather than a credit card only model where customers are charged a hefty FX margin on their card purchases.

Dynamic FX conversion and settlement

FX engine

FX conversion to base currency

Payment gateway

Amount: USD 1,595.00
Order No: CXN98JNX
Payment options:
  • Credit card / PayPal
  • Debit card
  • Mobile money
  • Instant payments
  • Business wallets
  • Request for payment

Local payment channels

Local currency collections
FX management solution

The solution lies in using a dynamic FX management engine to manage the pricing and settlement of cross-border sales transactions.

Key elements of this solution include:

- Provision of real-time FX rate feeds to the online sales platform that enable the base price in US dollars to be dynamically converted to the local currency equivalent and presented online to the customer. The FX rate can be held for a period of time to enable the customer to complete the transaction but generally moves in line with the market.

- Range of local currency payment types offered through an integrated payment gateway.

- Daily settlement of funds in base currency. The local currency equivalent of the various transactions completed during the day is settled to a bank account using the FX rates used for each transaction.

- Transactional level data feeds to enable reconciliation of all transactions.

- Release of funds cross-border to the appropriate billing entity (factory, CTC or sales entity) subject to local FX approval and reporting requirements.

The benefits of this solution are that:

- Goods and services can be priced in local currency broadening the customer base to those preferring a local currency option.

- FX rates are dynamically managed preserving margins.

- Overall FX spreads are lower. This can be passed back to customers in the form of lower pricing or retained as additional margin to the business.

- Centralised management and billing can be retained in the based currency without taking on additional FX risks.

- Reconciliation is fully automated eliminating manual processes.

- Overall cost of distribution can be lowered by going direct where an indirect model was previously used.
Scenario 4: Direct Sales Solutions

The various solutions discussed above can be combined to support businesses who want to move to a direct sales model by bypassing traditional distribution channels and going online to end customers.

Imagine a typical manufacturing company that sells its products to a range of large to small businesses. It has a dedicated salesforce that sells directly to large clients whilst small and medium sized clients are handled by approved distributors in each local market. Equipment is manufactured at a limited number of production sites and shipped ex-factory directly to the distributors who settle with the manufacturer’s central billing entity in US dollars.

This distribution model enables a large number of smaller customers to be reached whilst allowing the manufacturer to limit its credit risk on smaller customers and inventory holding costs by shifting these risks to its distributors. The distributors themselves manage credit risk by requiring their customers to pay cash on delivery or to purchase and pick up the equipment at the distribution outlets. In some cases, the distributor may extend credit terms to the customers.

Distributor based sales model

Goods manufactured → Goods delivered to distributors → Goods dispatched to customers → Goods delivered → Cash collected

Solutions can be combined to support businesses who want to move to a direct sales model by bypassing traditional distribution channels and going online to end customers.
The downside of this model is that the manufacturer does not really have a direct relationship with much of its customer base. As a result, it is more difficult to build customer loyalty and cross sell spare parts, consumables and other services. The customers often buy non-genuine parts from the open market due to the high prices charged by distributors or the availability of convenient local options. Some distributors may even sell rival products or flip between different manufacturers.

Now imagine that the same manufacturer decides to go directly to these small and medium customers by selling to them through an online site in each market. Goods are despatched directly from the factory and delivered right to the doorstop of the customer. Regular customers can be rewarded with discounts and other offers and once a pattern of regular purchases has been established, offered credit terms.

Moreover, the equipment itself has sensors that indicate when parts and consumables are needed and can send this information ‘back to base’. The manufacturer can now either proactively reach out to offer these parts and consumables to customers as needed or alternatively create a fully automated process wherein parts, consumables and servicing are automatically despatched, ensuring downtime is minimised and the customer gets the best performance from their equipment.

Since the equipment and parts can be shipped directly ex-factory, this eliminates the need for a local warehouse and the added cost that distributors margins add to the price of the product lowering the overall costs to the end customer.

