



BNY MELLON

Modernization of Payments and Collections

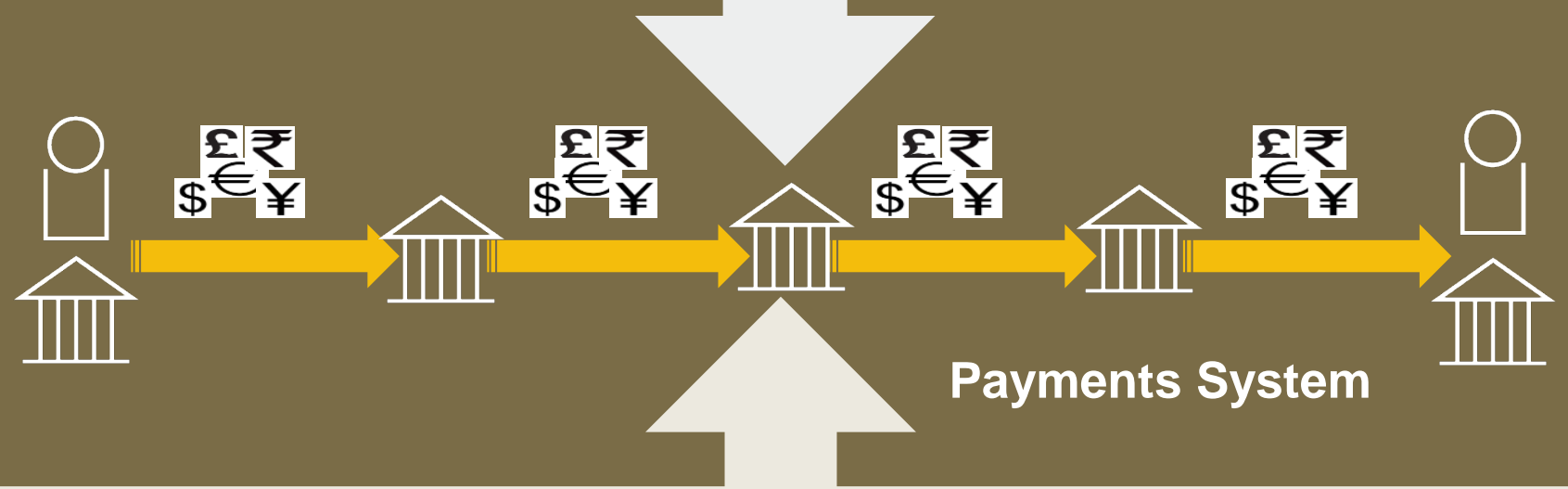
Josie Forde

Market Management

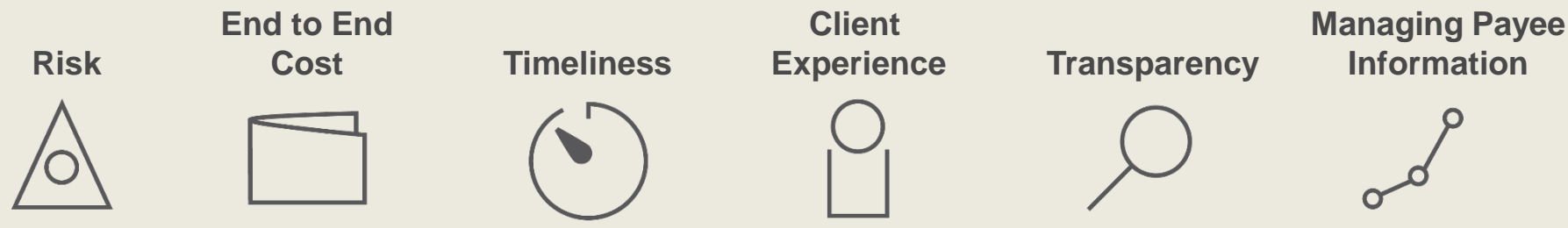


Growing Pressures on an Imperfect Payments System

Market Forces...



Traditional Challenges...



Challenge—Friction in Payment Flows and Infrastructures

- Cumbersome, outdated infrastructure and technology
- Inefficient processes, in many cases the incremental result of compliance with new regulatory mandates over many years
- Processing costs
- Lack of transparency for payments, timing, and liquidity throughout end to end process
- Customer fees can be high and unpredictable
- Sub-optimal user experience
- Lack of speed, for most payment rails



Opening the door to potential disruptors who promise a better client experience.



