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The Partnership of NRI and BetaNXT

AUGMENT DOMESTIC SETTLEMENT SYSTEMS TO SETTLE
INTERNATIONAL SECURITIES

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NRI Beta**NXT**

IMPACT BRIEF

INTRODUCTION

A post-trade clearing and settlement function is a core piece of trading firms' books and records systems. Due to market dynamics and multiple market integrations, these are complex systems, and financial institutions are embracing new technology solutions to increase straight-through post-trade processing. By adopting the best mix of complementary technology solutions, financial institutions can enhance their processes, but migrating from existing solutions is a long, time-consuming process. A system replacement is a multi-year engagement.

Vendor and services firms are collaborating to provide an innovative solution. BetaNXT and NRI have embarked upon a journey to combine the Beta, a BetaNXT business and NRI I-STAR/GX offerings to support a fully automated domestic and international settlement and straight-through processing platform for trades executed across all markets. Rarely do two established vendors offering clearing and settlement functionality come together to provide a single solution that meets a client requirement without replacing an existing system. Still, an anchor client is required to bring the partnership live.

This Impact Brief highlights the integration of NRI and BetaNXT that enhances the existing BetaNXT Beta platform with the NRI I-STAR/GX platform to provide a joint solution to process international securities trade settlement for Baird. The report discusses the solution offering, the drivers for Baird in making the business decision, the decision outcome, and the roadmap ahead.

OVERVIEW OF SOLUTIONS

The key offerings from the solutions involved in the partnership between BetaNXT and NRI are the BetaNXT Beta Brokerage Processing Solutions and the NRI I-STAR/GX. An overview of the solutions is discussed in the following sections.

BetaNXT Beta

BetaNXT Beta Securities Processing Solutions is a complete suite of products to manage the daily operations of a brokerage business. Beta Host is the core back-office processing solution for wealth management. Thomson ONE is a complete front-to-back-office workflow platform for wealth management firms and supports news, stock reports, corporate information, client reporting, and watchlists synced to the desktops. Beta Link connects the Thomson ONE desktop with Beta Host, combining real-time market data and customer account information and trading. Additional BetaNXT Beta securities processing solution offerings include:

- Single and complex order entry, including basket, block, and complex options orders, covering all security types
- Rules interrogation during order entry processing covering equity, options, fixed income, and mutual fund orders and trades
- Workflow solution to review, accept, and reject orders in “pending for review” status
- Complete end-to-end unit investment trust processing directly integrated with the back office
- Helix REPO, a dynamic multicurrency, multi-entity, multiportfolio collateral management and trading system for the repo and securities lending markets
- Multi-asset proposal creation for investment options selected by clients
- Enables advisors to monitor drift and implement single account rebalancing, model management, rebalancing, and trading

NRI I-STAR/GX

NRI offers I-STAR/GX as a global securities settlement processing platform. I-STAR/GX has been the global system for the largest Japanese security firm for more than 10

years, covering the major markets in the Americas, Europe, and the Asia-Pacific. NRI also provides utility services, operations, and technology services for leading international security firms. It covers clearing and settlement, corporate actions, and reporting. Additional offerings from I-STAR/GX include:

- 24/7 global capability and support, covering major markets in the Americas, Europe, and Asia
- Multiple asset classes: equity, fixed income (asset-backed securities), listed derivatives, currencies
- Supports cash, DVP, margin, financing transactions (securities lending and repo), foreign exchange, and derivative contracts
- Supports real-time interface with external institutions
- Through BetaNXT Beta, the NRI I-STAR/GX messaging engine supports connectivity to major depositories, clearing corporations, and custodians
- Enables multitenant support of multiple enterprises with proper data segregation and a comprehensive, flexible entity hierarchy, including correspondent clearing