Whilst the business is excited about its plans for an online portal and smart phone app, the treasurer is now faced with the task of managing the FX risk since goods are priced in US dollars but will be sold in local currency. The treasurer must also work out how the customers can pay for the goods online in local currency, and then work out how to get the money out of the country and back to the central billing entity for the goods shipped.

**Direct online sales model**

- Goods manufactured
- Goods sold online
- Goods dispatched to customers
- Goods delivered

Regular customers can be rewarded with discounts and other offers and once a pattern of regular purchases has been established, offered credit terms.
Cash management solution

The solution lies in using the various technologies and solutions already discussed to power this real-time business solution including:

- A real-time to FX pricing engine to convert the dollar base price to a local currency on a dynamic basis thereby protecting product margins

- Online payment options suitable for small and medium business customers such as instant, mobile money, and peer-to-peer payments

- Automated reconciliation of online purchases with receipts of payments in real-time

- Daily settlement of all transactions into the base currency at the FX rates used throughout the day

- Sweep of funds from the local currency accounts to the billing entity representing the dollar value of invoiced goods sold ex-factory to the local customer

- Potential provision of corporate wallets to customers in countries where real-time payment options are not available and/or as a tool for crediting discounts and other incentives that can be used to purchase future products

- Data analytics including dynamic credit scoring to evaluate patterns of purchases and enable the provision of credit lines or trade terms via the corporate wallet.

The benefits of this solution are that:

- The supply chain can be dramatically shortened reducing inventories, time to market, and distribution costs

- Customers can be reached directly via the online offering creating opportunities for enhanced engagement, greater loyalty and increased sales

- Automated fulfilment option can be created leading to better outcomes for customers and higher retention rates for spares and consumables

- Wallets can be combined with alternative payment methods to capture the widest possible market

- Cash conversion cycle is drastically shortened leading to higher cash flow and working capital

- Data can be mined to target special offers or dynamically extend credit terms

- Reconciliation is fully automated eliminating manual processes.
Scenario 5: Subscription / Pay per Use Solution

Some businesses wish to go further and not just move to a direct sales model, but fundamentally change the way that products and services are used and paid for by customers. Subscription and pay per use business models feature strongly in this area.

In a traditional model, manufacturers sell their equipment to customers either directly or via distributors. The customers then purchase parts and consumables when required from the manufacturer or distributor. They may, or may not, use authorised service personnel to maintain the equipment.

In a subscription based model all of these different components are bundled into a single service package and with an all-inclusive usage charge. Much like an all-inclusive car lease wherein the use of the vehicle, maintenance, parts, and insurance are all bundled into a single monthly leasing fee.

In a pay per use model, the same concept applies but the use of the equipment is limited to a shorter period that could be hourly, daily, weekly or monthly. Much like an equipment rental contract.

In both cases, payment for use of the equipment typically happens before the equipment is used rather than be invoiced in arrears.

These types of models typically appeal to consumers and small and medium sized businesses who often prefer to smooth out their cash flow over time rather than making large upfront payments for purchase of equipment. A dynamic and flexible range of payment options is required to suit these markets. Moreover, as these types of services are now often sourced online or via an app, then the payment and settlement processes also need to be real-time.
Cash management solution

The solution supporting this type of model would include:

- A payment gateway connected to the online site or app via APIs thereby enabling real-time payment processing
- Access to the most commonly accepted payment options in the local market including credit cards, debit cards, instant payments, and mobile or peer-to-peer payments
- The use of QR codes, ‘request for pay’, virtual account numbers or other mechanisms that enable transactions to be initiated by the end customer and matched automatically at the back end to the underlying order or transactions
- Data for reconciliation payments received to orders processed via the online site or app.