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Fintechs are also active in Latin America...

Chile

Payments :

- CrowdTransfer
- CurrencyBird
- Khipu
- Flow
- Masblu
- Puntopagos

Brazil

▪ 150 Fintechs :

- Vindi
- Foxbit
- MoIP

Mexico

- Payments and bitcoin
 - Volabit
 - PagoFacil
 - ComproPago
- Enterprise financial management
 - Facturama
 - Reachcore
 - Factigo

Blocktech in Financial Services Virtualscape


Applications & Solutions



Source: <http://startupmanagement.org/blog>

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Blockchain Exploration at BNY Mellon

Initiative	Participants	Objectives	BNYM Role & Opportunities
 BKoin	Internal	Understand working of Bitcoin and blockchain to create an internal coin.	Use BKoin for blockchain awareness and education.
PTDL Group (Post Trade Decentralized Ledger Group)	London Stock Exchange + Financial Institutions	Explore blockchain for Post Trade activities	BNY Mellon to participate in Business use-case group as well as Technology group.
R3 CEV Distributed Ledger Group	40+ global Financial Institutions	Create common standards and technology platform for blockchain-based solutions for financial services.	BNY Mellon to participate in identifying business use-cases and defining the technology architecture. Opportunity to access common standards, work with other Financial Institutions.
Ripple	Ripple Labs	Payments & Settlement improvements.	Opportunity to optimize cross-border payments.

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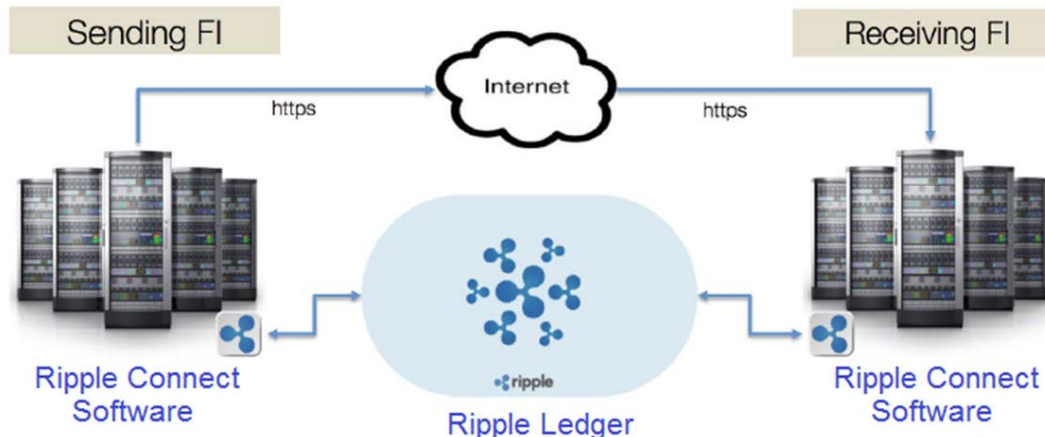
Ripple Proof of Concept (POC)

Test Environment Experimentation with Ripple Connect Software and Ripple Ledger/Network

- Ripple Connect Software – payment communications and quoting process
- Ripple Ledger/Network – transaction settlement, ledger based on Blockchain tech
- Modeling a cross-border low value payment use case