JOINT SOLUTION

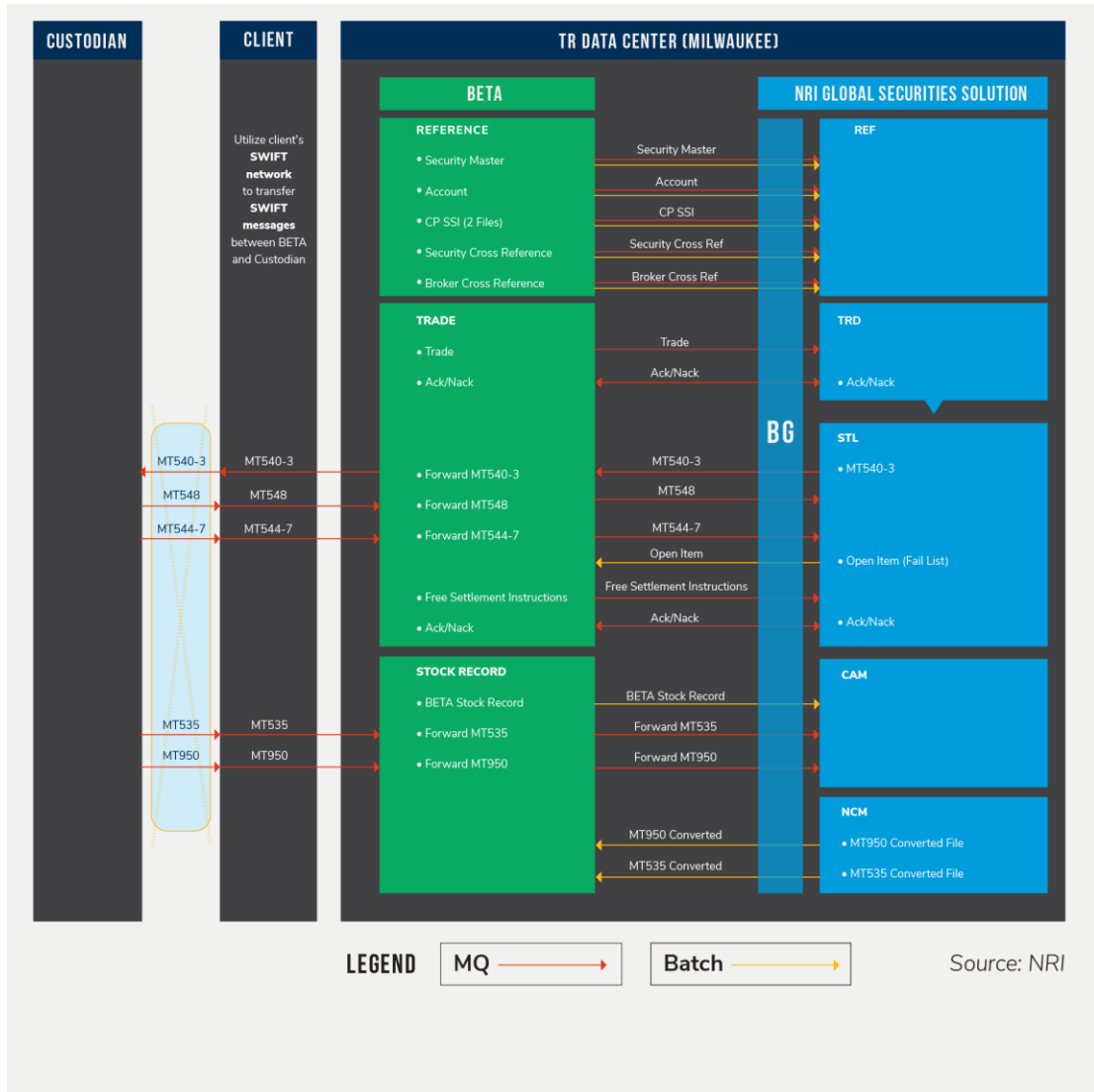
By combining the best of the I-STAR/GX and Beta solutions, NRI and BetaNXT have created a comprehensive global securities settlement processing platform. The integrated platform meets the post-trade processing capabilities required by institutional broker-dealers, wealth management firms, and correspondent clearing firms. It aims for automated multimarket, straight-through processing capabilities to provide a cost-effective, high-volume solution with a single stock record across all asset classes and markets. Its processing capabilities deliver real-time settlement updates on the BetaNXT Beta books and records, and real-time updates of intraday transaction status change through the life cycle of the settlement.

