PRODUCT DEMONSTRATIONS

Enterprise Risk Integration (ERI)

BUSINESS LEADER
Dean Stephan
Chief Enterprise Risk Officer

TECHNOLOGIST
Alex Jovanovich
ERI Program Manager

BUSINESS CHALLENGE TO SOLVE
- Increase global transparency to risk exposures by improving risk management tools and analytics to drive faster decision making and provide flexible and more comprehensive reporting capabilities

TECHNOLOGY SOLUTION
- Created a dynamic risk management system and reporting capability to provide a transparent global view across risk categories and by client, BNY Mellon legal entities, country, direct and indirect collateral exposure and positions and line of business

NEXEN BUILDING BLOCK COMPONENT(S)
- BXP; API store; Gateway

BENEFITS

Efficiency	√
Cost Savings	√
Resiliency	√
Risk Reduction	√
Revenue Generation Opportunity	√

Client

- Greater credit exposure detail and enhanced reporting capabilities improves responsiveness to clients while generating confidence in BNY Mellon's risk assessment, management and reporting capabilities

BNY Mellon

- Efficient, effective, complete and timely risk assessment and decision-making
- Increased visibility and transparency of risk exposures
- Faster assimilation of data to quickly determine risk exposure without manual intervention

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Client Onboarding

BUSINESS LEADER
Amy Harkins
Head of Enterprise Client
Onboarding

TECHNOLOGIST
Mark Green
Investment Services Technology
Management

BUSINESS CHALLENGE TO SOLVE
- Required automated workflow within cash and custody account opening
- Clients required transparency, timeliness, and standardization during account opening
- Clients requested automated workflow tool to reduce wait time and internal manual touch points, which caused delays – also a competitive peer challenge

TECHNOLOGY SOLUTION
- Developed single portal to access all BNY Mellon solutions, delivering a unified client experience across the enterprise
- Reduced data duplication
- Enabled rapid collection of standardized data and automated routine processes

NEXEN BUILDING BLOCK COMPONENT(S)
- BXP; API store; Digital Pulse; Gateway

BENEFITS

Efficiency	√
Cost Savings	√
Resiliency	
Risk Reduction	√
Revenue Generation Opportunity	

Client

- Enables direct client access to action data with increased speed to task completion
- Operational simplification and enhanced accuracy
- Faster client onboarding with a uniform and cohesive client experience for all solutions delivered
- Clients with unique compliance provisioning request flexible authorization set-up and ability to attach additional documentation

BNY Mellon

- Creates efficiencies by making services interoperable
- Drives process improvement and waste elimination
- Reduces operational risk due to manual errors
- Manages and secures accessible data for regulatory reporting
- Accelerates billable services – increased time-to-revenue

Digital Pulse – Trade Capture Analytics

BUSINESS LEADER
Lynn Sibley
Operations Manager
Trade Capture

TECHNOLOGIST
Tim Kuntz
Principal Architect
Global Custody and Cash Services

BUSINESS CHALLENGE TO SOLVE

- Easy access to data to enable intelligent business insights and identify areas for process improvement

TECHNOLOGY SOLUTION

- Utilized Big Data platform and various tool sets to develop multi-dimensional data visualizations, aggregations and granular drilldowns

NEXEN BUILDING BLOCK COMPONENT(S)

- BXP; API store; Digital Pulse

BENEFITS

Efficiency	√
Cost Savings	√
Resiliency	
Risk Reduction	√
Revenue Generation Opportunity	√

Client

- Provides insights that create value and improve decision making
- Single source of the truth
- Allows massive amounts of information to be organized and visualized in a consistent manner

BNY Mellon

- Drives process improvement, waste elimination, and unit cost reduction
- Supports evidence-based management culture
  - Enables monitoring and measurement to increase performance improvement opportunities

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App Store (Heckyl)

BUSINESS LEADER

Jennifer Cole
Head of Business Creation,
Client Technology Solutions

BUSINESS CHALLENGE TO SOLVE

- Vetting, integrating and subscribing to new products available from FinTechs and vendors external to BNY Mellon is costly for organizations because of the vast number of solutions and the ever-changing landscape

TECHNOLOGY SOLUTION

- BNY Mellon evaluates and curates leading solutions from third-party providers and integrates client data, third-party solutions, and enhancements to create new value-add products for clients
- Providing access to all of BNY Mellon and new solutions in one place – the App store

NEXEN BUILDING BLOCK COMPONENT(S)

- BXP; API store; App store; Digital Pulse; Gateway

BENEFITS

Efficiency	√
Cost Savings	√
Resiliency	√
Risk Reduction	√
Revenue Generation Opportunity	√

Client

- BNY Mellon evaluates and curates third-party solutions and builds necessary APIs to integrate with FinTechs and vendors as needed
- Invokes BNY Mellon's services directly, improving speed to access our solutions
- Enables the creation of new solutions that combine data and functionality
- BNY Mellon handles the following for clients to eliminate the need for duplicative resources at each client: price negotiation, vetting of product, building of the APIs, making accessible through the App store

BNY Mellon

- Transforms business operations to be more agile, flexible and dynamic in the new digital economy
- Creates operational efficiencies by making services interoperable
- Increases speed-to-market, accelerates innovation, enables monetization of data and functionality and offers new solutions not currently available

Blockchain Overview

Blockchain Could be Disruptive Medium to Long-Term While Bringing Significant Improvements in Security and Efficiency to the Financial Industry Short-Term

