The US stock market has grappled with extremely stringent regulations in the aftermath of the 2007 financial meltdown. Stock exchanges were mandated to strengthen their surveillance mechanisms and improve the reporting systems and information flow between companies and market participants. This led to an emerging need for advanced market surveillance technologies to provide the wherewithal (analytics, process and ability) for identifying and reacting to market manipulations in an environment where trading volumes are powered by advanced trading technologies like algorithmic trading.

Wipro's client, a leading stock exchange in the US, provides trading platforms to participants for multiple asset classes across geographies and time zones. The exchange is operated by a leading global operator of financial markets and provider of innovative trading technologies. Products traded on the exchange include equities, futures, options, fixed-income, ETFs, and structured products. The company also offers comprehensive trading platforms, connectivity solutions and market data products and services as a leading provider of end-to-end electronic trading solutions.

In responding to the dynamic market realities, the client wanted to re-engineer its existing mainframe-based core surveillance system to enhance its scalability, performance and usability, generate output in multiple formats and reduce the cost of maintaining legacy systems. Robust market surveillance would enable the exchange to monitor and weed out orders and trades that could be detrimental to the market integrity, produce market quality reports based on the voluminous trade data, and support SEC regulations pertaining to trading. However, the client was saddled with a very large number of applications and multiple technologies with no proper documentation.

In addition to this, the client also wanted to define a structured compliance process to streamline compliance reporting for listed companies and avoid delays in information processing or oversights resulting in auditory non-conformances with the SEC requirements.

Robust and effective market surveillance will enable the exchange to monitor and act on trading irregularities in the market and ensure that markets are efficient and transparent for all participants.
In re-engineering the client’s legacy system, Wipro’s study revealed the absence of an enterprise IT architecture and the existence of archaic application re-writes and documentation processes.

Wipro then developed a scalable and agile application, making it easier to incorporate new SEC regulations without significant re-work. The application was built in line with the trading guidelines of the exchange to prevent market volatility and to send out alerts to the exchange administrators in case of any discrepancies.

In addition to the surveillance module, Wipro built a centralized repository for market research data across multiple markets (in spite of average daily data volumes of approximately 2 billion records) and an online compliance platform for regulatory reporting of the exchange and its clients.

The centralized repository helped the exchange reduce costs, regulated data quality and shortened the cycle time for reporting transactions. To manage the daily data volumes, Wipro also developed a large piece of the client’s data warehousing application.

The online compliance portal platform automated some of the SEC-mandated compliance procedures, by facilitating the exchange of information and supporting the dissemination of regulatory requirements to listed companies. The compliance portal allowed for concurrent information validation which helped the client and its customers comply better with SEC requirements.

**BUSINESS IMPACT**

The surveillance module delivered:
- Major cost benefits to the client by forgoing the huge annual maintenance cost of legacy systems
- A scalable application
- Surveillance across yearly data giving in-depth surveillance insight and control to the exchange trade analyst
- Migration to open platforms like J2EE/Oracle which eased out the maintenance
- Multiple output formats (PDF, text, Excel, external feeds etc.)

The compliance portal contributed to:
- Reduced overhead costs
- Greater accuracy in compliance data processing
- Focus on compliance issues rather than paper work
- Reduced cost of compliance for listed companies
- More companies approaching the exchange for listing

**ENGAGEMENT HIGHLIGHTS**

- Wipro handles a large part of the client’s surveillance applications through which the client’s trade data gets routed. As a result, Wipro services 30.1% of the trading volume in US equity & OTC derivatives market.
- The modules and applications that were developed enabled the exchange to talk about value-added services which were extremely critical in a highly competitive market landscape.

**About Wipro Ltd.**

Wipro Ltd. (NYSE:WIT) is a leading Information Technology, Consulting and Outsourcing company that delivers solutions to enable its clients do business better. Wipro delivers winning business outcomes through its deep industry experience and a 360 degree view of “Business through Technology” - helping clients create successful and adaptive businesses. A company recognized globally for its comprehensive portfolio of services, a practitioner’s approach to delivering innovation and an organization wide commitment to sustainability, Wipro has a workforce of 140,000 serving clients across 57 countries. For more information, please visit www.wipro.com.

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