The new single platform offering is built on four functional building blocks drawn from the Beta and I-STAR/GX solutions (Figure 1):

- I-STAR/CORE supports securities processing in the Japanese market.
- I-STAR/GV supports securities processing in Australia, Hong Kong, and Thailand.

- I-STAR/GX supports global securities processing via SWIFT with any global custodian.
- BetaNXT Beta supports global securities processing with the Depository Trust and Clearing Corporation (DTCC) and the U.S. Federal Reserve.

Figure 1: NRI I-STAR/GX and BetaNXT Beta Building Blocks



The potential benefits to industry participants include the following:

- Higher certainty on trade and settlement execution by detecting, correcting, or directly enriching reference data
- Reduced settlement failure and costs caused by incorrect counterparty standing settlement instructions (SSIs)
- Direct access to trusted SSI databases for each settlement instruction
- Greater certainty that SSIs have not been changed during the settlement cycle
- One-stop-shop solution with flexible configuration options for international securities identification numbers (ISINs) and other securities identifiers to screen payments and securities transactions
- For smaller users, mutualized cost benefits and reduced complexity of maintaining ISIN lists and screening engine

BAIRD CASE STUDY

Baird is a global financial services firm serving institutions, individuals, families, businesses, and communities based out of the United States. Baird provides asset management, wealth management, private equity, fixed income, and equity capital markets expertise.

DRIVER TO ADOPT THE SOLUTION

Baird's post-trade operations team used the BetaNXT Beta suite of products to enable the clearing and settlement of U.S. trades. The platform provided the books and records supporting domestic U.S. settlement via straight-through processing.

The international settlement processing was completely manual and involved processing steps, workflow checks, and controls. For international settlements, trades were manually booked in BetaNXT Beta and manual instructions were sent to a third-party clearing broker for processing. Additionally, settlement instructions were submitted via manual data entry through the global custodian portal, which was then used to manually track the settlement status.

BetaNXT Beta's support for international processing was not scalable. As the number of international trades processed and settled increased, demand from businesses to reduce the risk involved in supporting international securities settlement processing began to grow.

THE HUNT AND SOLUTION EVALUATION

At the outset, Baird was clear that it needed a new solution that would complement the existing solution. Baird's management was not in favor of replacing the stock books and records systems, as replacement is a multiyear engagement that disturbs existing processes and creates uncertain operations. That sort of disruption would not meet Baird's business needs.

The challenge was to find a solution that complemented Baird's existing BetaNXT Beta-supported domestic processing capabilities. Baird began by speaking with BetaNXT and exploring other vendor products in the market. At this point, BetaNXT introduced Baird to the NRI I-STAR/GX solution.

Using key criteria identified by Baird management, Baird evaluated the solutions to create a shortlist of three potential vendors. The three key criteria were:

- Pricing
- Ease of implementation
- Vendor's expertise in international settlement

In the next round, Baird used the same criteria but analyzed the vendor solutions in greater detail. This helped Baird to link the initial evaluation to the detailed analysis. Along with the vendor evaluation, Baird looked at the internal capability and team members' familiarity with the products. This input acted as a catalyst, connecting the dots between the vendor-offered functionality and how the vendor could meet Baird's requirements. By integrating the NRI I-STAR/GX offering with BetaNXT Beta, BetaNXT and NRI were able to meet Baird's requirements to enhance its current solution. The product development journey thus began with a strong partnership between Baird, BetaNXT, and NRI.