Potential benefits to confirm via the POC

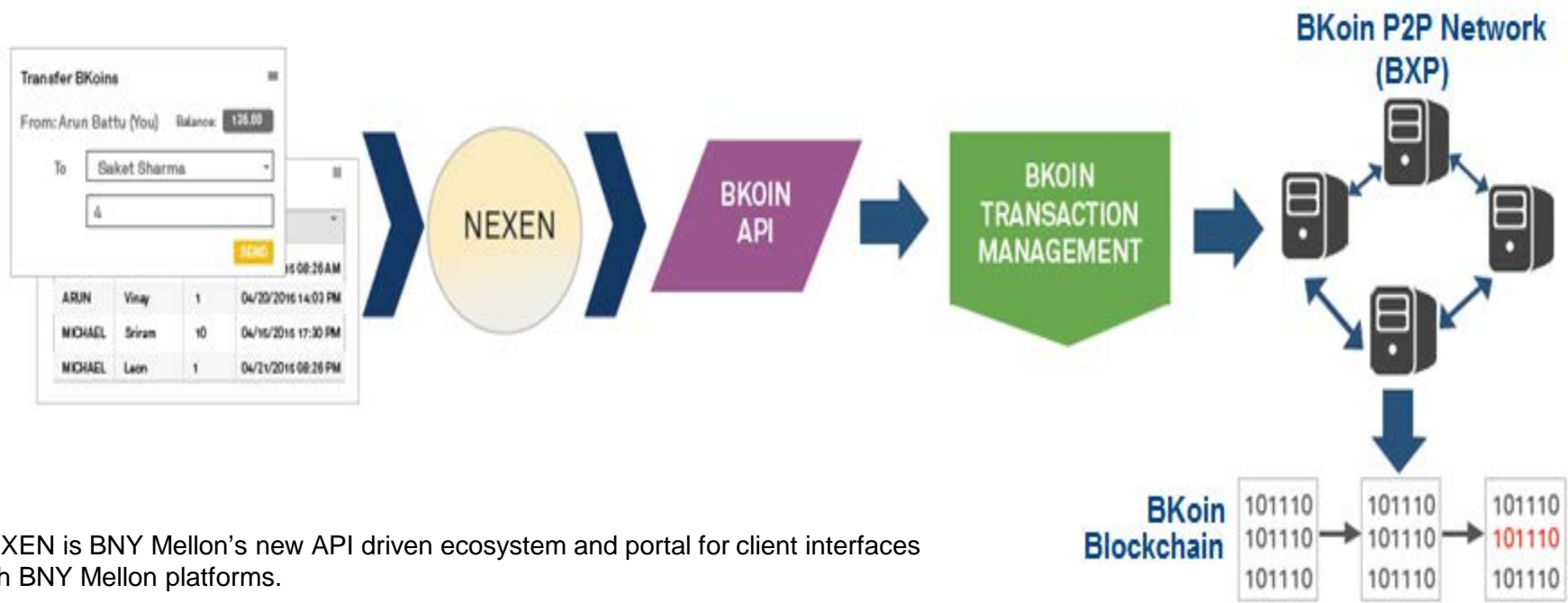
- Greater straight through processing via up-front quoting process
- Expedited payment settlement, near real-time
- Lower processing costs
- Improved payment status transparency and real-time liquidity monitoring
- Certainty of end to end fees for clients



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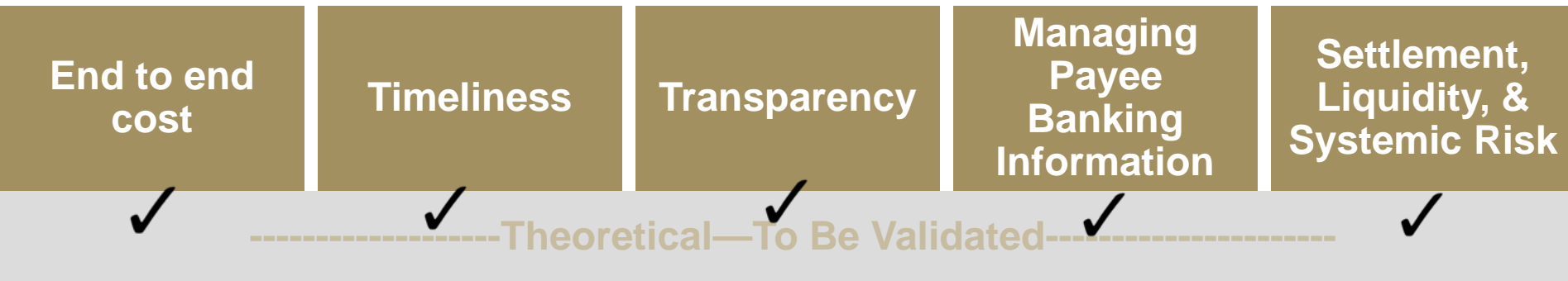
BKoin: Executing Blockchain within BNY Mellon

- Internal application built using Bitcoin core
- Allows exchange of “BKoins” between internal BNY Mellon users
- Tracks user balances and transaction history using private blockchain
- Uses private peer-to-peer network within BNY Mellon infrastructure



NEXEN is BNY Mellon's new API driven ecosystem and portal for client interfaces with BNY Mellon platforms.