The benefits of this solution are that:

- Everything can be bundled into one payment providing multiple sources of revenue for the business
- Online and app based sales model reaches the widest possible customer base supported by a range of real-time payment options
- Cash conversion cycle is smoothed over time for both the business and its customers compared to unbundled sales model (although conversely more upfront funding will be required)
- Data on usage can be mined to target specific customers, segments and locations where this model is popular
- Reconciliation is fully automated eliminating manual processes.
Scenario 6: Express Claims, Payment and Incentive Solutions

Not every real-time business scenario needs to be complex. Sometimes a simple enhancement of an existing business model can have a big impact.

Some insurance companies have decided that the speed of making claims payments is a positive differentiator. They have introduced ‘teleclaims’ whereby customers can ring up and effectively have their claim authorised over the phone. The ability to then send the claim payment to the customer as quickly as possible is seen as creating an even more positive experience for the customer. Hence, the desire to use instant or real-time payments.

Express claims model

| Online or teleclaims | Claim processed real-time | Instant payment request | Instant payment | Funds remitted real-time | Funds received | Social media recommendations |

Not every real-time business scenario needs to be complex. Sometimes a simple enhancement of an existing business model can have a big impact.
In a similar way, the ability to pay incentives or marketing rewards to consumers or small businesses as it happens is very powerful. In the example below, a small retailer receives instant reward payments for selling products to a consumer by scanning a QR code on the product packaging when it is sold. A specialised app on their phone scans the QR code and sends a message back to the manufacturer who then sends an incentive payment in the form of instant payment to the retailer.

In yet another example, a business may employ casual workers who are unbanked but have a mobile wallet. They can be paid almost immediately after completing their work using instant or mobile payment systems.

**Cash management solution**

In other words, there are a growing number of situations where making payments faster or via alternative payment methods is seen as creating greater customer or worker loyalty. In all these examples, the key components of the solution include:

- Real-time connectivity from the underlying payment processing engine via APIs to the bank’s payment engine. This could include claims payment systems, marketing databases, ordering systems, etc.
- Multiple payment types that can be supported in that market including mobile money, peer-to-peer, or instant bank transfers
- Single file format for all the payment types
- Data enabling reconciliation of all the transactions.

The benefits of these solution are that payments can be made instantly via a range of different payment types where available, payment files are standard for all the different payment types, payments can be generated and sent from virtually any system and executed real-time via the bank using API connectivity.
Scenario 7: Cross-border Remittances

Over 800 million people worldwide are directly supported by remittances from relatives and loved ones abroad according to the International Fund for Agricultural Development (IFAD) in 2018. However, the cost of making overseas remittances for overseas workers is generally quite expensive and often manually intensive as many workers do not have bank accounts and must remit the funds by visiting a money service bureau.

One promising solution is to link different mobile wallets and/or peer-to-peer payment systems together to enable cross-border wallet to wallet transfers.

Cross-border wallet to wallet transfers

Sender remits local currency to recipient → Request received by local wallet provider → X-border payment added to blockchain → Bank facilitates underlying FX conversion → Validated payment published to blockchain → Recipient gets local currency by local wallet

Cash management solution

In this type of solution, the key components are:

- Intermediate blockchain enabling transactions to pass from one wallet provider to another. This acts as a single source of truth for all transactions processed.
- Real-time fixed conversion of transactions from one currency to another including notification to the sender on the FX rate they are receiving plus confirmation of funds transfer once completed.
- Back end settlement of funds for both the sending and receiving wallet providers as well as data to reconcile all the outward and inwards funds transfers.

The benefits of this solution are that:

- Cost of sending funds can be drastically reduced through the elimination of brick and mortar operations.
- FX margins are generally more competitive.
- Recipients get their funds instantly.
- Different wallets can be linked taking the process outside the normal banking system to reach the unbanked and promote financial inclusion.
Developing the Right Treasury Expertise

The challenge for most treasurers is that these new solutions go beyond traditional cash management solutions and require new skills and knowledge to effectively support the business. Treasurers need to bring ideas to the table and actively participate in the ideation of new business models and digitisation of processes. Otherwise the business will move ahead on its own and engage directly with fintechs and payment processors without consulting treasury.