KEY PROJECT CONSIDERATIONS

The project officially kicked off in mid-2019, and international settlement straight-through processing for equity and fixed income trades went live in November 2020. Multiple key considerations shaped the project:

- **Setup:** An internal project management office set up the program and detailed project activities with stakeholders and timelines to track the deliverables.
- **Technology integrations:** Baird's technology team collaborated with the BetaNXT Beta and NRI I-STAR/GX technology teams to identify functional and technical integration touch points and data-exchange handshakes. The Beta Host login was used for books and records, while the NRI application is hosted within Thomson ONE as a module.
- **Reference data:** The reference data hosted in BetaNXT Beta for client master, securities master, securities cross-reference, and brokers was kept in common to be leveraged by BetaNXT Beta for U.S. settlement and by I-STAR/GX for international settlement.

- **Settlement identifiers:** The Baird Depository Trust Company (DTC) account number was shared within the main SWIFT ID of BetaNXT to ensure the complete linking of identifiers from the front office to the back office.
- **Trade data:** The trade data integration between BetaNXT Beta and I-STAR was completed using SWIFT messages, such as MT 540, MT 548, and a proprietary message format, to exchange acknowledge/negative acknowledge messages and free settlement instructions.
- **Stock record:** I-STAR/GX accessed the stock record hosted in BetaNXT Beta to identify the availability of securities in the account before releasing the settlement instructions to the global custodians.
- **Global custodian connectivity:** I-STAR/GX leveraged its existing messaging engine and instruction-creation capability, and BetaNXT Beta integrated with Baird's global custodian to route trades to local custodians or depository institutions for settlement.
- **Integration with market utility:** The existing BetaNXT Beta integration with market utility was leveraged for international settlement.
- **Team size:** The team size involved from Baird was five associate members at the peak time in the project and with intermittent support from a technology group for network and application installation equivalent to up to five full-time employees. BetaNXT Beta and NRI provided users with training and support throughout the project and beyond to resolve users' queries in a timely manner.
- **Maintain a backup:** To prevent loss due to uncertain events, access to Baird's old systems was not removed. It was kept as a failover backup system to ensure that international settlements can be processed manually if required.

PROJECT OUTCOME

Baird realized the following positive outcomes after implementing the joint solution:

- Achieved straight-through processing of international trades for settlement in Europe, the Middle East, and Africa; the Asia-Pacific; and the North, Central, and South America global regions leveraging the joint solution for integration with the global custodian

- Dramatic 90% reduction in operational risk due to manual activities involved in processing 5,000 trades per month due to straight-through processing and automation
- Automated settlement instructions tracking to identify status, such as settled or failed
- Enhanced the single sign-on feature for users to access BetaNXT Beta Host and I-STAR/GX dashboards for tracking, processing, and reporting
- Achieved a centralized global stock record system in BetaNXT Beta
- Increased the scalability of the operating model to support international settlement and leveraged the team expertise to support a global 24/7 submodel to maintain the extremely low settlement fail rate
- Increased operations staff job quality by eliminating manual processes, diverting staff capability and capacity to other strategic projects
- Automated control reports tracking for domestic and international settlements

ROADMAP

Baird, BetaNXT, and NRI identified the following roadmap items as priorities for the next six to 18 months.

- Continual development of more functionality and other development/ enhancements are in progress.
- BetaNXT and NRI are working on the corporate action module. Baird has implemented a corporate action middleware platform and has not decided whether the existing middleware will be replaced with BetaNXT and NRI solutions.

AITE-NOVARICA GROUP'S TAKE

A partnership between firms is purpose-driven. The partnership formed by BetaNXT and NRI facilitated Baird's ability to support trading and settlement across the globe. The two systems were integrated to provide the best solution to Baird. The existing operations process was migrated to a new technology platform, and a new process was established to meet the future business needs. As a result of the BetaNXT/NRI partnership, Baird was able to maintain its existing platform for domestic U.S. trading and settlement and expand to all global markets using its existing service provider, while gaining access to a new global provider with expertise in this space.

