How to Enhance the Value of Operational Data

Capital markets firms can lower risk, unlock cost efficiencies, and identify revenue opportunities based on operational improvements.

“Data is a foundational element to everything that the business runs on,” said Nickolas Delikaris, Managing Director, Global Head of Algorithmic Trading, State Street Global Markets, who participated in a SIFMA webinar sponsored by TCS.

“Technologies like natural language processing and computer vision help enrich our data structures, which ultimately allow us to automate different aspects of our workflow and operations,” said Delikaris.

Reimagining data management isn’t something that you can address with a big-bang deployment. Unlike a core solution upgrade, for which it’s possible to envision and work toward a target operating model, monetizing enterprise data is an iterative process, to be built one use case at a time.

Our recommended approach: Embark upon a process of discovery through which organizations work closely.
with internal and external stakeholders to identify situations where real-time data and analytics may contribute to improved decision making or performance. Once you have identified the potential business benefit, it’s easier to track down the required sources of data and make the case for ecosystem transformation.

As ecosystem transformation progresses with exchanges, brokers, clients, custodians, agents, and CSDs, we expect to foster benefits that will transform the entire securities marketplace. Over time, we expect the industry to bring together a wide range of data that, today, is held separately in multiple disconnected data sources.

- **Maintain zero-outage operations.** With all the visionary effort taking place in the industry, what takes precedence is operational stability.

  “Our senior management at all levels is focused on digital and data-focused initiatives,” said Vikrant Goyal, Director of BNP Paribas Securities Services. “The basic expectation is still around stability and zero-outage service.”

- **Better decisions.** Firms can improve decision-making by bringing real-time back-office data to the front office. For example, investors making a voluntary corporate actions decision should be able to understand the tax implications of their selections – and this just doesn’t happen today due to siloed, inaccessible information.

- **Lower risk.** When lending stock for a repo transaction, various external factors may influence the probability of timely return; these data points can be made more visible and actionable prior to the loan being priced and executed. This is just one example of how the cycle of operational data improvement can lower risk and increased profitability for a business unit.

  In general, we expect that predictive analytics will help organizations to identify and respond quickly to high-risk, high-valued events that may impact customers and business partners.

- **Process Automation.** By aligning to standardized data formats, the industry can work towards its long-held ambition to establish shared golden-source records in areas such as primary corporate announcement records or standard securities reference details. In turn, these golden-source records will reduce processing breaks between chain participants and increase the extent of process automation.

- **Improve regulatory compliance.** Regulators would benefit at each stage of the cycle. Data governance would ensure that organizations are following appropriate guidelines for data usage; automated analytics would enable financial institutions to deliver smarter reports to examiners; enhancing data provenance would provide better visibility into operations; a full set of APIs would reduce the cost of compliance; and tracking of the appropriate metrics would deliver confidence about the financial health of the overall marketplace. Regulators will also benefit with internal and external stakeholders to identify situations where real-time data and analytics may contribute to improved decision making or performance. Once you have identified the potential business benefit, it’s easier to track down the required sources of data and make the case for ecosystem transformation.

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Governance also enables firms to establish rules for how to agree on which “golden-source” version of the data will be published to a client, so that they do not see conflicting data. This is a highly complex area of governance and change, but it’s critical for any organization intending to share a multi-business view of activity to clients, rather than discrete, product-based insights.

2. Automate Analytics with Embedded Intelligence

“With new technology like natural language processing and computer vision, we can start to enhance data elements in new ways, which ultimately allows us to automate things in different ways,” said Delikaris.

The typical securities firm aims for straight-through processing. Yet whenever a break occurs, the operations team still must get involved. With predictive analytics, an automated solution can anticipate a break before it happens and suggest the most appropriate remedy. This preemptive approach avoids problems before they cause a process failure, saving time and effort in operations while improving the customer experience.

Our approach of “Embedded Intelligence” (see article, page 12) ensures that any automated advice will be delivered through transparent and auditable recommendations, using human oversight to ensure ongoing business value. Through this approach, we expect to implement fully automated “self-healing” from common taxonomies, golden-source data, and adherence to ecosystem-wide standards.

1. Mitigate Risk with Data Governance

“By knocking down silos and by understanding more deeply why stakeholders want the data, operations can leap forward,” said Paul Lacey, Managing Director, Wells Fargo Securities.

Data governance ensures that organizations can establish fine-grained controls over how information can be shared, with whom, and for how long.

Risk mitigation based on robust data governance practices will help to build consensus on the appropriateness and feasibility of sharing data for new applications, enabling organizations to unlock business value.

To deliver the benefits of ecosystem transformation, we recommend these five pillars for operational improvement:
3. Enrichment with Data Provenance

Help your downstream ecosystem partners by enriching messages with machine-readable information about data provenance and other useful data points. A good rule of thumb would be to assume that everything you send from one system to another will be read first and foremost by an AI-driven solution. Compose your messages accordingly.

One place to start would be SWIFT MT and MX messages, where free-format text fields are frequently used for various purposes. If you expect a human being to be on the other end of a message, that’s probably a good candidate for enrichment. By tagging data at the source, whether with ISO 20022 or some other schema, you can enable much higher degrees of reuse for downstream users of the information, along with faster uptake of AI-based solutions.

4. Distribute to ecosystem partners using APIs

Compared to retail banking, uptake of APIs is lagging in the capital markets, in part because of the preponderance of customized or bespoke solutions, along with legacy experience with manual processes for high-value capital markets transactions.

Given the volumes involved, there are highly significant profit opportunities for the industry and for individual players through enabling ecosystem efficiency powered by APIs.

To identify and develop candidate APIs, we recommend that organizations work closely with technology partners and industry groups to share approaches among comparable firms with similar systems and data models.

At TCS, we expect to be in the forefront of developing industry-leading APIs that will transform the industry for higher efficiency and improved services. API development requires an iterative approach, and we are working through specific use cases involving actual clients and their business needs within the larger ecosystem.

5. Monitor success and evaluate next steps

Each success propels the next evolution of operational data in the capital markets. To ensure the speed of that evolution, it will be critical to gather metrics and stakeholder feedback to ensure constant improvement and to make the business case for future cycles.

As an example, we are working with the local agent of a global custodian on approaches for sharing securities master reference data. These local agents have privileged access to data that nobody else has. As we go through the process of enhancing data governance; embedding intelligence; enriching with data provenance; and building APIs; we are also keen on collecting metadata about how the process is being changed throughout the entire lifecycle of the data. By capturing this metadata, we ensure that the local agent can be appropriately compensated for their efforts, while adding to the business case for future rounds of improvements throughout the ecosystem.