Blockchain - Potential Benefits



Potential Benefits

- Capable of recording movement of digital assets real-time.
- Public/private encryption key technology - difficult to hack without private keys.
- Encodes all transactions into blocks.
- Quick, global confirmation of transactions.
- Decentralized - no one place for cyber attack or failure.
- New product opportunities using a single messaging & settlement infrastructure.

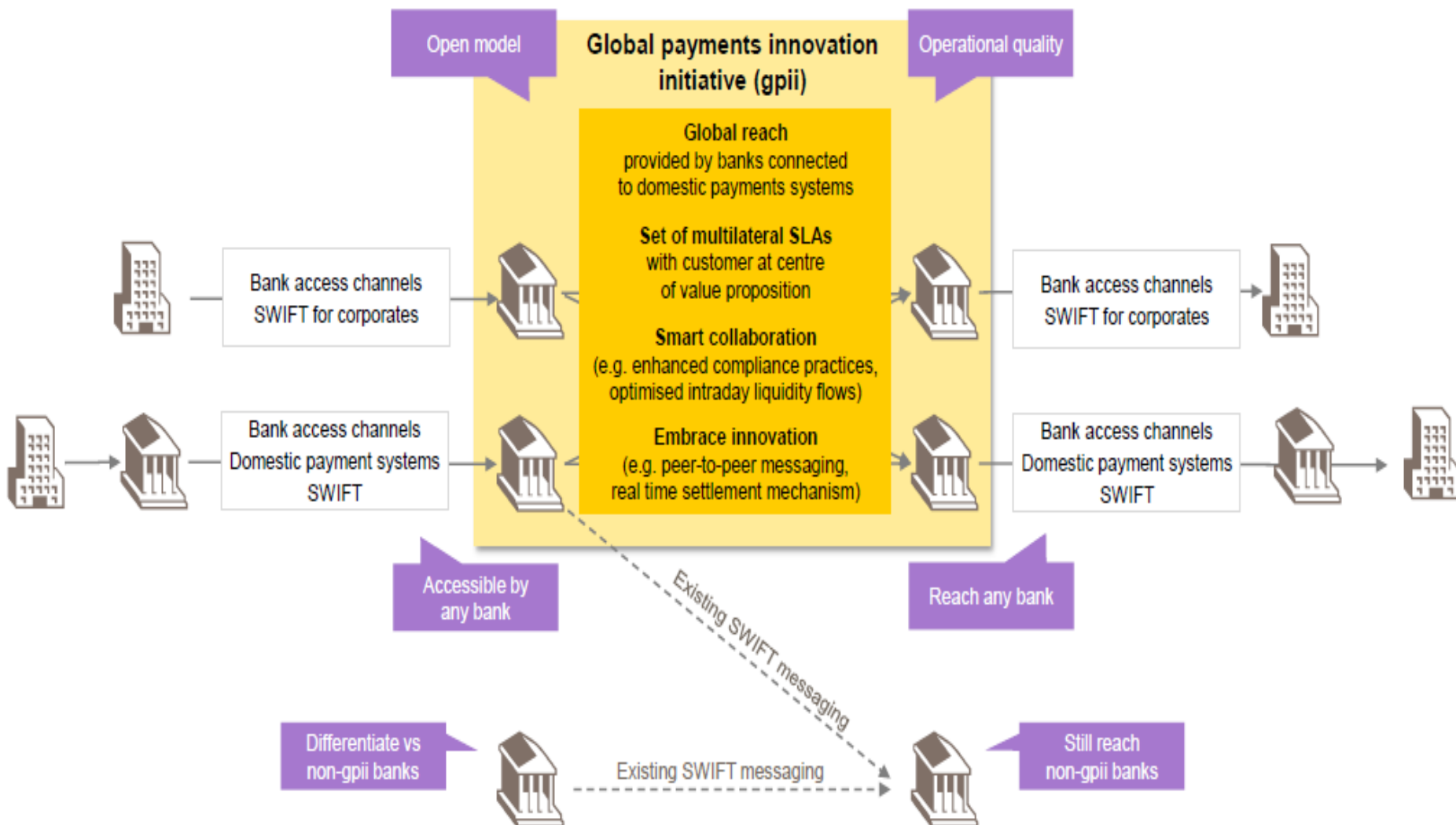
Outstanding Questions

- Open source – is it secure?
- AML/OFAC compliance?
- How much transactional data can be incorporated into a blockchain?
- Timetable for network effect?
- Difficulty of integration with existing platforms?
- Does long-term benefit justify short-term cost of integration and multiple infrastructures?