Baird's implementation of the NRI/BetaNXT Beta international settlement processing solution complements its existing domestic processing platform. Thus, one can view this implementation not so much as a transformation process, but more as an effort to establish a correct process so that Baird's needs are met.

Inefficiency enters all business processes over time, leading to a need for transformation. Driven by the business need to reduce settlement and operational risk in post-trade processing, post-trade clearing and settlement functions will continue to undergo transformative change in 2021 and beyond. Demand will continue to increase for straight-through processing automation and cost reduction through access to standardized and clean data exchanged over automated interfaces supported by robust exception processing.

The majority of transformation process initiatives involve heavy operations and technology changes—something especially true when it comes to large-scale core activities, such as trade processing and settlement. And technology integrations between large systems are generally substantial projects due to the convergence of varied technology architecture and functionalities.

The adoption of industry-standard mutualized services to enrich the trade for settlement, such as using DTCC's SSI facility to reduce the number of settlements fails, emphasizes the importance of shared services and industry collaboration. In the coming days, complementary vendor products for post-trade processing will be essential, as no one technology solution can do it alone. Solutions are coming together in post-trade processing more than ever before. Aligned with this trend toward collaboration, the NRI and BetaNXT Beta combined solution demonstrates how partnership between vendor firms can deliver the best solution to the financial industry.

CASE STUDY PARTICIPANTS

ABOUT BAIRD

Putting clients first since 1919, Baird is an employee-owned, international wealth management, asset management, investment banking/capital markets, and private equity firm with offices in the United States, Europe and Asia. Baird has approximately 4,600 associates serving the needs of individual, corporate, institutional and municipal clients and more than \$385 billion in client assets as of June 30, 2021. Committed to being a great workplace, Baird ranked No. 32 on the 2021 Fortune 100 Best Companies to Work For list – its 18th consecutive year on the list. Baird is the marketing name of Baird Financial Group. Baird’s principal operating subsidiaries are Robert W. Baird & Co. Incorporated and Baird Trust Company in the United States and Robert W. Baird Group Ltd. in Europe. Baird also has an operating subsidiary in Asia supporting Baird’s investment banking and private equity operations. For more information, please visit Baird’s website at www.rwbaird.com.

ABOUT BetaNXT

BetaNXT is one of the world’s largest providers of financial markets data and infrastructure, serving over 40,000 institutions in approximately 190 countries. It provides leading data and insights, trading platforms, and open data and technology platforms that connect a thriving global financial markets community—driving performance in trading, investment, wealth management, regulatory compliance, market data management, enterprise risk, and fighting financial crime. For more information, visit www.betanxt.com.

ABOUT NRI

Founded in 1965, NRI is a leading global provider of system solutions and consulting services, including management consulting, system integration, and IT management and solutions for the financial, manufacturing, retail, and service industries. Clients from all layers of these individual industries partner with NRI to tap NRI’s research expertise and innovative solutions across the organization to expand businesses, design corporate structures, and create new business strategies. NRI has more than 13,000 employees in more than 50 offices globally including New York, London, Tokyo, Hong Kong, Singapore, and Australia. NRI reports annual sales above \$4.9 billion. NRI is rated “A” by S&P Global Ratings Japan. For more information, visit <https://www.nri.com/en>.

ABOUT AITE-NOVARICA GROUP

Aite-Novarica Group is an advisory firm providing mission-critical insights on technology, regulations, strategy, and operations to hundreds of banks, insurers, payments providers, and investment firms—as well as the technology and service providers that support them. Comprising former senior technology, strategy, and operations executives as well as experienced researchers and consultants, our experts provide actionable advice to our client base, leveraging deep insights developed via our extensive network of clients and other industry contacts.

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