To maintain their relevancy, treasurers need to develop a strong working knowledge and become advisers to the business in areas such as:

- Alternative payment methods and systems
- End-to-end financial process design
- Mobile and online commerce
- Reconciliation systems
- API integration with banks and fintechs

Treasurers then need to apply this expertise by helping the business to:

- Design the financial processes and payment options that are needed to support new online business models, market places or supply chain solutions
- Educating the business on new payment and gateway connectivity options to support new online channels
- Showing how cross-border transactions can be managed ‘on the fly’ so a product created in one country can be sold online in multiple countries and currencies
- Developing the appropriate account structures and pooling solutions to ensure funds can be repatriated efficiently.
How Standard Chartered can help

Vision
Standard Chartered is leading the way in the development of new and innovative cash management solutions to power real-time commerce and support the digitisation of business processes for our clients. Our vision is to be:

- **A trusted Partner** and **Connector Bank**, for advisory, thought leadership, innovation and technology
- The go-to bank to provide **real-time** and **borderless solutions** to support clients' digital treasury and cash management needs; and
- The leading provider of **digital** and **data-driven cash management solutions** and **platform services** for e-commerce clients. This has driven the Bank to become an early adopter of APIs connecting us to many third-party platforms and fintechs, driving connectivity to alternative payment methods such as mobile money and peer-to-peer payment systems, developing our own payment gateways and merchant applications, investing in various fintechs and third-party platforms, and developing a range of digital solutions.

As evidence of our own commitment to digital services we have also launched a fully digital bank in eight African countries, we are building a digital bank in Hong Kong in partnership with Ctrip and PCCW, and we have launched a digital commercial banking platform in India.

Track Record
Working with corporate clients, Standard Chartered has pioneered a range of innovative solutions covering many of the areas discussed in this paper, including:

- Last mile payment solution for collecting customs duties online for one of the world’s largest parcel delivery companies across multiple markets. This supports a range of alternative payment methods
- Processing of instant claims payments for a major insurance company and instant rewards payments as part of real-time incentive schemes
- World’s first cross-border wallet to wallet transfer service with real-time FX conversion and payment transfer
Real-time FX management solutions enabling many online businesses to localise their offering by pricing products and accepting payments in local currency.

Development of wallet based services to support a proprietary wallet solution for a leading corporate across more than a dozen markets.

Providing the processing ‘rails’, trust accounts and settlement services for a number of leading alternative payment providers and payment gateways including virtual account and automated reconciliation services.

**Structuring Expertise**

To support the development of these bespoke and innovative solutions, we have established a specialist solution structuring team to co-create new processes and solutions with clients. The team comprises former treasurers, industry experts, seasoned bankers and technologists to cover all aspects of a solution covering both business needs and treasury requirements.

We also operate a network of dedicated technology labs in Singapore, Hong Kong, San Francisco, London, and Nairobi that support these efforts. Our innovation arm, SC Ventures, collaborates, invests and nurtures leading fintechs which can be leveraged to create hybrid solutions.

Cash management solutions will continue to play an important role in the digital revolution. Business interactions with customers, suppliers and markets will evolve. Our cash management team offers valuable insight to assist in this very important journey. For more information visit [www.sc.com](http://www.sc.com)

---

**Victor Penna**  
Head of Cash Management, Europe & Americas, and Global Head of Cash Structured Solution Development, Transaction Banking

Victor Penna is the Global Head of Standard Chartered's Structured Solutions Development team, a group of expert treasurers, bankers and technologists who work with clients on business and treasury transformation projects, developing solutions to digitise processes and power real-time business with cutting edge cash management solutions. Victor has worked closely with some of the world's largest organisations on their digital transformation strategies, leading workshops and round tables with more than 250 large corporations and financial intermediaries. He is also the Head of the Bank's Cash Management business for Europe and Americas. Victor has over 30 years' experience in finance, process reengineering, technology development, and management consulting.