KEY CONSIDERATIONS

- Permissioned ledger with an intermediary is better suited for financial transactions

- Regulatory, accounting and legal frameworks needs to evolve. Fiat currencies not going away

- Technology is still evolving. Standards will drive adoption and interoperability

KEY TAKEAWAYS

- Fundamental business process redesign is required to reap the benefits of blockchain

- Effectively representing cash in-ledger is first step towards any financial use cases

- Internal use cases are a good start but Network Effect will be the key to harness the benefits of distributed ledger

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BNY MELLON INITIATIVES

2015 – 2016 Q2		TODAY	2016 Q3 +

Education

Educating clients and internal businesses for organizational readiness

- More than 30 clients and over eight internal businesses educated
- Over 125 active participants internally

Exploration

Exploring FinTechs to develop internal use cases for efficiency, security and resiliency

- More than 50 FinTechs evaluated
- Five internal use cases developed

Collaboration

Exploring opportunities for client collaboration with FinTechs and industry peers and participate with Consortiums to drive standards

- More than six client collaboration opportunities
- Participate with four consortiums

Transformation

Short-term: efficiency, security and resiliency

Long-term: organizational readiness for potential disruption; pro-active leadership in key markets, standards for next generation of financial markets infrastructure

- Two internal use cases
- Dedicated team across all businesses
- Strategy to determine risks, opportunities, and timeframes in current and potentially new businesses

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Distributed Ledger (BDS 360)

BUSINESS LEADER

Andrea Pfenning
Chief Operating Officer
Broker-Dealer Services

TECHNOLOGIST

Sarthak Pattanaik
Head of Broker-Dealer Services
Technology

BUSINESS CHALLENGE TO SOLVE

- Develop resilient solution to survive tail events such as loss of data-centers, multi-state power outages and other business disruptions, enhancing system resiliency and recoverability

TECHNOLOGY SOLUTION

- Utilized distributed ledger architecture to provide redundancy and market monitoring, enabling transparent data integrity and real-time market risk assessment

NEXEN BUILDING BLOCK COMPONENT(S)

- BXP*; API store*; Gateway*

* Future

BENEFITS

Efficiency	√
Cost Savings	√
Resiliency	√
Risk Reduction	√
Revenue Generation Opportunity	

Client

- Operational simplification – reconciliation of activities between clearance and repo platforms that typically occur at the end of the day are now performed on a real-time basis (every 10 minutes)
- Improved client experience – allowing real time decisions when there are "breaks" rather than waiting for end-of-day reconciliation

BNY Mellon

- Self-sufficient environment with high level of productivity/efficiency
- Risk management improvement through single "source of truth", away from primary system, enabling security source and full transaction history
- "Version of truth" can be shared with clients real-time
- Operational intelligence to analyze system inefficiencies
- Enhanced recovery in the event of primary data center outage

Node-RED Business Productivity

BUSINESS LEADER
Sasi Rayankula
Global Head of Engineering
Operational Excellence Group

TECHNOLOGIST
Meghan Judge
Technology Intern
Johns Hopkins University

BUSINESS CHALLENGE TO SOLVE
- Empower non-technical clients to build visual custom apps on a self-serve basis

TECHNOLOGY SOLUTION
- Extend Node-RED prototyping platform by building a set of reusable components for APIs

NEXEN BUILDING BLOCK COMPONENT(S)
- BXP; API store; Digital Pulse; Gateway

BENEFITS

Efficiency	√
Cost Savings	√
Resiliency	√
Risk Reduction	√
Revenue Generation Opportunity	

Client

- Allows clients to configure reusable components of APIs to develop workflows that solve business challenges
- Enables non-technical clients to create custom apps to meet their needs with limited technologist involvement

BNY Mellon

- Self-sufficient environment with high level of productivity/efficiency
- Tracks APIs utilized by clients
- Manages and secures accessible data

Robotic Process Automation (RPA)

BUSINESS LEADER

Mark Shivers
Co-Head of Robotic Process Automation

BUSINESS CHALLENGE TO SOLVE

- Business subject matter experts spend time manually processing transactions that have clear business rules and potentially require interaction with multiple systems or applications
- Enable business subject matter experts to apply their industry knowledge and spend more time on value-added delivery of services rather than manual, routine and repetitive tasks

TECHNOLOGY SOLUTION

- Replace mundane standardized processes completed by valuable subject matter experts with cloud-based, robotics-enabled, virtual workforce ("bots")
- Automate routine processes such as Account Closures, ICSD Trade Entry Input, and US Settlements Repairs
- Changes global workforce from operations processors to exception handlers and client service delivery agents

NEXEN BUILDING BLOCK COMPONENT(S)

- BXP; API store

BENEFITS

Efficiency	√
Cost Savings	√
Resiliency	√
Risk Reduction	√
Revenue Generation Opportunity	√

Clients and BNY Mellon

- Clients and BNY Mellon both benefit from "Better, Faster & Cheaper" processing as outlined in the below case studies:

  - **Better** accuracy in account closure request processing – 100% accuracy in account closure validations across 5 systems with an 88% improvement in processing time
  - **Faster** processing in ICSD Trade Entry, which realized 60% improvement in trade entry turnaround time, after a project that took only 4 weeks to implement
  - **Cheaper** processing of unsettled trade resolution resulting in a reduction in FTEs required for processing high-volume, rules-based research and repair

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