SWIFT Global Payments Innovation—Improving the speed and transparency of cross-border payments

- Collaborative effort between SWIFT and 40+ global banks
- Aims to improve client's correspondent banking experience by increasing speed, transparency and predictability of cross-border payments through:
 - Same day use of funds
 - Transparency and predictability of fees
 - End-to-end payments tracking
 - Transfer of rich payment information
- Initially targeting corporates for B2B payments
- Underlying technology will involve peer-to-peer messaging
 - Blockchain and distributed ledger technology will be explored in the future
- Targeting a pilot by September 2016
- BNY Mellon intends to participate in the pilot for USD payments.

Global Payments Innovation – Ecosystem Vision



Source: SWIFT

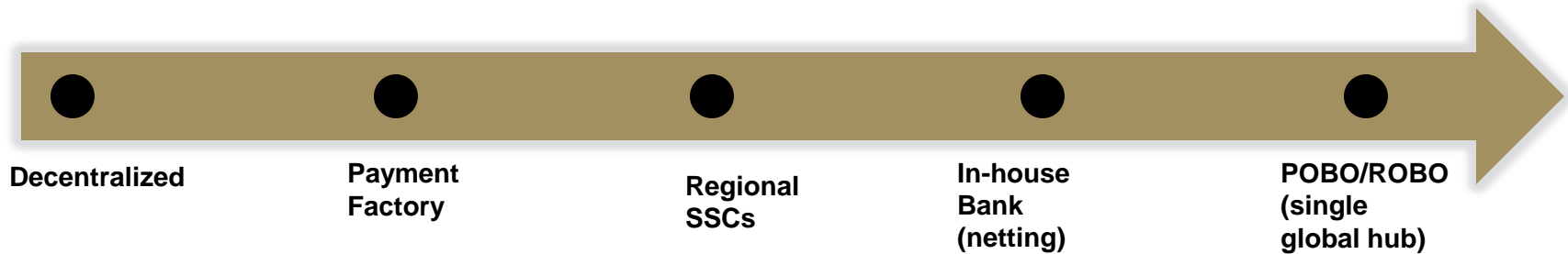
SWIFT Global Payments Innovation Initiative—Benefits

End to end cost	Timeliness	Transparency	Managing Payee Banking Information	Settlement Risk
✓	✓	✓		

- Greater efficiency in managing cross-border payment flows
- Improved ability for banks to provide SLAs and status updates for designated cross border payments
- Greater predictability of, and visibility into, payment delivery
- Increased speed
- Greater fee transparency

Payments on Behalf of (POBO) structure has been evolving...

- POBO : evolution towards greater centralization of cash management



POBO Process

- Business unit receives invoice, approves it and sends to Payment Factory
- Payment factory sends payment instruction to bank on behalf of business unit and sends a debit entry to the company's in-house bank
- Bank executes the payment
- Company's in-house bank debits the business unit's internal account

Though more successful in Europe and Asia, POBO is encountering challenges in Latin America...

Benefits and Challenges of POBO

Benefits

- More efficient working capital management
- Reduced costs: account maintenance, transaction fees
- Decreased cross border and FX payments, with better spreads
- Greater control and fraud prevention
- Better, consolidated view of supplier relationships

Challenges

- Local, complex tax implications
 - Differing regulations on non-resident accounts and non residents paying for local entities
- Many countries require Central Bank approval

BNY Mellon is modernizing our approach to payments to help clients overcome challenges

Payments modernization



Expanding suite of solutions



Collaborating within the industry



Teaming with disruptors

NEXEN: New open source cloud-based platform

Providing a foundation for clients and the industry to build upon

NEXEN is driven by five core components that are transforming how our services are developed and delivered. NEXEN creates a flexible environment where we can be responsive to clients' needs.

Platform	BXP is a cloud-based platform that lowers our costs and delivers resilient, secure solutions that scale and accelerate time to market.
Digital Pulse	Reports, predictive analytics and insights generated from the multitude of transactions at BNY Mellon.
APIs	Application Program Interfaces (APIs) allow integration between BNY Mellon services and our clients' solutions.
Gateway	Integrated business solutions, capabilities and data delivered across all access devices.
App Store	A virtual store offers enhanced customization and choice with best in-class apps from a wide range of providers.

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