

HOW TO SUCCESSFULLY NAVIGATE DATA MODERNIZATION

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Effective data management and efficient technology performance are inextricably linked, especially in capital markets. The growth in transactional volumes and growing data sources means that the quality of the data management and technology directly impacts the growth and profitability of both Buy-Side and Sell-Side market participants.

Historical tick data is a large, complex data set that needs to be accurate, readily accessible and effectively integrated with other market data and emerging sources of alternate data.

With the explosion of data volumes, speed to test and execute new trading strategies is crucial to remain competitive. In this environment, time is critical in all facets of the enterprise: minimizing time taken to source, load and integrate data, maximizing time for analysis and modeling, optimizing the time to implement revised trading strategies or executing trades during tight windows of event-driven opportunities.

RoZetta has a proven history of delivering on the modernization of an integrated data management and technology solution - DataHex, a SaaS-managed service.

WHY YOU SHOULD MODERNIZE

Modernization of data management and technology provides five fundamental value drivers for an organization:

Improve revenue and margin - Focus on opportunity discovery and innovation in trading strategies.

Efficiency - Optimizing the deployment of scarce data analytic resources to alpha discovery increases speed to market and trading innovations.

Data quality - Improve data quality. For example, reconcile timestamp accuracy, discover and resolve data gaps, improve symbology matching across time and multiple sources and accurate integration of both reference data and alternate data.

Quick access - All market data (including tick) and related data assets centralized to decision-making functions in an organization. API suite for all functions across an organization supplemented by direct access of all data assets.

Cost savings - Single source of all market data - reduce data storage, compute, data operations costs and retire legacy infrastructure. Avoid data duplication and align the total cost of operations to the fluctuating needs of the various user groups.

HOW MODERNIZATION ENHANCES PERFORMANCE

All organizations face multiple challenges when modernizing data and technology platforms.

It is crucial to consider the following factors and why it is valuable to modernize when undergoing the process.

- Integrating, cleansing, normalizing and transforming data for use by a range of user groups. These challenges increase as the volume and number of data sources increase.
- Operational data and technology silos. Business silos result in uneven distribution of data assets, leading to multiple licensing of the same data and underutilization of existing data assets.
- Effective and scalable data management enables the front, middle, and back-office to use the source data, however they need it delivered in bespoke formats to ensure it is fit for purpose.
- Trading teams emphasize the need for continuous and consistent support on data to maintain a competitive edge.
- Faster time to market is a critical goal of modernization, identifying and responding to trading opportunities in the shortest possible time.
- Integrating new data sources that support traded asset classes and emerging markets is vital in a competitive landscape.
- Demonstrate the “value” in data to support business cases - the priority is gaining business buy-in across the enterprise to improve data acquisition and utilization.
- Compliance is of increasing importance for access, usage, and transparency across an organization. For example, trade and transaction reporting rely on accurate and timely data aggregation.
- Need for seamless integration with Data Science applications like machine learning (ML), artificial intelligence (AI) and APIs.

Case Study 1 - Global Buy-Side Bank

Bend the Total Cost Operations curve? Innovations like cloud-based platforms, APIs, and serverless data dramatically simplify operations and speed up development.

In a recent engagement, the total cost of ownership of historical tick data was reduced by >50%, representing a cost saving of ~US\$10.4m pa. This included savings on infrastructure and data operations. RoZetta's proprietary organization of the data allowed far more efficient access, search and extraction. The ability to drill down to a single symbol, and schedule incremental updates, enabled the client to reallocate resources to core business activities, without costly and time consuming data wrangling. Data extracts can be reformatted to become seamless inputs into downstream processes like trading strategy development, statistical model updates, compliance tools, reporting and updating portfolio values.

RoZetta's DataHex also caters for the integration of related market data, like corporate actions, company fundamentals, announcements and internal customer data.

DEMOCRATIZING DATA

The democratization of data is a construct that didn't exist until recent times. This leads to proper data usage and empowers the delivery of insights very effectively to end-users. An organization should not underestimate the value gained by democratizing its data assets. It is critical in an industry where transactional data is becoming more complex. The requirement to integrate a rapidly growing number of data sources, structured and unstructured, needs to be at the core of the data management philosophy.

EXTENDING MODERNIZATION TO APPS

There are multiple strategies for modernizing apps, but the most efficient is to move to a SaaS platform. It has the advantage of total integration and increased control over costs. The cost of cloud-based technology flexes with the demands of the users. There is no need to establish infrastructure for the maximum processing requirements and often infrequent use case.

The modernization trend is not just about the modernization of storage and computing. It also means modernizing data management, taking legacy databases that are not flexible and scalable, and scaling them to meet the changing needs of users.

Flexibility to integrate new data sources quickly is a crucial outcome of modernizing apps.

Historically most data was very structured. The current requirement is to incorporate multiple forms of data, including articles, news feeds, text transcripts, documents, and emails. Some of these will be structured, but many unstructured. This requires more flexibility to deal with the variations of data an organization utilizes in conducting its core functions.

It is all about reducing the time to insight, increasing usability, and quickly uncovering value-creating insights.



Case Study 2 - Major Data Vendor

Data management and technology modernization will unlock the ability to execute on opportunities faster, provide a platform for new product development, and enable the organization to scale.

Historical tick data for 200+ venues at the full order book level. Access to the data was via a team who used query tools for each customer extract and delivery time was 2 - 3 weeks, for simple extracts and more than 2 months for complex requests.

The DataHex platform provided a far more efficient data structure and a user interface with search and extract capability. Bulk data extracts could be provided in minutes and the self-serve interface enabled a user to drill down to a single symbol, build a portfolio, and then extract the data within minutes without any need for data operations support. Curated output files can be delivered to any cloud environment or to any secure server on the client's premises.

Case Study 3 - US Trading Firm

Easily scale from a localized environment to a global enterprise platform? A successful modernization project creates transformational outcomes and sets an organization up to scale for innovation and success.

This firm needed to expand its historical data by introducing new venues and extending its historical data by splicing in an alternate data source to increase the time period covered to 15 years +. The organization also needed to define bespoke market metrics in line with its definitions. For example, End of Day pricing data needed to be consistent with its definition, and time bar data needed to comply with its defined start time for each time bar. RoZetta was able to demonstrate how DataHex could integrate the additional data and provide an intuitive user interface to access, search and extract historical tick data.

DataHex has three components - Data Management, Data Enhancement and Data Analytics. Pre-calculated metrics are available in the Data Enhancement but the client has the option to also access Data Analytics which contain Python Notebooks used to calculate the metrics. This enabled the client to efficiently develop a bespoke version of market metrics and produce exactly what they needed for their modeling inputs and reporting.

ROZETTA TECHNOLOGY

Unlock the future by integrating its expertise in data science, cloud technology and managed services operations to transform high-volume, high-velocity structured and unstructured data into clear insights.

In a market driving for differentiation through data, organizations invest in expert applications and capabilities that deliver unique IP and the opportunity for competitive advantage. To help clients remain nimble and innovative in this context while optimizing investment in technical infrastructure, RoZetta Technology provides a managed SaaS platform that offers a resilient and scalable data and technology solution. Successful execution typically requires deploying game-changing tools, including digital ones, and unleashing the front line's enthusiasm to embrace them.

RoZetta's Head of Technology, Stephen Johansen, has written a history of data management and technology. This will provide some insights into the development of RoZetta's DataHex SaaS.

- [The Evolving Landscape of Data Storage](#)

Contact Phil Anderson, Head of Product Management via email at phil.anderson@rozettatechnology.com and find out how we can facilitate your journey to data management and technology modernization.

UNLOCK THE FUTURE

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